COMMERCE DEPARTMENT

SEMESTER – I

COURSE DETAILS

1) **Programme Title:** Bachelor of Commerce.
2) **Duration of Programme:** 3 years
3) **Title of the Course: Introduction to Business. (Commerce - I)**
4) **Category of Course : Major - Core**
5) **Course Code:**
6) **Course Objective:**
   - To make students acquainted with the concept, scope and significance of business
   - To provide basic conceptual and applicative knowledge about business organizations
   - To enlighten students about business environment and its inter-relationship with the business
   - To provide students with the intellectual exposure to entrepreneurship and its tremendous opportunities, so that they can visualize the possibilities of initializing viable start-ups.

6) Eligibility for admission: HSC/ 10+2

7) Duration of course: One semester

8) Intake capacity: 480 (4 divisions of 120 learners each)

9) Attendance: 75%

10) Total Credits: 3

11) Fee Structure:

12) Teacher's Qualification: M. Com. / with NET/SET with minimum B+ grade or equivalent with NET/SET/Ph.D. (Subject to reservation policy of the Government)

13) Per week Work-load of the Teacher: 3 lectures per week

14) Total modules: 4

15) Content:

MODULE	CONTENT	NO. OF LECTURES
1	**Introduction to Business:** • Business - Meaning, Definition, Features. • Importance to Business firms, society and customer • Business function. • Objectives of Business - Classification of business objectives, reconciliation of social objectives. • Social responsibility of a business firm towards various stakeholders. • Business Ethics - Meaning, Definition of ethics, nature of ethics, Business ethics, Importance of Business ethics, factors influencing business ethics, ethical dilemmas, role of corporate culture in ethics. • Corporate Social Responsibility - Concept, relevance and importance of CSR. • Case study of successful businesses and business failures worldwide.	**12 Lectures**
2	**Setting up of Business:** • Business Planning Process. • Concept & Importance of Project Planning, Project Report. • Feasibility Study - Importance and its Types. • Concept and Stages of Business Unit Promotion • Factors determining location. • Role of Govt. in Promotion of Business Units. • Statutory Requirements in Promoting Business Unit: Licensing and Registration Procedure, Filing returns and other documents, other important legal provisions.	**10 Lectures**
3	**Business Environment:** • Meaning, features, significance of Business Environment. • Micro environment - Internal & external environment. • Macro environment - Demographic, Natural, Political, Social, Cultural, Economic, Technological. Legal and International. • Competitive Environment - Meaning, International Environment - WTO - Objectives & Functions of WTO, Pros and Cons of WTO. • Major Trading Blocs (EU, ASEAN, SAARC & NAFTA) • Challenges faced by International Business.	**10 Lectures**
4	**Entrepreneurship:** • Entrepreneur - Definition & Characteristics • Entrepreneurship - Meaning, need, factors influencing entrepreneurship, Global perspective. • Role of Entrepreneurship in economic development. • Entrepreneurship training and development centers in India • Women Entrepreneurs - Problems and Promotion • Sunrise sectors of Indian economy, Investment Opportunities and Challenges for Indian Industries. • Start-up - Meaning, features, types and challenges. • Sources of funding for starting new businesses.	**13 lectures**

16) EVALUATION PATTERN:

a) Total Marks: 100 Marks (10 Point Grading)

b) Passing Criteria: 40 % (4 Grade Points)

c) Marking Scheme: 60:40 Pattern

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
Semester End Exam (SEE): Written Exam	60 Marks	24 Marks
Continuous Internal Assessment (CIA)	40 Marks	16 Marks
TOTAL	100 Marks	40 Marks

d) Mode of Evaluation of Answer-book: Online/Offline

17) PAPER PATTERN: 60 MARKS

Question No.	Particulars (Nature of Questions)	Marks
Q.1	(Module-I) Answer any 2 out of 3	**12**
Q.2	(Module-II) Answer any 2 out of 3	**12**
Q.3	(Module- III) Answer any 2 out of 3	**12**
Q.4	(Module-IV) Answer any 2 out of 3	**12**
Q.5	Write short notes on (Any 3 out of 4) Based on entire syllabus	**12**
	Total Marks	**60**

18) Continuous Internal Assessment (CIA) – 40 Marks Classification

ASSESSMENT	MARKS
Periodical Class Tests /Online test	20 Marks
PowerPoint Presentation / An assignment based on curriculum to be assessed by the concerned teacher.	15 Marks
Overall conduct as a responsible student,, mannerism , etc.	05 Marks

19) Learning Outcome:

After completion of the course, the student will be able to:

C01: Understand the nuances of business organization-its objectives, new trends, etc.

C02: Identify and utilize entrepreneurship opportunities

CO3: Compete in the contemporary job market successfully.

20) Reference:

- Ashwathapa K., Essentials of Business Environment, Himalaya Publication.
- Paul Justin, Business Environment, Tata McGraw Hill, 2008.
- Key John, Business Environment: Managing in a Strategic Context, Jaico Publication, 2006.
- Shukla M.B., Business Environment Text & Cases, Taxmann Publication, 2012.
- Butter David, Business Planning - A Guide to Business Start-up, Butterworth Heinemann 2003.
- Temani V.K .Service Marketing, Prism publication.
- Zeithmael, Valarie A., Service Marketing, Tata McGraw Hill Edn. 2011.
- Joseph P.T., E-Commerce in India. 9. Levy Michael, Weiz Barton A. Retailing Management, Tata McGraw Hill.
- Jha S.M., Service Marketing, Himalaya Publication.

COMMERCE DEPARTMENT

SEMESTER – II

COURSE DETAILS

1) **Programme Title:** Bachelor of Commerce.
2) **Duration of Programme:** 3 years
3) **Title of the Course: Introduction to Service. (Commerce - II)**
4) **Category of Course : Major - Core**
5) **Course Code:**
6) **Course Objective:**
   - To make students acquainted with the concept, scope and significance of service sector
   - To provide basic conceptual and applicative knowledge about the latest trends in service sector
   - To provide students with the intellectual exposure to growing organized retailing and consequent employment opportunities
   - To familiarize students with the concept and potentialities of e-commerce

6) Eligibility for admission: HSC/ 10+2

7) Duration of course: One semester

8) Intake capacity: 480 (4 divisions of 120 learners each)

9) Attendance: 75%

10) Total Credits: 3

11) Fee Structure:

12) Teacher's Qualification: M. Com. / with NET/SET with minimum B+ grade or equivalent with NET/SET/Ph.D. (Subject to reservation policy of the Government)

13) Per week Work-load of the Teacher: 3 lectures per week

14) Total modules: 4

15) Content:

MODULE	CONTENT	NO. OF LECTURES
1	**Introduction to Service Sector:** • Concept of Services, Characteristics. • Scope of Services. • Importance of Service Sector in Indian context. • Marketing Mix for services. • Consumer expectations. • Managing Demand & Capacity, Role of Customer Relationship Management in service marketing.	**10 Lectures**

2	**Retailing:** • Concept of Organized & Unorganized retailing. • Trends in retailing in India. • Survival strategies for unorganized retailers. • Retail formats. • Store planning, design & layout. • Mall management, retail franchising, FDI in retailing, Careers in retailing. • Legal & ethical aspects of retailing. • Case studies of successful retailers in India & worldwide.	**12 Lectures**
3	**Recent Trends in Service Sector:** • ITES Sector: Concept & Scope of BPO, KPO, LPO and ERP • Banking and Insurance Sector: ATM, Debit & Credit Cards, Internet Banking - Opening of Insurance Sector for private players, FDI and its impact on Banking and Insurance Sector in India • Logistics: Networking-Importance- Challenges	**12 Lectures**
4	**E-Commerce:** • E-Commerce - Concept, functions. • Benefits of E-Commerce. • Challenges of E-Commerce. • Internal payment system. • Business Models of E-Commerce. • Present Status of E-Commerce in India • Cyber security.	**11 lectures**

16) EVALUATION PATTERN:

a) Total Marks: 100 Marks (10 Point Grading)

b) Passing Criteria: 40 % (4 Grade Points)

c) Marking Scheme: 60:40 Pattern

MARKING SCHEME	**TOTAL MARKS**	**PASSING MARKS**
Semester End Exam (SEE): Written Exam	60 Marks	24 Marks
Continuous Internal Assessment (CIA)	40 Marks	16 Marks
TOTAL	100 Marks	40 Marks

d) Mode of Evaluation of Answer-book: Online/Offline

17) PAPER PATTERN: 60 MARKS

Question No.	**Particulars (Nature of Questions)**	**Marks**
Q.1	(Module-I) Answer any 2 out of 3	**12**
Q.2	(Module-II) Answer any 2 out of 3	**12**
Q.3	(Module- III) Answer any 2 out of 3	**12**
Q.4	(Module-IV) Answer any 2 out of 3	**12**
Q.5	Write short notes on (Any 3 out of 4) Based on entire syllabus	**12**
	Total Marks	**60**

18) Continuous Internal Assessment (CIA) – 40 Marks Classification

ASSESSMENT	MARKS
Periodical Class Tests /Online test	20 Marks
PowerPoint Presentation / An assignment based on curriculum to be assessed by the concerned teacher.	15 Marks
Overall conduct as a responsible student,, mannerism , etc.	05 Marks

19) Learning Outcome:

After completion of the course, the student will be able to:

C01: Understand the functioning of service sector

C02: Identify and utilize entrepreneurship opportunities

CO3: Visualize the possibilities of initializing viable start-ups

CO4: Compete in the contemporary job market successfully

20) Reference:

- Ashwathapa K., Essentials of Business Environment, Himalaya Publication.
- Paul Justin, Business Environment, Tata McGraw Hill, 2008.
- Key John, Business Environment: Managing in a Strategic Context, Jaico Publication, 2006.
- Shukla M.B., Business Environment Text & Cases, Taxmann Publication, 2012.
- Butter David, Business Planning - A Guide to Business Start-up, Butterworth Heinemann 2003.
- Temani V.K .Service Marketing, Prism publication.
- Zeithmael, Valarie A., Service Marketing, Tata McGraw Hill Edn. 2011.
- Joseph P.T., E-Commerce in India. 9. Levy Michael, Weiz Barton A. Retailing Management, Tata McGraw Hill.
- Jha S.M., Service Marketing, Himalaya Publication.

Commerce Department (Autonomous) Syllabus for S.Y.B. COM

SEMESTER-III
COMMERCE-III
COURSE DETAILS

1) Programme Title: Bachelor of Commerce (B.Com.)
2) Duration of programme: 3 Years
3) Title of the Course: MANAGEMENT: PRINCIPLES AND FUNCTIONS
4) Course Code : BC
5) Course Objective:

- To enlighten the learners about conceptual and evolution of management.
- To make learners aware of the functions of management and its applications
- To sensitize the learners about the contemporary business environment evolving due to application of management techniques and practices.

6) Eligibility for admission: FY BCOM
7) Duration of course: One Semester
8) Intake capacity: 480 (4 division of 120 learners each)
9) Attendance: Minimum 75%
10) Total Credits: 3 credits
11) Total Hours – 45 hours
12) Fee Structure:
13) Teacher's Qualification: M. Com with minimum B+ grade or equivalent with NET/SET/Ph.D. (Subject to reservation policy of the Government)
14) Per week Work-load of the Teacher: 3 lectures
15) Total modules: 04
16) Content:

Module I- Introduction to Management	Hours
1. Management – Meaning, Features and Significance of Management 2. i) Functions of Management (brief mention of Planning, Organizing, Directing and Controlling) ii) Co ordinating – Concept and Importance 3. Levels of Management – Managerial Skills- Role of Manager 4. Evolution of Management – A) Classical Approach i) F.W. Taylor's Scientific Management Concept and Principles ii) Henri Fayol's Principles of Management B) Human Relation Approach and Elton Mayo's Hawthorn Experiment C) Quantitative Approach D) Contemporary Approach Including System Theory and Contingency Theory	12
Module II- Planning and Decision Making	
1. Planning- Meaning, Features and Significance, Steps in Planning, Components Of Planning 2. MBO – Meaning, Advantages and Process 3. Management Information System – Meaning, Features and Components 4. Decision Making – Concept of Decision and Decision Making, Types of Decisions, Techniques of Decision Making, Essentials of Sound Decision Making, Steps in Decision Making	12
Module III- Organizing	
1. Organizing- Meaning of Organizing & Organization – Types of Organization- Formal and Informal, Span of Control- Meaning and Factors Determining Span of Control 2. Delegation – Meaning, Barriers to Delegation, Principles of Effective Delegation 3. Departmentation – Meaning and Base of Departmentation – Tall and Flat Organization 4. Forms of Organization – Line, Line & Staff and Matrix – Features, Conflicts and Resolution of Conflicts in Line & Staff Organization 5. Organization Structure – Meaning, Advantages and Limitations, Organization Chart, Emerging Organization Structure – Network organization and Virtual organization	11
Module IV- Directing and Controlling	
1. Concept of Directing and Leading- i) Leadership – Characteristic and Functions Of Leadership ii) Leadership Styles iii) Qualities of good leader iv) leader versus manager 2. Motivation – i) Concept, Features and Importance of Motivation ii) Factors Influencing Motivation iii) Process of motivation	10

3. Controlling – i) Meaning and Significance of Controlling ii) Characteristics of Control iii) Steps in Controlling iv) Essentials of Good Control System V) Techniques of Controlling, 4. Barriers of effective Communication	
Total	45

17)EVALUATION PATTERN:

a) Total Marks: 100 Marks (10 Point Grading)

b) Passing Criteria : 40 % (4 Grade Points)

c) Marking Scheme: 60:40 Pattern

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
Semester End Exam (SEE) : Written Exam	60 Marks	24 Marks
Continuous Internal Assessment (CIA) :	40 Marks	16 Marks
TOTAL :	100 Marks	40 Marks

d) Mode of Evaluation of Answer-book : Online/Offline

17) Paper Pattern:

Question No.	Particulars (Nature of Questions)	Marks
Q-1 (Module-I)	Answer any 2 out of 3	12
Q-2 (Module-II)	Answer any 2 out of 3	12
Q-3 (Module- III)	Answer any 2 out of 3	12
Q-4 (Module-IV)	Answer any 2 out of 3	12
Q-5	Write short notes on (Any 3 out of 4) Based on entire syllabus	12
Total		60

Continuous Internal Assessment (CIA) – 40 marks

classification

ASSESSMENT	MARKS
Periodical Class Tests /Online test	20 Marks
PowerPoint Presentation / An assignment based on curriculum to be assessed by the concerned teacher. Overall conduct as a responsible learner, active class participation in routine class instruction delivery etc	15 Marks 05 Marks
TOTAL	40 marks

18) Learning Outcome :

After completing the course, the learners shall be able:

CO1: To know the relevance of management and its trajectory of evolution in light of its modern era application

CO2: Equipped intellectually to practice modern management functions successfully

CO3: confidentendly apply various management techniques in different functional areas professionally.

19) Reference:

1. Koontz Harold & Weihrich Harold, 2017, "Essentials of Management- An International, Innovation, and Leadership Perspective", 10th Edition, McGraw Hill Education (India) Private Limited.
2. Aswathappa K & Ghuman Karminder, 2010, "Management- Concept, Practice & Cases", McGraw Hill Education (India) Private Limited.
3. Principles and Practice of Management by Dr. L. M. Prasad- Sultan Chand & Sons Management Theory & Practice by C.B. Gupta- Sultan Chand & Sons
4. PC Tripathi, PN Reddy, Ashish Bajpai, 2022, "Principles of management", 7th Editions", Mc Graw Hill Education (India) Private Limited.
5. Mintzberg, H. ,1990," The Manager's Job Folklore and Fact", Harvard Business Review
6. Fred Luthans, 2011," Organizational Behaviour", Mc Graw Hill/ Irwin
7. Harold Koontz, Heinz Weihrich,1988, "Management" 9th Edition, Mc Graw Hill Book Company.

ADVERTISING - I

COURSE DETAILS

1. Programme Title: Bachelor of Commerce.
2. Duration of programme: 3 years
3. Title of the Course: Advertising-I
4. Course Code : BC1036A
5. Course Objective:

1. To provide basic conceptual and applicative knowledge about advertising.
2. To develop the student's employability and interpersonal skills

6. Eligibility for admission: F.Y.B. Com
7. Duration of course: one semester
8. Intake capacity: 240 (2 divisions of 120 learners each)
9. Attendance: 75%
10. Total Credits: 3
11. Total Hours- 45hours
12. Fee Structure:
13. Teacher's Qualification: M. Com. / with NET/SET with minimum B+ grade or equivalent with NET/SET/Ph.D. (Subject to reservation policy of the Government)
14. Per week Work-load of the Teacher: 3 lectures per week
15. Total modules: 4
16. Content:

Module-I	Hours
Introduction to Advertising: Advertising: Concept, Characteristics, Evolution of Advertising, Active Participants, Benefits of advertising to all stakeholders. Integrated Marketing Communication (IMC): Concept, Elements, The Communication Process, Role of advertising within IMC during different stages of a Product's Life Cycle (PLC) Classification of Advertising: Geographic, Media, Target Audience and functions	11
Module-II	
Economic and Social Aspects of Advertising: A. Economic Aspects: Effect of advertising on consumer demand, Monopoly and Competition, Price. B. Social aspects: Ethical and social issues in advertising, positive and negative influence of advertising on Indian values and culture. Celebrity endorsement, and role of children in advertising. Social advertising Role of ASCI	12
Module-III	
Media in Advertising A. Conventional/Traditional Media - Print Media(newspapers, magazine, fliers. Advantages & Disadvantages - Broadcast media (TV, radio)(Advantages and Disadvantages) - Out of home /outdoor media(Advantages and Disadvantages) -(Posters, Billboards, Hoarding, Transit (Advantages and Disadvantages) B. Contemporary Media : Out of Home advertising-Blimps, balloons, drones, flags, Wraps, merchandise, event sponsorship, film advertising. Ariel Transit, Digital media-Significance of digital media, Limitations of Digital media, Internet advertising, Social media advertising. C. Special Purpose Advertising: Rural advertising, Political advertising-, Financial Advertising, Corporate Image advertising, Native Advertising, Green Advertising, Covert advertising, Surrogate advertising, Institutional Advertising, Primary Advertising, Advocacy advertising, Features of all the above special purpose advertising.	12
Module-IV	
Advertising Agency Features, Organizational structure of an ad agency, agency selection criteria, Agency Client relationship, Client Turnover, Agency accreditation, Types of Agencies Career Options, Freelancing Career Options - Graphics, Animation, Modelling, Dubbing.	10
Total	45

17) EVALUATION PATTERN:

a) Total Marks: 100 Marks (10 Point Grading)
b) Passing Criteria : 40 % (4 Grade Points)
c) Marking Scheme: 60:40 Pattern

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
Semester End Exam (SEE) : Written Exam	60 Marks	24 Marks
Continuous Internal Assessment (CIA) :	40 Marks	16 Marks
TOTAL :	100 Marks	40 Marks

d) Mode of Evaluation of Answer-book : Online/Offline 17) Paper Pattern:

Question No.	Particulars (Nature of Questions)	Marks
Q-1 (Module-I)	Answer any 2 out of 3	12
Q-2 (Module-II)	Answer any 2 out of 3	12
Q-3 (Module- III)	Answer any 2 out of 3	12
Q-4 (Module-IV)	Answer any 2 out of 3	12
Q-5	Write short notes on (Any 3 out of 4) Based on entire syllabus	12
Total		60

18)Continuous Internal Assessment (CIA) – 40 Marks Classification

ASSESSMENT	MARKS
Periodical Class Tests /Online test	20 Marks
PowerPoint Presentation / An assignment based on curriculum to be assessed by the concerned teacher. Overall conduct as a responsible learner, active class participation in routine class instruction delivery.	15 Marks 05 Marks
TOTAL	40 Marks

19) Learning Outcome:

After completion of the course, the student will be able to:

1. Students are expected to know the meaning of advertising and its importance to all stakeholders.
2. Students learn about the emergence of media as well as study about the technological advancements/ growth of media industry in India.
3. To explain the different forms of advertising and stimulate interest among students on the new trends in advertising
4. It aims to orient learners towards the practical aspects and techniques of advertising.
5. To provide insight about how organisations /ad agencies relay information through mass media to large segment of the viewers at the same time.
6. To explain the different forms of advertising and stimulate interest among students about the new trends in advertising.

20) References:

1. Advertising and Promotion: An Integrated Marketing Communications Perspective, 10th Edition.
2. Advertising Principles and Practice, 2012 - Ruchi Gupta – S.Chand Publishing.
3. Advertising, 10th Edition, Sandra Moriarty, Nancy D Mitchell, William D. Wells, 2010 Pearson
4. Contemporary Advertising, 15th Edition, William Arens, Michael Weigold and Christian Arens, Hill Higher Education, 2017.
5. Integrated Advertising, Promotion, and Marketing Communications, Kenneth E. Clow and Donald E. Baack, 5th Edition, 2012 – Pearson.
6. Kotler Philip and Eduardo Roberto, Social Marketing, Strategies for Changing PublicBehaviour, The Free Press, New York, 1989.
7. Kleppner's Advertising Procedure – Ron Lane and Karen King, 18th edition, 2011 – Pearson.
8. The Advertising Association Handbook - J. J. D. Bullmore, M. J. Waterson, 1983 - Holt Rinehart & Winston.
9. Advertising : Planning and Implementation, 2006 – Raghuvir Singh, Sangeeta Sharma Prentice Hall.
10. Advertising Management, 5th Edition, 2002 –Batra, Myers and Aaker – Pearson Education.

BUSINESS LAW - I

COURSE DETAILS

1) Programme Title: Bachelor of Commerce (B.Com.)
2) Duration of Programme: 3 Years
3) Title of the Course: Business Law- I
4) Semester: III
5) Course Code: BC1038
6) Course Objective:

- To provide a conceptual study about the framework of Indian Business Laws.
- To orient students about the legal aspects of business
- To familiarize the students with case law studies related to Business Laws

7) Category of Course: Generic Elective Course
8) Duration of course: One Semester
9) Intake capacity: 480 (4 divisions of 120 learners each)
10) Attendance: Minimum 75%
11) Total Credits: 3 credits
12) Total Hours – 60 hours
13) Fee Structure:
14) Teacher's Qualification: LLM / M.Com. with minimum B+ grade or equivalent with NET/SET/Ph.D. (Subject to reservation policy of the Government)
15) Per week Work-load of the Teacher: 4 lectures per week
16) Total modules: 4 modules

17) Content:

Module-I	Hours
Unit I: Indian Contract Act 1872 ➢ Contract – Definition of Contract and Agreement, Essentials of Valid Contract, Classification of Contracts. ➢ Offer and Acceptance – Rules of valid offer and acceptance, Counter offer, standing or open offer, distinguish between offer and invitation to offer. ➢ Concept of Communication and Revocation of offer and acceptance (sec. 3,5) Capacity to Contract (S. 10-12) – Minor, Unsound Mind, Disqualified Persons. ➢ Consideration (S. 2 & 25) – Concept and Importance of consideration, Legal rules of Consideration, Exceptions to the Rule, 'No Consideration No Contract'(Ss. 25) Unlawful Consideration (S 23)Consent (Ss.13, 14-18, 39.53, 55, 66)-Agreements in which consent is not free - Coercion, Undue Influence, Misrepresentation Fraud, Mistake. ➢ Void Agreements (S. 24-30) – Concept, Void Agreements under Indian Contract Act. Contingent Contract (S. 31), Quasi Contract (S.68-72), Concept of E-Contract & Legal Issues in formation and discharge of E-Contract. ➢ Concept of Performance of Contract (S 37) Modes of Discharge of Contract, Remedies on breach of Contract.(73-75) Law of Indemnity & Guarantee (Ss. 124-125, Ss. 126-129, 132- 147) – Concept, Essentials elements of Indemnity and Guarantee, Contract of Indemnity vs. Guarantee, Modes of Discharge of Surety.	15
Module -II	
UNIT II- SPECIAL CONTRACT ➢ Law of Indemnity & Guarantee (Ss. 124-125, Ss.126-129, 132- 147) – Concept, Essentials elements of Indemnity and Guarantee, Contract of Indemnity vs. Guarantee, Modes of Discharge of Surety. ➢ Law of Bailment (S. 148, 152-154, 162, 172, 178, 178A, 179) – Concept, Essentials of Bailment, Kinds of Bailment, Rights and Duties of Bailor and Bailee, Law of Pledge – Concept, Essentials of valid Pledge, Lien - concept, Difference between Pledge and Lien, Rights of Pawnor & Pawnee. (Ss.173, 174, 177) ➢ Law of Agency (Ss. 182-185, 201-209) – Concept, Modes of creation of Agency, Modes of termination of Agency, Right s & Duties of Principal and Agent.	15

Module III	
Unit III: Sale of Goods Act 1930 ➢ Contract of Sale (S.2) – Concept, Essentials elements of contract of sale, Distinction between Sale and Agreement to sell (S.4) Distinguish between Sale and Hire Purchase Agreement, Types of Goods. Effects of destruction of Goods (Ss. 6,7.8). ➢ Conditions & Warranties (Ss. 11-25 & 62, 63) – Concept, Distinguish between Conditions and Warranties, Implied Conditions & Warranties, Concept of Doctrine of Caveat Emptor – Exceptions. ➢ Property – Concept , Rules of transfer of property (Ss. 18-26) Unpaid Seller (Ss. 45-54, 55 & 56)- Concept, Rights of an unpaid seller, Remedies for Breach of contract of Sale (Ss. 55-61),Auction sale – Concept, Legal Provisions. (S. 64)	15
Module-IV	
Unit -IV: The Negotiable Instrument Act (Amended) 2015 & 2018 ➢ Negotiable Instruments – Concept (S13), Characteristics, Classification of Negotiable Instruments (Ss. 11, 12, 17-20, 42, 43, 104,134,135) Maturity of Instruments. ➢ Promissory Note and Bill of Exchange (Ss. 4,5, 108-116)- Concept, Essentials of Promissory Note, Bill of Exchange (Ss. 4,5), Essential features of promissory note and Bill of exchange, Kinds Promissory note and Bill of exchange, Cheque (S.6)– Concept, Types & Crossing of Cheque, Distinguish between Bill of Exchange & Cheque, Dishonour of Cheque – Concept & Penalties (Ss. 138, 139,142) ➢ Miscellaneous Provisions (S. 8-10, 22, 99-102, 118-122, 134-137) –Parties to Negotiable instruments Holder, Holder in due course, Rights & Privileges of Holder in due course, Payment in due course, Noting & Protest (99-104A)	15
Total	60

18) EVALUATION PATTERN:

a Total Marks: 100 Marks (10 Point Grading)

b Passing Criteria: 40 % (4 Grade Points)

c Marking Scheme: 60:40 Pattern

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
Semester End Exam (SEE) : Written Exam	60 Marks	24 Marks
Continuous Internal Assessment (CIA) :	40 Marks	16 Marks
TOTAL :	100 Marks	40 Marks

d Mode of Evaluation of Answer-book: Online/Offline

19) Paper Pattern:

Question No.	Particulars (Nature of Questions)	Marks
Q-1 (Module-I)	Answer any 2 out of 3	12
Q-2 (Module-II)	Answer any 2 out of 3	12
Q-3 (Module- III)	Answer any 2 out of 3	12
Q-4 (Module-IV)	Answer any 2 out of 3	12
Q-5	MCQ/TRUE OR FALSE/MATCH THE FOLLOWING OR Write short notes on (Any 3 out of 4) Based on entire syllabus	12
Total		60

19) **Continuous Internal Assessment (CIA) – 40 Marks Classification**

ASSESSMENT	MARKS
Group Discussion/Periodical Class Tests /Online test/ Problem solving exercises/ Case Presentations	20 Marks
An assignment based on curriculum to be assessed by the teacher concerned through observation of practical skills through case laws and viva - voce interviews.	15 Marks
Active participation in routine class instructional deliveries	05 Marks
TOTAL :	40 marks

20)Learning Outcome:

After completing the course, the student shall be able to:

CO1: understand the regulatory aspects and the broader procedural aspects involved in different types of contracts and Rules there under.

CO2: follow the basic legal documents and their usage essential for business operations and contractual obligations

CO3: enable the students to synthesis the legal aspects of sale of goods and negotiable instruments

21) References:

1. Avatar Singh. (2020). Law of Contract. Eastern Book Company.
2. M.C.Kucchal. (2020). Merchantile Law
3. N.D.Kapoor. (2018). Business Law
4. Nilima Chandiramani. (2000). The Law of Contract: An Outline. Avinash Publications.
5. Nilima Chandiramani. (1999). Law of Sale of Goods and Partnership: A Concise Study.
6. P. Ramanatha Aiyar. (2016). The Sale of Goods Act. University Book Agency.
7. Bhashyam & Adiga. (2020). The Negotiable Instruments Act. Bharat Law House.
8. Avatar Singh. (2020). The Negotiable Instruments Act. Eastern Book Company
9. Khergamvala. (2017). The Negotiable Instruments (Amendment) Act, 2015. Lexis Nexis

COMPANY LAW -I
COURSE DETAILS

1) Programme Title: Bachelor of Commerce (B.Com.)
2) Duration of Programme: 3 Years
3) Title of the Course: Company Law- I
4) Semester: III
5) Course Code : BC1037
6) Course Objective:

   To impart basic knowledge of the provisions of the Companies Act 2013. Case studies involving issues in corporate laws are required to be discussed.

7) Category of Course: Generic Elective Course
8) Duration of course: One Semester
9) Intake capacity: 480 (4 divisions of 120 learners each)
10) Attendance: Minimum 75%
11) Total Credits: 3 credits
12) Total Hours – 60 hours
13) Fee Structure:
14) Teacher's Qualification: LLM / M.Com. with minimum B+ grade or equivalent with NET/SET/Ph.D. (Subject to reservation policy of the Government)
15) Per week Work-load of the Teacher: 4 lectures per week
16) Total modules: 4 modules

Module-I	Lectures
Unit I: Introduction Meaning and characteristics of a company; Lifting of corporate veil; Administration of Company Law [including National Company Law Tribunal (NCLT), National Company Law Appellate Tribunal (NCLAT), Special Courts]; Types of companies including private and public company, government company, foreign company, one person company, small company, associate company, dormant company and producer company; Association not for profit; Illegal association; Formation of company, promoters, their legal position and pre incorporation contracts; Online registration of a company.	15
Module-II	
Unit II: Documents and shares Memorandum of Association and its alteration, Articles of Association and its alteration, doctrine of constructive notice, doctrine of ultra vires and indoor management; Prospectus, Shelf and Red herring prospectus, misstatement in prospectus; book building; Allotment and Forfeiture of share, Sweat Equity, ESOPs, Bonus issue, and Further issue of shares, buyback and provisions regarding buyback; Membership of company.	15

Module-III	
Unit -III: Management Classification of directors-Additional, Alternate and Casual directors, Women directors, Independent director, Small shareholder's director; Director Identity Number (DIN); Appointment, Disqualifications, Removal of directors; Legal positions, Powers and Duties; Key managerial personnel, Managing director, Manager and Whole Time Director MEETINGS: Statutory Meeting.Annual general Meeting. Extraordinary general meeting. General provisions relating to meetings: notice of the meeting. Quorum. Chairman. Voting. Proxy. Resolutions.Minutes	15
Module -IV	
DEVIDEND & ACCOUNTSSS, AUDIT AND AUDITORS. MEANING & PAYMENT, CAPITALIZATION-PROFIT. Accounts and books of account. Appointment of auditors. Qualification of an auditor. Restrictions on the number of auditorships. Remuneration of auditors. Removal of auditors. Rights, duties and liabilities of an auditor. Cost of audit. Audit committee. Corporate Social Responsibility(CSR). WINDING UP OF COMPANIES. What is winding up.modes of winding up. Contributories.winding up by the Tribunal.(compulsory winding up). Grounds of compulsory winding up. Persons how can file a winding up petition. Powers of the Tribunal. Powers and duties of the Company Liquidator.the Official Liquidator and summary procedure for winding up. Winding up subject to the supervision of the Court.(under the 1956 Act). winding up unregistered companies. Consequences of winding up. dissolution.	15
Total	60

17) EVALUATION PATTERN:

a) Total Marks: 100 Marks (10 Point Grading)

b) Passing Criteria : 40 % (4 Grade Points)

c) Marking Scheme: 60:40 Pattern

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
Semester End Exam (SEE) : Written Exam	60 Marks	24 Marks
Continuous Internal Assessment (CIA) :	40 Marks	16 Marks
TOTAL :	100 Marks	40 Marks

d) Mode of Evaluation of Answer-book: Online/Off-line

18) Paper Pattern:

a. SEMESTER END EXAM (SEE): (60 Marks, Passing 24 Marks)

b) Continuous Internal Assessment (CIA) (40 Marks, Passing 16 Marks)

Question No.	Particulars (Nature of Questions)	Marks
Q-1 (Module-I)	Answer any 2 out of 3	12
Q-2 (Module-II)	Answer any 2 out of 3	12
Q-3 (Module- III)	Answer any 2 out of 3	12
Q-4 (Module-IV)	Answer any 2 out of 3	12
Q-5	MCQ/TRUE OR FALSE/MATCH THE FOLLOWING OR Write short notes on (Any 3 out of 4) Based on entire syllabus	12
Total		60

ASSESSMENT	MARKS
Group Discussion/Periodical Class Tests /Online test/ Problem solving exercises/ Case Presentations	20 Marks
An assignment based on curriculum to be assessed by the teacher concerned through observation of practical skills through case laws and viva-voce interviews.	15 Marks
Active participation in routine class instructional deliveries	05 Marks
TOTAL	40 Marks

19) Course Outcomes:

After completing the course, the student shall be able to:

CO1: understand the regulatory aspects and the broader procedural aspects involved in different types of companies covering the Companies Act 2013 and Rules there under.

CO2: follow the basic legal documents and their usage essential for operations and management of company.

CO3: enable the students to synthesis company processes & decisions

20) References:

- Hicks, Andrew & Goo S.H., (2017) Cases and Material on Company Law, Oxford University Press.
- Sharma, J.P.(2018). An Easy Approach to Corporate Laws, Ane Books Pvt. Ltd., New Delhi
- Kumar, A., (2019) Corporate Laws, Taxmann Pvt Ltd
- Chadha R. & Chadha, S.(2018). Company Laws. Scholar Tech Press, Delhi. The Depositories Act,1996.Bare Act.

Additional Resources

- Gowar, LCB. (1969). Principles of Modern company Law, Stevens & Sons, London.
- Ramaiya. (2015). A Guide to Companies Act. Nagpur. Wadhwa Book Company.
- Hanningan, Brenda.(2018). Company Law, Oxford University Press, U.K.

SEMESTER IV

COMMERCE – IV

COURSE DETAILS

1) Programme Title: Bachelor of Commerce (B.Com.)
2) Duration of programme: 3 Years
3) Title of the Course:: FUNDAMENTALS OF FINANCE AND QUALITY
4) Course Code :
5) Course Objective:
   - To acquaint the learners with the basic concepts of Quality Management and financial management
   - To Enlighten learners about the basic framework of indian financial system
   - To make learners aware about the emerging trends in finance
6) Eligibility for admission: FY BCOM
7) Duration of course: One Semester
8) Intake capacity: 480 (4 division of 120 learners each)
9) Attendance : Minimum 75%
10) Total Credits: 3 credits
11) Total Hours – 45 hours
12) Fee Structure:
13) Teacher's Qualification : M. Com with minimum B+ grade or equivalent with NET/SET/Ph.D. (Subject to reservation policy of the Government)
14) Per week Work-load of the Teacher : 3 lectures
15) Total modules: 04
16) Content

Module I- Introduction to Financial Concepts	Hours
1. Financial Management – Meaning, Objective, Functions 2. Financial Planning – Need, Objective, Significance, Essential of A Sound Financial Plan 3. Indian Financial System- Concepts, Functions, Role 4. Challenges Faced in The Financial Sector, Weakness of The Indian Financial System, Components of The Indian Financial System 5. Financial Inclusion	12
Module II – Financial Market & Regulatory Framework	
1. Financial Markets- Introduction, Role of financial market, structure - money market- organized market and unorganized market, money market instruments, capital market – primary market and secondary market, Reasons for growth in capital market, IPO- concept, procedure 2. Dematerialization- Concept, Process, Importance of Depository System 3. SEBI- Objective, Power, Functions, Investor Protection Measures of SEBI, Stock Exchange- Concept, Functions, Speculators, Meaning, Kinds 4. Credit Rating Agencies- Concept, Functions, Advantages, Credit Rating Agencies- CRISIL & CARE	12
Module III – Recent Trends in Finance Asset Management	
1. Mutual Funds- Concepts, Advantages, Limitations, Types, Factors Responsible for Growth of Mutual Funds, SIP, Alternative Investment Funds (AIF) 2. Portfolio Management Service (PMS) 3. Derivatives Market- Meaning, Participants, Types 4. Commodity Market – Meaning, Types 5. Fintech in financial services, Fintech industry segments 6. Start Up Ventures – concept, sources of funds 7. Sweat Equity Shares, ESOP	11
Module IV – Introduction to Quality Management	
1. Introduction to Quality: Dimensions of Quality 2. Quality Circle: Meaning, Features. 3. Quality Management Tools: TQM –Meaning, Importance. Six Sigma–Meaning, characteristics, steps, ISO 9000 – Meaning, Procedure to obtain certification, Kaizen- Meaning, process 4. Service Quality Management: Concept and Importance.	10

5. SERVQUAL Model: Measures to improve service quality.	
Total	45

17)EVALUATION PATTERN:

e) Total Marks: 100 Marks (10 Point Grading)

f) Passing Criteria : 40 % (4 Grade Points)

g) Marking Scheme: 60:40 Pattern

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
Semester End Exam (SEE) : Written Exam	60 Marks	24 Marks
Continuous Internal Assessment (CIA) :	40 Marks	16 Marks
TOTAL :	100 Marks	40 Marks

h) Mode of Evaluation of Answer-book : Online/Offline

18) Paper Pattern:

Question No.	Particulars (Nature of Questions)	Marks
Q-1 (Module-I)	Answer any 2 out of 3	12
Q-2 (Module-II)	Answer any 2 out of 3	12
Q-3 (Module- III)	Answer any 2 out of 3	12
Q-4 (Module-IV)	Answer any 2 out of 3	12
Q-5	Write short notes on (Any 3 out of 4) Based on entire syllabus	12
Total		60

Continuous Internal Assessment (CIA) – 40 marks classification

ASSESSMENT	MARKS
Periodical Class Tests /Online test	20 Marks
PowerPoint Presentation / An assignment based on curriculum to be assessed by the concerned teacher. Overall conduct as a responsible learner, active class participation in routine class instruction delivery etc	15 Marks 05 Marks
TOTAL	40 marks

19) Learning Outcome :

After completing the course, the learners shall be able:

CO1: Well equipped to comprehend various quality management processes and techniques adopted by companies.

CO2: Equipped intellectually to practise financial activities with full knowledge of various regulators and market players successfully

C03: capable to make use of various financial opportunities to invest and raise funds effectively and profitably.

CO4: confidently apply various management techniques in different functional areas professionally.

20) REFERENCES:

1.Bharathi Pathak,2014, Indian Financial System, Pearson Publication

2. L.M.Bhole, Jitendra Mahakad, 2017,Financial Institutions and Markets: Structure Growth & Innovations–Tata McGraw Hill.

3.Vasant Desai, 2016, The Indian Financial System and Financial Market Operator- Himalaya Publishing

4. M.Y.Khan,2013, Indian Financial System–Tata McGraw–Hill

5. Nalini Prava Tripathy, 2007, Mutual Funds in India: Emerging Issues Excel Books New Delhi.

6.Strategic Quality Management- Issues & Perspectives by Ch. Venkataiah- Himalaya Publishing House

7. Quality Management by Bindiya Goyal- Himalaya Publishing House

8. H.R. Machiraj, 2018, "Indian Financial System", 5th edition, Vikas Publication House

9. I.M. Pandey, 2021, "Financial Management", 12th Edition, Pearson Education.

10. Adam Durchslag, Thomos Reuters, 2011, " Asset Management – Tools and Strategies", Bloomsburg Information.

ADVERTISING -II
COURSE DETAILS

1) Programme Title: Bachelor of Commerce.
2) Duration of programme: 3 years
3) Title of the Course: Advertising-II
4) Course Code : BC1046A
5) Course Objective:

- It identifies creativity relevant to selected media, to orient learners towards the practical aspects and techniques of advertising.
- It is expected that this course will prepare learners to lay down a foundation for advanced post-graduate courses in advertising.
- It would motivate students to consider career options in the field of advertising.

6) Eligibility for admission: S.Y.B. Com
7) Duration of course: one semester
8) Intake capacity: 240 (2 divisions of 120 learners each)
9) Attendance: 75%
10) Total Credits: 3
11) Total Hours – 45 hours
12) Fee Structure:
13) Teacher's Qualification: M. Com. / with NET/SET with minimum B+ grade or equivalent with NET/SET/Ph.D. (Subject to reservation policy of the Government)
14) Per week Work-load of the Teacher: 3 lectures per week
15) Total modules: 4
16) Content:

Module-I	Hours
Planning advertising Campaign Advertising Campaign- Concept, need, steps in planning campaign, determining advertising objectives-AIDA and DAGMAR model. Advertising budget – Meaning, factors to be considered for advertising budget, methods of setting advertising budgets (Fixed Guideline method, Task Method, Subjective method) Media Planning- Meaning, Process, factors to be considered while selecting media, media scheduling strategies.	12
Module-II	
Fundamentals of Creativity in Advertising Creativity- Concept and Importance, Creative brief, Visualisation - Meaning, techniques. Selling Points – Meaning, Features. Advertising Appeals – Meaning, essentials, Types. Buying Motives – Meaning, USP High Involvement Products, Low Involvement Products- meaning, features. Creativity through Endorsements: Endorsers, types-advantages and disadvantages	11
Module-III	
Execution of Advertising Preparing print ads: Essentials of Copywriting, Copy – Elements, Types, Layout- Principles, Illustration - Importance. types Creating broadcast ads: Execution Styles, Jingles and Music Importance, Concept of Storyboard	12
Module-IV	
Evaluation of Advertising Pre-testing & Post testing advertising effectiveness – Meaning, Objectives Pre-testing methods- Checklist, Consumer Jury, Sales Test Area, Portfolio Test, Projective Techniques. Post-testing Methods – Readership Survey Method, Recognition & Recall Test, Inquiry & Coupon Response Method, Attitude & Opinion Test	10
Total	45

17) EVALUATION PATTERN:

i. Total Marks: 100 Marks (10 Point Grading)

ii. Passing Criteria : 40 % (4 Grade Points)

iii. Marking Scheme: 60:40 Pattern

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
Semester End Exam (SEE) : Written Exam	60 Marks	24 Marks
Continuous Internal Assessment (CIA) :	40 Marks	16 Marks
TOTAL :	100 Marks	40 Marks

iv. Mode of Evaluation of Answer-book : Online/Offline

18) Paper Pattern:

Question No.	Particulars (Nature of Questions)	Marks
Q-1 (Module-I)	Answer any 2 out of 3	12
Q-2 (Module-II)	Answer any 2 out of 3	12
Q-3 (Module- III)	Answer any 2 out of 3	12
Q-4 (Module-IV)	Answer any 2 out of 3	12
Q-5	Write short notes on (Any 3 out of 4) Based on entire syllabus	12
Total		60

Continuous Internal Assessment (CIA) – 40 marks

classification

ASSESSMENT	MARKS
Periodical Class Tests /Online test	20 Marks
PowerPoint Presentation / An assignment based on curriculum to be assessed by the concerned teacher. Overall conduct as a responsible learner, active class participation in routine class instruction delivery etc	15 Marks 05 Marks
TOTAL	40 marks

19) Learning Outcome:

After completion of the course, the student will be able to:

1. Learn the practical aspects and techniques of advertising.
2. To lay down a foundation for their careers related to advertising and marketing.

20)REFERENCES:

1. Belch, G. E., & Belch, M. A. (2017), Advertising and promotion: An integrated marketing communications perspective, 11th Edition, Boston: McGraw-Hill.
2. Raghuvir Singh, Sangeeta Sharma (2006), Advertising: Planning and Implementation, Prentice Hall
3. Batra, Myers and Aaker, (2008), Advertising Management, 5th Edition, – Pearson Education
4. Ruchi Gupta, (2012), Advertising Principles and Practice – S. Chand Publishing 5. Kotler Philip and Eduardo Roberto, Social Marketing, Strategies for Changing Public Behaviour, The Free Press, New York, 1989.
5. Kleppner's Advertising Procedure – Ron Lane and Karen King, 18th edition, 2011 Pearson.

BUSINESS LAW -II
COURSE DETAILS

1) Programme Title: Bachelor of Commerce (B.Com.)
2) Duration of Programme: 3 Years
3) Title of the Course: Business Law- II
4) Semester: IV
5) Course Code: BC1048
6) Course Objective:

- To provide a conceptual stuy about the framework of Indian Business Laws.
- To orient students about the legal aspects of business
- To familiarize the students with case law studies related to Business Law

Category of Course: Generic Elective Course

7) Duration of course: One Semester
8) Intake capacity: 480 (4 divisions of 120 learners each)
9) Attendance: Minimum 75%
10) Total Credits: 3 credits'
11) Total Hours – 60 Hours
12) Fee Structure:
13) Teacher's Qualification: LLM / M.Com. with minimum B+ grade or equivalent with NET/SET/Ph.D. (Subject to reservation policy of the Government)
14) Per week Work-load of the Teacher: 4 lectures per week
15) Total modules: 4 modules
16) Content:

Module-I	Hours
Unit I: The Partnership Act 1932 (Inclusive of Limited Liability Partnership Act 2008) ➢ Partnership – Concept, Essentials, True Test of Partnership, Partnership Deed, Types of Partnership, Rights and Duties of Partners, Distinguish between Partnership & Hindu Undivided Family (HUF). ➢ Dissolution – Concept, Modes of Dissolution, Consequences of Dissolution. ➢ Limited Liability Partnership (LLP) 2008 – Concept, Characteristics, Advantages & Disadvantages, Procedure for Incorporation. ➢ Extent of L.L.P.- Conversion of LLP, Mutual rights & duties of partners, Winding up of LLP, Distinction between LLP and Partnership	15
Module-II	
Unit II: Consumer Protection Act 1986 & Competition Act 2002 ➢ Consumer Protection Act – Concept , Objects, Reasons for enacting the Consumer Protection Act, Definition of Consumer, Consumer Dispute, Complaint, Complainant, Defect, Deficiency, Consumer Dispute, Unfair Trade Practices, Goods and Services. Consumer Protection Councils & Redressal Agencies – District, State & National. ➢ Competition Act 2002 – Concept, Salient Features, Objectives & Advantages. Abuse of Dominant Position, Competition Commission of India, Anti Competition Agreements	15
Module-III	
Unit -III: Intellectual Property Rights ➢ Intellectual Property Right (IPR) – Concept, Nature, Introduction & background of IPR in India. ➢ IPR relating to Patents – Concepts of Invention and discovery, Comparison (S2 (j)), Concept of Patents, General principles applicable to working of patented inventions, Term of Patent. Infringement of Patent Rights & Remedies. (Ss. 104-115) ➢ IPR relating to Copyrights- Concept of Copyright (Ss. 14, 16, 54,) Concept of author and authorised acts, (S.2) Ownership of Copy right (S.17) Duration or term of Copy right. (S. 22-27), Original work and fair use, Rights of Copyright holder, Infringement of Copyrights & Remedies. (Ss. 51, 52) ➢ IPR relating to Trademarks –Concept, Functions of Trade Mark, types, trademarks that cannot be registered, Registration of Trade Marks and rights of the proprietor of Trade Marks. Procedure for registration of Trade Marks., Infringement of Trademarks & Remedies.	15

Module IV	
➢ Protection Of Investors And Creditors, Need Of Protection, Protection And Rights Of Creditors. Protection Of Investors. ➢ Rights Of Shareholders & Members. Majority Power And Minority Rights, Administrative Regulation On Corporate Finance, Security Exchange Board Of India (Sebi), Central Government Control. Control By Registrar Of Companies. Control By Company Law, Board. Prevention Of Oppression And Mismanagement, Oppression, Mismanagement Preventive Measures, Powers Of Company Law Board. Powers Of Central Government.	15
Total	60

17)EVALUATION PATTERN:

- Total Marks: 100 Marks (10 Point Grading)
- Passing Criteria: 40 % (4 Grade Points)
- Marking Scheme: 60:40 Pattern

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
Semester End Exam (SEE) : Written Exam	60 Marks	24 Marks
Continuous Internal Assessment (CIA) :	40 Marks	16 Marks
TOTAL :	100 Marks	40 Marks

- Mode of Evaluation of Answer-book : Online/Offline

18)Paper Pattern:

Question No.	Particulars (Nature of Questions)	Marks
Q-1 (Module-I)	Answer any 2 out of 3	12
Q-2 (Module-II)	Answer any 2 out of 3	12
Q-3 (Module- III)	Answer any 2 out of 3	12
Q-4 (Module-IV)	Answer any 2 out of 3	12
Q-5	MCQ/TRUE OR FALSE/MATCH THE FOLLOWING OR Write short notes on (Any 3 out of 4) Based on entire syllabus	12
Total		60

19)Continuous Internal Assessment (CIA) – 40 Marks Classification

ASSESSMENT	MARKS
Group Discussion/Periodical Class Tests /Online test/ Problem solving exercises/ Case Presentations	20 Marks
An assignment based on curriculum to be assessed by the teacher concerned through observation of practical skills through case laws and viva - voce interviews.	15 Marks
Active participation in routine class instructional deliveries	05 Marks
TOTAL :	40 marks

20)Learning Outcome:

After completing the course, the student shall be able to:

CO1: understand the regulatory aspects and the broader procedural aspects involved in different types of Intellectual Property Rights (IPR) and Rules there under.

CO2: follow the basic legal documents and their usage essential for business operations and contractual obligation under Competition Act 2002 &Limited Liability Partnership Act 2008

CO3: enable the students to synthesis the legal aspects of Consumer Protection Act 1986, Competition Act 2002 and Intellectual Property Rights.

21)References:

1. Nilima Chandiramani. (1999). Law of Sale of Goods and Partnership: A Concise Study. Shroff Publishers.
2. Vikas Vashishth. (2006). Law and practice of Intellectual Property in India. Bharat Law House.
3. Avatar Singh. (2018). Law of Partnership along with Limited Liability Partnership. Eastern Book Company.
4. B.L.Wadhera. (2010). Laws Relating to Intellectual Property. Universal Law Publishing Co.
5. V.K.Agarwal. (2016). Consumer Protection Law and Practice. Bharat Law House.
6. Avatar Singh. (2012). Competition Law. Eastern Book Company
7. T. Ramappa. (2014). Competition Law in India. Oxford University Press.
8. P. Narayan. (2018). Intellectual Property Rights. Eastern Law House

Cyber Crime & Laws -I

COURSE DETAILS

1) Title of the Course: Cyber Crimes & Laws -I
2) Course Code : BCH-III-CYLAW1
3) Course Objective: I t would create an understanding towards the cyber-c rimes and to familiarize the students with the application of cyber laws in business.
4) Course Outcome (CO) :

After completing the course, the student shall be able to:

CO1: identify cyber risk associated with online activities

CO2: prepare them for safe working in the vertical having varied access points, data sources, network and system related issues, especially in online transactions.

CO3: generate and preserve electronic evidences for personal and professional use. CO4: work in virtual space safely and with business process or products confirming to the regulatory framework and not falling under the ambit of cyber-crimes.

CO5: analyse the cases and find pertinent facts for resolutions

5) Category of Course : Generic Elective Course
6) Semester : IV
7) Total Hours: 60 hours
8) Total Credits: 3 credits
9) Total Modules - 4
10) Evaluation Pattern :

a. Total Marks: 100 Marks (10 Point Grading)
b. Passing Criteria : 40 % (4 Grade Points)
c. Marking Scheme: 60:40 Pattern

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
Semester End Exam (SEE) : Written Exam	60 Marks	24 Marks
Continuous Internal Assessment (CIA) :	40 Marks	16 Marks
TOTAL :	100 Marks	40 Marks

d) Mode of Evaluation of Answer-books: Online/Offline

e) Paper Pattern: SEMESTER END EXAM (SEE): (60 Marks, Passing 24 Marks)

Question No.	Particulars (Nature of Questions)	Marks
Q-1 (Module-I)	Answer any 2 out of 3	12
Q-2 (Module-II)	Answer any 2 out of 3	12
Q-3 (Module- III)	Answer any 2 out of 3	12
Q-4 (Module-IV)	Answer any 2 out of 3	12
Q-5	MCQ/TRUE OR FALSE/MATCH THE FOLLOWING OR Write short notes on (Any 3 out of 4) Based on entire syllabus	12
Total		60

f) Continuous Internal Assessment (CIA) (40 Marks, Passing 16 Marks)

ASSESSMENT	MARKS
Group Discussion/Periodical Class Tests /Online test/ Problem solving exercises/ Case Presentations	20 Marks
An assignment based on curriculum to be assessed by the teacher concerned through observation of practical skills through case laws and viva-voce interviews.	15 Marks
Active participation in routine class instructional deliveries	05 Marks
TOTAL	40 Marks

11) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED	Hours
I	Cyber Crimes and Contemporary Business Issues in Cyber Space	Introduction- Computer crime and cyber-crimes; Distinction between cyber- crime and conventional crimes; Kinds of cyber-crimes- cyber stalking, cyber terrorism, forgery and fraud, crimes related to IPRs, computer vandalism, cyber forensic. Definitions under IT Act, 2000; Concept of Internet, Web Centric Business, E Business and its significance, Electronic Governance, Instant messaging platform, social networking sites and mobile applications, security risks, Internet of Things (IOT), Cyber jurisdiction, Domain name dispute and their resolution, E-forms; E- Money, regulations of PPI (Pre-Payment Instruments) by RBI, Electronic Money Transfer, Privacy of Data and Secure Ways of Operation in Cyber Space	15
II	Electronic Records and Cyberspace jurisdiction	Authentication of Electronic Records; Legal Recognition of Electronic Records; Legal Recognition of Digital Signatures; Applications and usage of electronic records and Digital Signatures in Government and its Agencies; Retention of Electronic Records, Intermediaries and their liabilities ; Attribution, Acknowledgement and Dispatch of Electronic Records; Secure Electronic Records and Digital Signatures. Cyberspace Jurisdiction Jurisdiction Issues Under It Act,2000 Traditional Principles Of Jurisdiction.Extra Terrestrial Jurisdiction. Case Laws On Cyberspace Jurisdiction	15
III	E-Commerce And Laws In India.	E-Commerce And Laws In India. Digital Electronic Signature In Indian Laws E-Commerce: Issues And Provisions In Indian Law E-Governance; Concepts And PracticabilityIn India. E-Taxation Issues In Cyberspace. E-Contract And Its Validity In India. Cyber Tribunal & Appellate Tribunal Cyber Regulations.	15

IV	Intellectual Property Rights	Intellectual Property Rights, Domain Names And Trade Mark Disputes. Concept Of Trademark In Internet Era. Cyber Squatting. Reverse Hijacking. Jurisdiction In Trademark Disputes. Copyright In The Digital Medium. Copyright In Computer Programmes. Copyright And Wipo Treaties. Concept Of Patent Right. Relevant Provisions Of Patent Act, 1970	15
	TOTAL		60

12) References:

- Brian, Craig. (2012). Cyber Law: The Law of the Internet and Information Technology. Pearson Education.
- Sharma J. P., and Kanojia, S. (2018).E Business and Cyber Laws. New Delhi. Bharat Law house Pvt Ltd.
- Rattan J, (2015)Cyber Crime and Information Technology, Bharat Law House, Pvt Ltd. Arora, S. and Arora R. (2017), Cyber crimes and laws, Taxmann Pvt Ltd, New Delhi.
- Additional Resources
- Information Technology Rules & Cyber Regulations Appellate Tribunal Rules with Information Technology Act 2000. Taxmann Publications Pvt. , New Delhi.
- Painttal, D. (2016) Law of Information Technology, New Delhi: Taxmann Publications Pvt. Ltd.
- Dietel, Harvey M., Dietel, Paul J., and Steinbuhler, Kate. (2001). E- business and E-commerce for managers. Pearson Education.
- Joseph, P.T. (2015). E-Commerce-An Indian Perspective. PHI

COMMERCE DEPARTMENT

SEMESTER – VI

COURSE DETAILS

1) **Programme Title:** Bachelor of Commerce.
2) **Duration of Programme:** 3 years
3) **Title of the Course: Export Marketing**
4) **Category of Course :**
5) **Course Code:** BC1066A
6) **Course Objective:**
   - To familiarize learners with the fundamentals of export pricing
   - To introduce learners to the global network of export distribution coupled with the promotional techniques
   - To enlighten learners about various export finance options and make them accustomed with procedures and documentation

6) Eligibility for admission: SY.BCOM

7) Duration of course: One semester

8) Intake capacity: 480 (4 divisions of 120 learners each)

9) Attendance: 75%

10) Total Credits: 3

11) Fee Structure:

12) Teacher's Qualification: M. Com. / with NET/SET with minimum B+ grade or equivalent with NET/SET/Ph.D. (Subject to reservation policy of the Government)

13) Per week Work-load of the Teacher: 3 lectures per week

14) Total modules: 4

15) Content:

MODULE	CONTENT	NO. OF LECTURES
1	**Product Planning and Pricing Decisions for Export Marketing:** a) Planning for Export Marketing with regards to Product, Branding, and Packaging, Introduction of Marketing analytics. b) Need for Labelling and Marking in Exports, Factors determining Export Price; Objectives of Export Pricing. c) International Commercial (INCO) Terms ; Export Pricing Quotations- free on Board (FOB), Cost Insurance and Freight (CIF) and Cost and Freight (C&F); Problems on FOB quotation.	**10**

2	**Export Distribution and Promotion:** a) Factors influencing Distribution Channels ; Direct and Indirect Exporting Channels ; Distinction between Direct and Indirect Exporting Channels b) Components of Logistics in Export Marketing; Selection criteria of Modes of Transport ; Need for Insurance in Export Marketing c) Sales Promotion Techniques used in Export Marketing; Importance of Trade Fairs and Exhibitions; Essentials of Advertising in Export Marketing. Employment opportunities in Export Marketing, Role of IT in Export Marketing.	**12**
3	**Export Finance:** a) Methods of payments in Export Marketing; Procedure to open letter of Credit, types and Benefits of Countertrade b) Features of Pre- Shipment and Post Shipment Finance, Procedure to obtain Export Finance, Distinguish between Pre-Shipment Finance and Post-Shipment Finance. c) Role of Commercial Banks, EXIM Bank, SIDBI In financing exporters; Role of ECGC	**10**
4	**Export Procedure and Documentation:** a) Registration with different authorities; Pre-shipment procedure involved in Exports; Procedure of Quality Control and Pre- shipment Inspection b) Shipping and Custom Stage Formalities ; Role of Clearing & Forwarding Agent; Post-Shipment Procedure for realization of Export Proceeds; Procedure of Export under Bond and Letter of Undertaking (LUT), Documentation on Foreign Collaboration. c) Importance of commercial Invoice cum Packing list, Bill of Lading/ Airway Bill, Shipping Bill/ Bill of Export, Consular Invoice, Certificate of origin.	**13**

Note: 1) Yellow one could be deleted 2) Blue one could be added.

16) EVALUATION PATTERN:

a) Total Marks: 100 Marks (10 Point Grading)

b) Passing Criteria: 40 % (4 Grade Points)

c) Marking Scheme: 60:40 Pattern

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
Semester End Exam (SEE): Written Exam	60 Marks	24 Marks
Continuous Internal Assessment (CIA)	40 Marks	16 Marks
TOTAL	100 Marks	40 Marks

d) Mode of Evaluation of Answer-book: Online/Offline

17) PAPER PATTERN: 60 MARKS

Question No.	Particulars (Nature of Questions)	Marks
Q.1	(Module-I) Answer any 2 out of 3	**12**
Q.2	(Module-II) Answer any 2 out of 3	**12**
Q.3	(Module- III) Answer any 2 out of 3	**12**
Q.4	(Module-IV) Answer any 2 out of 3	**12**
Q.5	Write short notes on (Any 3 out of 4) Based on entire syllabus	**12**
	Total Marks	**60**

18) Continuous Internal Assessment (CIA) – 40 Marks Classification

ASSESSMENT	MARKS
Periodical Class Tests /Online test	20 Marks
PowerPoint Presentation / An assignment based on curriculum to be assessed by the concerned teacher.	15 Marks
Overall conduct as a responsible student,, mannerism , etc.	05 Marks

19) Learning Outcome: After completion of the course, the student will be able to:

CO1: To understand the nuances of export marketing pricing- its terms and usage based upon circumstances.

CO2: Equipped intellectually to comprehend sales and finance arenas of export marketing professionally.

CO3: Confident to get career opportunities in export field due to their technical knowledge about documentation etc.

20) Reference:

- Ashwathapa K., Essentials of Business Environment, Himalaya Publication.
- Paul Justin, Business Environment, Tata McGraw Hill, 2008.
- Key John, Business Environment: Managing in a Strategic Context, Jaico Publication, 2006.
- Shukla M.B., Business Environment Text & Cases, Taxmann Publication, 2012.
- Butter David, Business Planning - A Guide to Business Start-up, Butterworth Heinemann 2003.
- Temani V.K .Service Marketing, Prism publication.
- Zeithmael, Valarie A., Service Marketing, Tata McGraw Hill Edn. 2011.
- Joseph P.T., E-Commerce in India. 9. Levy Michael, Weiz Barton A. Retailing Management, Tata McGraw Hill.
- Jha S.M., Service Marketing, Himalaya Publication.

COMMERCE DEPARTMENT

SEMESTER – VI

COURSE DETAILS

1) **Programme Title:** Bachelor of Commerce.
2) **Duration of Programme:** 3 years
3) **Title of the Course: Human Resource Management**
4) **Category of Course :**
5) **Course Code:** BC1061
6) **Course Objective:**
   - It aims to orient learners towards the practical aspects of Human Resource Management.
   - It is expected that this course will prepare learners to lay down a foundation for advanced post-graduate course in Human Resource Management.

6) Eligibility for admission: SY.BCOM

7) Duration of course: One semester

8) Intake capacity: 480 (4 divisions of 120 learners each)

9) Attendance: 75%

10) Total Credits: 3

11) Fee Structure:

12) Teacher's Qualification: M. Com. / with NET/SET with minimum B+ grade or equivalent with NET/SET/Ph.D. (Subject to reservation policy of the Government)

13) Per week Work-load of the Teacher: 3 lectures per week

14) Total modules: 4

15) Content:

MODULE	CONTENT	NO. OF LECTURES
1	**Human Resource Management:** • Human Resource Management – Concept, Functions, Importance, Traditional v/s Strategic Human Resource Management Human Resource Planning- Concept Steps in Human Resource Planning • Job Analysis-Concept, Components, Job design- Concept, Techniques Recruitment- Concept, Sources of Recruitment • Selection - Concept , process , Techniques of E-selection	10
2	**Human Resource Development:** • Human Resource Development- Concept, functions Training- Concept, Process of identifying training and development needs, Methods of	12

	Training & Development (Apprenticeship, understudy, job rotation, vestibule training, case study, role playing, sensitivity training, In, basket, management games) Evaluating training effectiveness- Concept, Methods Performance Appraisal- Concept, Benefits, Limitations, Methods • Potential Appraisal-Concept, Importance Career Planning- Concept, Importance • Succession Planning and career advancement- Concept, Need Mentoring- Concept, Importance Counseling- Concept, Techniques. Self-Development Mechanism and Knowledge enrichment,	
3	**Human Relations:** • Human Relations- Concept, Significance Leadership –Concept, Transactional & Transformational Leadership Motivation- Concept, Theories of Motivation,(Maslow's Need Hierarchy Theory, Vroom's Expectancy Theory, McGregor's Theory X and Theory Y, Pink's Theory of Motivation, Herzberg's Theory) • Employees Morale- Concept, Factors affecting Morale, Measurement of Employees Morale Emotional Quotient and Spiritual Quotient- Concept, Factors affecting EQ & SQ • Employee Grievance- Causes, Procedure for Grievance redressal • Employee welfare measures and Health & Safety Measures.	**11**
4	**Trends in Human Resource Management:** • HR in changing environment: Competencies- concept, classification learning organizations- Concept, Creating an innovative organization, Innovation culture- Concept, Need, Managerial role. Trends in Human Resource Management • Talent Management – Concept , Importance, Process • Employee Engagement- Concept, Types Human resource Information System (HRIS) – Concept, Importance, Changing patterns of employment. Challenges in Human Resource Management: Employee Empowerment • Workforce Diversity. Attrition, Downsizing, Employee Absenteeism, Work life Balance, Sexual Harassment at work place, Domestic and International HR Practices, Millennial (Gen Y)Competency Mapping	**12**

Note: 1) Yellow one could be deleted 2) Blue one could be added.

16) EVALUATION PATTERN:

a) Total Marks: 100 Marks (10 Point Grading)

b) Passing Criteria: 40 % (4 Grade Points)

c) Marking Scheme: 60:40 Pattern

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
Semester End Exam (SEE): Written Exam	60 Marks	24 Marks
Continuous Internal Assessment (CIA)	40 Marks	16 Marks
TOTAL	100 Marks	40 Marks

d) Mode of Evaluation of Answer-book: Online/Offline

17) PAPER PATTERN: 60 MARKS

Question No.	Particulars (Nature of Questions)	Marks
Q.1	(Module-I) Answer any 2 out of 3	**12**
Q.2	(Module-II) Answer any 2 out of 3	**12**
Q.3	(Module-III) Answer any 2 out of 3	**12**
Q.4	(Module-IV) Answer any 2 out of 3	**12**
Q.5	Write short notes on (Any 3 out of 4) Based on entire syllabus	**12**
	Total Marks	**60**

18) Continuous Internal Assessment (CIA) – 40 Marks Classification

ASSESSMENT	MARKS
Periodical Class Tests /Online test	20 Marks
PowerPoint Presentation / An assignment based on curriculum to be assessed by the concerned teacher.	15 Marks
Overall conduct as a responsible student,, mannerism , etc.	05 Marks

19) Learning Outcome: After completion of the course, the student will be able to:

CO1: It will help the learners to learn conceptual and applicative knowledge in the field of Human Resource Management and Human Relations.

CO2: It will provide learner with opportunity to develop skills required to become a successful HR manager.

20) Reference:

- Bernardin, John H: Human Resource Management, Tata McGraw Hill, New Delhi2004.
- Belkaoui, A.R. and Belkaoui, JM, Human Resource Valuation: A Guide to Strategies and Techniques, Quarum Books, Greenwood, 1995.
- Dale, B, Total Quality and Human Resources: An Executive Guide, Blackwell, Oxford.J.H. Career Management, Dryden, New York.
- Mabey, C and Salama, G., Strategic Human Resource Management, Blackwell, Oxford.
- Subba Rao, Human Resources Management.
- M.N. Rudrabasavaraj: Cases in Human Resource Management –Himalaya Publishing House New Delhi, 1998
- Decenzo, D.A. and Robbins, S. P., Fundamentals of Human Resource Management, Wiley, India.
- Dessler, G. and Varkkey, B., Human Resource Management, Pearson Education, Delhi.
- Chhabra, T.N., Human Resource Management, Dhanpat Rai & Co., Delhi.
- Aswathappa K., Human Resource Management, Tata McGraw-Hill, New Delhi.
- H. John Bernardin and Richard W. Beatty: Performance Appraisal: Human Behavior at work Boston: Kent, 1984
- George T. Milkovich and John W. Boudream: Personnel / Human Resources Management: A Diagnostic
- Lepak, David & Gowan, Mary. Human Resource Management. Dorling Kindersley (India).
- Khanna, S.S. Human resource Management (Text and Cases). S. Chand, New Delhi.
- Sadri.J, Sadri.S, Nayak.N, A Strategic Approach to Human Resource Management, JAICO Publishing House.

LEARNING OUTCOME BASED CURRICULUM FRAMEWORK

[LOCF]

Sanskar Sarjan Education Society's

DTSS COLLEGE OF COMMERCE

[AUTONOMOUS]

COURSE CODE: BC1012

FINANCIAL ACCOUNTING - I

(for Bachelor of Commerce Semester-I)

w. e. f. 2023-24

COURSE STRUCTURE

1) **Programme Title:** Bachelor of Commerce (B.Com.)
2) **Duration of Programme:** 3 Years
3) **Title of the Course:** Financial Accounting -I
4) **Semester**: I
5) **Course Code** : BC1012
6) **Course Objective:**

This course provides conceptual knowledge of financial accounting

- To develop understanding and application of accounting principles and Accounting Standards
- Aims to develop proper identification of capital and revenue elements of income & expenses
- To develop the skill for preparing accounts and statements for a proprietary firm
- To develop the skill to prepare accounts for hire purchase agreement
- To develop the skill to prepare the books of accounts for inland branches

7) **Category of Course**: Department Specific Core Course (Mandatory)
8) **Duration of course:** One Semester
9) **Intake capacity:** 480 (4 divisions of 120 learners each)
10) **Attendance:** Minimum 75%
11) **Total Credits:** 4 credits
12) **Fee Structure:**
13) **Teacher's Qualification:** M.Com. /C.A. / CS / ICWA with minimum B+ grade or equivalent with NET/SET/Ph.D. (Subject to reservation policy of the Government)
14) **Per week Work-load of the Teacher:** 4 lectures per week
15) **Total modules:** 4 modules

Module-I	**Hours**
A] Theoretical Framework: Accounting as an information system, the users of financial accounting information and their needs. Qualitative characteristics of accounting, information. Functions, advantages and limitations of accounting. Branches of accounting. Bases of accounting; cash basis and accrual basis. The nature of financial accounting principles – Basic concepts and conventions: entity, money measurement, going concern, cost,	**15**

realization, accruals, periodicity, consistency, prudence (conservatism), materiality and full disclosures. Financial accounting standards: Concept, benefits, procedure for issuing accounting standards in India. **B] Business Income** Measurement of business income-Net income: the accounting period, the continuity doctrine and matching concept. Objectives of measurement. Revenue: concept, revenue recognition principles as per AS-9, recognition of expenses. Capital and Revenue expenditure & receipts Inventories: Meaning. Significance of inventory valuation. Inventory Record Systems: periodic and perpetual. Methods: FIFO, LIFO and Weighted Average.(as per AS-2)	
Module-II	
Final Accounts of a Manufacturing Concern- Proprietary Firm: i. From recording of a business transaction to preparation of trial balance including adjustments, Closing entries ii. Preparation of Manufacturing Account, Trading Account, Profit and Loss Account and Balance Sheet.	**15**
Module-III	
Hire Purchase Accounting: i. Accounting for Hire Purchase Transactions, ii. Journal entries and ledger accounts in the books of Hire Vendors iii. Journal entries and ledger accounts in the books of purchaser for large value items including default and repossession, iv. Stock and debtors system.	**15**
Module-IV	
Accounting for Inland Branches i. Concept, Scope and objectives ii. Dependent branches only and iii. Ascertainment of Profit by Debtors Method & Stock and Debtors Method - Inter branch transfer - Cost & Invoice Price - Stock Reserve	**15**
Total	**60**

***Note: All relevant accounting standards issued by ICAI would be applicable.**

16) EVALUATION PATTERN:

a) **Total Marks:** 100 Marks (10 Point Grading)

b) **Passing Criteria :** 40 % (4 Grade Points)

c) **Marking Scheme:** 60:40 Pattern

MARKING SCHEME	**TOTAL MARKS**	**PASSING MARKS**
Semester End Exam (SEE) : Written Exam	60 Marks	24 Marks
Continuous Internal Assessment (CIA) :	40 Marks	16 Marks
TOTAL :	100 Marks	40 Marks

d) **Mode of Evaluation of Answer-book**: Online/Off-line

17) Paper Pattern:

a. SEMESTER END EXAM (SEE): (60 Marks, Passing 24 Marks)

Question No.	**Sub-Question**	**Type of Question**	**Total Marks**
Q.1.	A.	Practical question OR	15 Marks
	B.	Practical question (Question can be subdivided into 7 and 8 marks)	
Q.2.	A.	Practical question OR	15 Marks
	B.	Practical question (Question can be subdivided into 7 and 8 marks)	
Q.3.	A.	Practical question OR	15 Marks
	B.	Practical question (Question can be subdivided into 7 and 8 marks)	
Q.4.	A.	Select the most appropriate option and rewrite the full sentence. (Any 8 out of 10)	08 Marks
	B.	State whether the following statements are TRUE or FALSE. (Any 8 out of 10)	07 Marks
	C.	Short Notes (Any 3 out of 5)	15 Marks

Sample Question Paper

Q. 1. A] Preparation of Final Accounts of a Manufacturing Concern (15)

OR

Q.1. B] (i) Classification of expenses and receipt as Capital and Revenue (8)

Q.1. B] (ii) Preparation of Manufacturing Account (7)

Q. 2 A] Hire Purchase (15)

OR

Q. 2 B] (i) Hire Purchase Short question (07)

Q. 2 B] (ii) Preparation of Stock ledger (08)

Q. 3 A] Branch Accounts (15)

OR

Q. 3 B] Branch Accounts (15)

Q. 4. A] Select the most appropriate option and rewrite the full sentence. (Any 8 out of 10)
(Minimum two from each module) (08)

Q. 4. B] State whether the following statements are TRUE or FALSE. (Any 8 out of 10)
(Minimum two from each module) (07)

OR

Q. 4. C] Write short notes on any 3 out of 5 (5 x3 =15)
(Minimum one short note from each module)

b) Continuous Internal Assessment (CIA) – (40 Marks, Passing 16 Marks)

ASSESSMENT	**MARKS**
Periodical Class Tests /Online test (2 better out of 3)	20 Marks
An assignment based on curriculum to be assessed by the teacher concerned	10 Marks
Active participation in routine class instructional deliveries	05 Marks
Overall conduct as a responsible learner, mannerism and articulation and exhibit of leadership qualities in organizing related academic activities	05 Marks
TOTAL	40 Marks

18) Course Outcomes:

After completing the course, the student shall be able to:

CO1: understand the theoretical framework of accounting and prepare financial statements

CO2: explain and determine value of inventory

CO3: prepare accounts for hire purchase transactions, Inland branches

CO4: understand the concepts of capital & revenue classification of expenses and receipts

CO5: develop practical application of relevant accounting standards.

19) References:

- Goyal, Bhushan Kumar and H.N. Tiwari, (2020). *Financial Accounting* . Taxmann.
- Kumar, Alok. (2017). *Financial Accounting.* Singhal Publication.
- Lt Bhupinder. (2020). *Financial Accounting – Concepts and Applications.* Cengage.
- Monga, J R. (2020). *Financial Accounting: Concept and Applications*. Mayur paper Backs. New Delhi

- Sehgal, Ashok & Deepak Sehgal. (2019). *Fundamentals of Financial Accounting.* Taxmann
- Tulsian, P C. (2018). *Financial Accounting*, Tata McGraw Hill. New Delhi.
- Lal, Jawahar, Seema Srivastava & Abrol, Shivani. (2017). *Financial Accounting Text and Problems.* Himalaya Publishing House, New Delhi.

Additional Resources:

- Charles, T Horngren, Gart L. Sundem, John A Elliot and Donna R. Philbrick. (2008). *Introduction to Financial Accounting.* Pearson.
- Leonardo, A. Robinson, James R. Qanis, C. Wayne Alderman,(1990). *Accounting Information Systems: A cycle Approach*. Publisher Wiley.
- Marshall, B Romney and Paul, John Steinbart. (2018). *Accounting Information Systems.* Pearson Education Limited.
- Robert, L. Hurt, (2015). *Accounting Information Systems: Basic Concepts and Current Issues.* McGraw Hill.

LEARNING OUTCOME BASED CURRICULUM FRAMEWORK

[LOCF]

Sanskar Sarjan Education Society's

DTSS COLLEGE OF COMMERCE

[AUTONOMOUS]

COURSE CODE: BC1022

FINANCIAL ACCOUNTING -II

(for Bachelor of Commerce Semester-II)

w. e. f. 2023-24

COURSE STRUCTURE

1) **Programme Title:** Bachelor of Commerce (B.Com.)
2) **Duration of Programme:** 3 Years
3) **Title of the Course:** Financial Accounting -II
4) **Semester:** II
5) **Course Code** : BC1022
6) **Course Objective:**

- This course provides conceptual knowledge of financial accounting for preparing accounts and statements for a not for profit organisation, consignments, joint ventures and leases.
- And the techniques for preparing accounts and statements for a not for profit organisation, consignments, joint ventures and leases.
- The course also aims to acquaint learners how to use computerised accounting software to prepare financial statements**.**

7) **Category of Course**: Department Specific Core Course (Mamndatory)
8) **Duration of course:** One Semester
9) **Intake capacity:** 480 (4 divisions of 120 learners each)
10) **Attendance:** Minimum 75%
11) **Total Credits:** 4 credits
12) **Fee Structure:**
13) **Teacher's Qualification:** M.Com. /C.A. / CS / ICWA with minimum B+ grade or equivalent with NET/SET/Ph.D. (Subject to reservation policy of the Government)
14) **Per week Work-load of the Teacher:** 4 lectures per week
15) **Total modules:** 4 modules

Module-I	**Hours**
Accounting for Not for Profit Organisations: Introduction, Objective, Scope, Definitions, Accounting framework for NPOs, Basis of accounting, Applicability of accounting standards to NPOs, Recognition & Measurement Principles for Income, Expense, Assets, Liabilities & Provisions, Preparation of Balance Sheet and Income & Expenditure Account - Disclosures	**15**
Module-II	
Accounting for Joint Venture	**15**

Joint Venture: Accounting procedures: Joint Bank Account, Records Maintained by Co- venture of (I) all transactions (ii) only his own transactions. (Memorandum joint venture account).	
Module-III	
Accounting for Consignment Consignment: Features, Accounting treatment in the books of the consignor and consignee	**15**
Module-IV	
Introduction to Computerised Accounting System: Computerized accounts by using accounting software, Creating a company; Configure and Features settings; Creating Accounting Ledgers and Groups, Creating Stock Items and Groups; Vouchers Entry; Generating Reports – Cash Book, Ledger Accounts, Trial Balance, Profit and Loss Account, Balance Sheet	**15**
Total	**60**

***Note: All relevant accounting standards issued by ICAI would be applicable.**
Removed Accounting for leases

16) EVALUATION PATTERN:

a) **Total Marks:** 100 Marks (10 Point Grading)

b) **Passing Criteria :** 40 % (4 Grade Points)

c) **Marking Scheme:** 60:40 Pattern

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
Semester End Exam (SEE) : Written Exam	60 Marks	24 Marks
Continuous Internal Assessment (CIA) :	40 Marks	16 Marks
TOTAL :	100 Marks	40 Marks

d) **Mode of Evaluation of Answer-book**: Online/Offline

17) Paper Pattern:

a. SEMESTER END EXAM (SEE): (60 Marks , Passing Marks 24)

Question No.	Sub-Question	Type of Question	Total Marks

Q.1.	A.	Practical question OR	15 Marks
	B.	Practical question (Question can be subdivided into 7 and 8 marks)	
Q.2.	A.	Practical question OR	15 Marks
	B.	Practical question (Question can be subdivided into 7 and 8 marks)	
Q.3.	A.	Practical question OR	15Marks
	B.	Practical question (Question can be subdivided into 7 and 8 marks)	
Q.4.	A.	Select the most appropriate option and rewrite the full sentence. (Any 8 out of 10)	08 Marks
	B.	State whether the following statements are TRUE or FALSE. (Any 8 out of 10)	07 Marks
	B.	Short Notes (Any 3 out of 5)	15 Marks

Sample Question Paper

Q. 1. A] Accounting for Not-for-Profit Organisations (15)

OR

Q.1. B] Accounting for Not for Profit Organisations (15)

Q. 2 A] Joint venture (15)

OR

Q. 2 B] Joint venture (15)

Q. 3 A] Accounting for Consignment (15)

OR

Q. 3 B] Accounting for Consignment (15)

Q. 4. A] Select the most appropriate option and rewrite the full sentence. (Any 8 out of 10)
(Minimum two from each module) (08)

Q. 4. B] State whether the following statements are TRUE or FALSE. (Any 8 out of 10)
(Minimum two from each module) (07)

OR

Q. 4. C] Write short notes on any 3 out of 5 (5 x3 =15)
(Minimum one short note from each module)

b. Continuous Internal Assessment (CIA) : (40 Marks, Passing Marks 16)

ASSESSMENT	**MARKS**
Periodical Class Tests /Online test (2 better out of 3)	20 Marks
An assignment based on curriculum to be assessed by the teacher concerned	10 Marks

Active participation in routine class instructional deliveries	05 Marks
Overall conduct as a responsible learner, mannerism and articulation and exhibit of leadership qualities in organizing related academic activities	05 Marks
TOTAL	40 Marks

18) Course Outcomes:

After completing the course, the student shall be able to:

CO1: prepare financial statements for not for profit organizations

CO2: prepare accounts for Consignment, Joint Ventures

CO3: prepare trading and profit and loss account and balance sheet using computerized accounting.

19) References:

- Goyal, Bhushan Kumar and H.N. Tiwari, (2020). *Financial Accounting* , Taxmann.
- Kumar, Alok. (2017). *Financial Accounting*, Singhal Publication.
- Lt Bhupinder. (2020). *Financial Accounting – Concepts and Applications*, Cengage.
- Monga, J R. (2020). *Financial Accounting: Concept and Applications*. Mayur paper Backs, New Delhi
- Sehgal, Ashok & Deepak Sehgal. (2019). *Fundamentals of Financial Accounting*, Taxmann,
- Tulsian, P C. (2018). *Financial Accounting*, Tata McGraw Hill New Delhi.
- Lal, Jawahar, Seema Srivastava & Abrol, Shivani. (2017). *Financial Accounting Text and Problems*, Himalaya Publishing House, New Delhi.
- Charles, T Horngren, Gart L. Sundem, John A Elliot and Donna R. Philbrick. (2008). *Introduction to Financial Accounting*, Pearson.
- Leonardo, A. Robinson, James R. Qanis, C. Wayne Alderman,(1990). *Accounting Information Systems: A cycle Approach*. Publisher Wiley.
- Marshall, B Romney and Paul, John Steinbart, (2018). *Accounting Information Systems*, Pearson Education Limited.
- Robert, L. Hurt, (2015). *Accounting Information Systems: Basic Concepts and Current Issues*, McGraw Hill.
- Nadhani, Ashok K, (2019). *Tally ERP 9 Training Guide*, BPB Publications
- Sathpathy, S. (2018).*Tally ERP 9 book advanced user*, Swayam Publication (www.tallyerp9book.com)
- Bassett,P.H. (1987). *Computerised Accounting*. Blackwell Publishers. (https://www.amazon.in/Computerised-Accounting-P-H-Bassett/dp/0850126487)

- Sharma, N. (2012). *Computerized Accounting And Business Systems: A text book on the applications of Computers in Accounting and Business.* LAP LAMBERT Academic Publishing

LEARNING OUTCOME BASED CURRICULUM FRAMEWORK

[LOCF]

Sanskar Sarjan Education Society's

DTSS COLLEGE OF COMMERCE

[**AUTONOMOUS**]

COURSE CODE: BC1032

FINANACIAL ACCOUNTING -III

(for Bachelor of Commerce Semester -III)

w. e. f. 2022-23

COURSE STRUCTURE

1. **Programme Title**: Bachelor of Commerce (B.Com.)
2. **Duration**: 3 Years
3. **Title of the Course:** Financial Accounting -III
4. **Semester**: III
5. **Course Code:** BC1032
6. **Course Objective:**

   a. This course will help the learner to develop an introductory understanding of company accounts.
   b. This course will enable the learner to develop the skill required to prepare the statement of fire insurance claim & Piecemeal distribution of cash on dissolution of a firm.
   c. It will build an understanding of process of amalgamation , conversion of a partnership firm into a company
   d. Learner will be equipped with the knowledge and skill to give accounting treatment for amalgamating firms and purchasing firm /company
   e. Learner will develop understanding for how to give accounting treatment for depreciation of fixed asset.

7. **Category of Course**: Discipline Specific Core Course
8. **Duration of course:** One Semester
9. **Intake capacity:** 480 (4 divisions of 120 learners each)
10. **Attendance:** Minimum 75%
11. **Total Credits:** 4 credits
12. **Fee Structure:**
13. **Teacher's Qualification:** M.Com. /C.A. / CS / ICWA with minimum B+ grade or equivalent with NET/SET/Ph.D. (Subject to reservation policy of the Government)
14. **Per week Work-load of the Teacher:** 4 lectures per week
15. **Total modules: 5** modules

Module	Module Title & Contents	Lectures
I	**Fire Insurance Claim** Computation of Loss of Stock by Fire, Ascertainment of Claim as per the Insurance Policy, (Excluding Loss of Profit and Consequential Loss)	10
II	**Piecemeal Distribution of Cash** Excess Capital Method only, Asset taken over by a partner, Treatment of past profits or past losses in the Balance sheet ,	10

	Contingent liabilities / Realization expenses / amount kept aside for expenses and adjustment of actual, Treatment of secured liabilities, Treatment of preferential liabilities like Govt. dues / labour dues etc. (Excluding : Insolvency of partner and Maximum Loss Method)	
III	**Amalgamation & Conversion/Sale of Partnership Firm into Company** **a) Amalgamation of Firms** Realization method only, Calculation of purchase consideration, Journal / ledger accounts of old firms, Preparing Balance sheet of new firm, Adjustment of goodwill in the new firm, Realignment of capitals in the new firm by current accounts / cash or a combination thereof (Excluding Common transactions between the amalgamating firms) **b) Conversion/ Sale of Partnership Firm into a Company** Realisation method only, Calculation of New Purchase consideration, Journal / Ledger Accounts of old firms, Preparing Balance sheet of new company	15
IV	**Issue of Shares & Debentures** **a) Introduction of basic terms** Types of companies, nature and formation of companies, Shares, Debentures, Share Capital, Reserves and surplus, types of assets and liabilities, dividend, format of Balance Sheet **b) Issue of shares** Different modes IPO, Private Placements, Preferential, Rights, ESO, SWEAT and ESCROW account, Issue of shares at par, premium and discount, Under subscription and Over subscription of shares, forfeiture and reissue of forfeited shares, issue of shares for consideration other than cash, Bonus shares **c) Issue of Debentures** Types of Debentures, Issue of debentures at par, premium and discount, Issue of Debentures with consideration of Redemption ,Issue of debentures for cash receivable in instalments or at a time Issue of debentures for consideration other than cash	15
V	**Depreciation Accounting** Accounting for Plant Property and Equipment & Depreciation: Meaning of Depreciation, Depletion and amortization, Objective and Methods of depreciation (Straight line, Diminishing Balance), Change of Method (As per AS-10)	10
	Total	**60**

***Note: All relevant accounting standards issued by ICAI would be applicable.**

16. EVALUATION PATTERN:

a) **Total Marks:** 100 Marks (10 Point Grading)

b) **Passing Criteria :** 40 % (4 Grade Points)

c) **Marking Scheme:** 60:40 Pattern

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
Semester End Exam (SEE) : Written Exam	60 Marks	24 Marks
Continuous Internal Assessment (CIA) :	40 Marks	16 Marks
TOTAL :	100 Marks	40 Marks

d) **Mode of Evaluation of Answer-book**: Online/Off-line

17. Paper Pattern:

a. Semester End Examination(SEE) (60 Marks, Passing 24 Marks)

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Full length practical question OR		15 Marks
	B.	Full length practical question		
Q.2.	A.	Full length practical question OR		15 Marks
	B.	Full length practical question		
Q.3.	A.	Full length practical question OR		15 Marks
	B.	**i)** Practical question **ii)** Practical question	8 + 7	
Q.4.	A.	Objective questions (MCQ/True or False/ Match the Following OR		15 Marks
	B.	Short Notes (Any 3 out of 5)		

b. Continuous Internal Assessment (CIA) (40 Marks, Passing 16 Marks)

Assessment	Marks
Periodical Class Test/ Online Test/ Group Discussion	20
An Assignment based on the curriculum to be assessed by the teacher concerned	10
Active participation in routine instructional deliveries in the class	05
Overall conduct as a responsible learner, mannerism and articulation and exhibit of leadership qualities in organizing related academic activities	05
Total	**40**

18. Course Outcome:

After completion of this course, learner will be able to

CO1: Develop the skill to prepare the Statement of Fire Insurance Claim

CO2: Prepare the Statement of Piecemeal Distribution of Cash on dissolution of firm

CO3: Compute Purchase Consideration in case of amalgamation or conversion of partnership firm

CO4: Develop understanding of the process of issue of shares and debentures of a company and give accounting treatment for the same

CO5: Give accounting treatment for depreciation of fixed asset as per AS-10

19. References:

- R. L Gupta and M Radhaswamy. (2014). *Advanced Accountancy*. S. Chand and Company (P) Ltd.. New Delhi
- Mukherjee and Hanif. (2018). *Modern Accountancy*. Tata MacGrow Hill & Co. Ltd. Mumbai
- Lesile, C. (2001). *FinancialAccounting.* Prentice Hall of India. Adin Bakley (P) Ltd.
- Harsalekar, D. (2014). *Financial Accounting for Management*. Multi Tech. Publishing Co.Ltd. Mumbai.
- Tulsian, P. (2002). *Financial Accounting*. Pearson Publications. New Delhi
- Anthony, R. , & Reece J. S. (2005). *Accounting Principles*. Richard Irwin Incorporation.
- Monga, Ahuja,J.R., Ahuja, G. and Shehgal,Ashok,(1991). *Financial Accounting*. Mayur Paper Back
- Williams. (2018). *Financial Accounting.* Tata Mc.Grow Hill & Co. Ltd.. Mumbai
- Mukherjee,M. & Hanif, M. (2015). *Financial Accounting*. Tata McGraw Hill Education Private Ltd. New Delhi
- Bhattacharyya, Ashish. (2016). *Financial Accounting for Business Managers*. Prentice Hall of India Pvt. Ltd.
- Gupta, Shashi. (2004). *Contemporary Issues in Accounting*. Kalyani Publishers.
- Narayanaswamy, R. (2017). *Financial Accounting*. Prentice Hall of India. New Delhi
- Sehgal, Ashok. (2006). *Fundamentals of Financial Accounting.* Taxmann's Publishers
- Charles, T Horngren, Gart L. Sundem, John A Elliot and Donna R. Philbrick. (2008). *Introduction to Financial Accounting.* Pearson.
- Leonardo, A. Robinson, James R. Qanis, C. Wayne Alderman,(1990). *Accounting Information Systems: A cycle Approach.* Publisher Wiley.
- Marshall, B Romney and Paul, John Steinbart, (2018). *Accounting Information Systems.* Pearson Education Limited.
- Robert, L. Hurt, (2015). *Accounting Information Systems: Basic Concepts and Current Issues.* McGraw Hill

LEARNING OUTCOME BASED CURRICULUM FRAMEWORK

[LOCF]

Sanskar Sarjan Education Society's

DTSS COLLEGE OF COMMERCE

[**AUTONOMOUS**]

COURSE CODE: BC1033

MANAGEMENT ACCOUNTING -I

(for Bachelor of Commerce Semester - III)

w.e.f. 2022-23

COURSE DETAILS

1. **Programme Title:** Bachelor of Commerce (B.Com.)

2. **Duration:** 3 Years

3. **Title of the Course:** Management Accounting-I

4. **Semester**: III

5. **Course Code:** BC1033

6. **Course Objective:**

   a. This course will help the learner to understand the vertical format of Income Statement and Balance sheet and the relationship between the items in the respective statements.

   b. This course will enable learner to gain knowledge regarding analytical tools of financial statements like trend analysis.

   c. It will help the learner to understand the various accounting ratios and their analysis and interpretation.

7. **Category of Course**: Discipline Specific Core Course

8. **Duration of course:** One Semester

9. **Intake capacity:** 480 (4 divisions of 120 learners each)

10. **Attendance:** Minimum 75%

11. **Total Credits:** 3 credits

12. **Fee Structure:**

13. **Teacher's Qualification:** M.Com. /C.A. / CS / ICWA with minimum B+ grade or equivalent with NET/SET/Ph.D. (Subject to reservation policy of the Government)

14. **Per week Work-load of the Teacher:** 3 lectures per week

15. **Total modules:** 3 modules

Module	Module Title & Contents	Lectures
I	**Analysis and Interpretation of Financial statements** a) Vertical Form of Income Statement b) Vertical Form of Balance Sheet c) Relationship between items in Income Statement and Balance Sheet	15
II	**Tools of Analysis of Financial statements** a) Trend Analysis b) Comparative Statement c) Common Size Statement	15

III	**<u>Ratio Analysis and Interpretation</u>** **a) Balance Sheet Ratios:** i) Current Ratio ii) Liquid Ratio iii) Stock Working Capital Ratio iv) Proprietary Ratio v) Debt Equity Ratio vi) Capital Gearing Ratio **b) Revenue Statement Ratios:** i) Gross Profit Ratio ii) Expenses Ratio iii) Operating Ratio iv) Net Profit Ratio v) Net Operating Profit Ratio vi) Stock Turnover Ratio **c) Combined Ratios:** i) Return on Capital employed (Including Long Term Borrowings) ii) Return on Proprietor's Fund iii) Return on Equity Capital iv) Dividend Payout Ratio v) Debt Service Ratio vi) Debt Service Coverage Ratio vii) Earning Per Share (EPS) viii) Price Earning Ratio (P/E Ratio) ix) Debtors Turnover Ratio x) Creditors Turnover Ratio	15
	Total	**45**

16. Evaluation Pattern:

a) **Total Marks:** 100 Marks (10 Point Grading)

b) **Passing Criteria:** 40 % (4 Grade Points)

c) **Marking Scheme:** 60:40 Pattern

Marking Scheme	Total Marks	Passing Marks
Semester End Exam (SEE) : Written Exam	60 Marks	24 Marks
Continuous Internal Assessment (CIA) :	40 Marks	16 Marks
Total	**100 Marks**	**40 Marks**

d) **Mode of Evaluation of Answer-book**: Online/Off-line

17. Paper Pattern:

a) SEMESTER END EXAM (SEE): (60 Marks, Passing 24 Marks)

Question No.	Sub-Question	Type of Question	Sub- Question Marks	Total Marks
Q.1.	A. B.	Full length Practical Question OR Full length Practical Question		15
Q.2.	A. B.	Full length Practical Question OR Full length Practical Question		15
Q.3.	A. B.	Full length Practical Question OR i) Practical Question ii) Practical Question	8 7	15
Q.4.	A. B.	Objective Questions (MCQ / True or False / Match the following) OR Short Notes (any 3 out of 5)		15

b) Continuous Internal Assessment (CIA) : (40 Marks, Passing 16 Marks)

Assessment	Marks
Group Discussion/Periodical Class Tests /Online test	20 Marks
An assignment based on curriculum to be assessed by the teacher concerned	10 Marks
Active participation in routine class instructional deliveries	05 Marks
Overall conduct as a responsible learner, mannerism and articulation and exhibit of leadership qualities in organizing related academic activities	05 Marks
TOTAL	**40 Marks**

18. Course Outcome:

After completion of this course, learner will be able to

CO1: Prepare the Vertical Income Statement and Balance sheet

CO2: Analyse financial statements with the help of trend, common size and comparative statements

CO3: Compute various accounting ratios and their analysis and interpretation.

19. References:

1. Saxena, V &Vashist, C. (2015). *Advanced Cost & Management Accounting*. Sultan Chand & Sons. New Delhi.
2. R.S.N. Pillai & Bhagavati. (2013). *Management Accounting.* Sultan Chand & Sons. New Delhi.
3. Inamdar, S. M. (1991). *Cost & Management Accounting*. Everest Publishing House
4. Kishore, R. M. (2018). *Cost & Management Accounting*. Taxmann Allied Service
5. Patankar, S. (2019). *Managerial Accounting.* Nirali Prakashan
6. Kishore, R. M. (2019). *Management Accounting & Financial Analysis.* Taxmann Allied Services
7. Khan, M. Y & Jain, P. K. (2019). *Management Accounting: Text, Problems & Cases*. Tata McGraw Hill
8. Khan, M. Y & Jain, P. K. (2019). *Management Accounting Reference Book*. Tata McGraw Hill
9. Rao, A. P. (2018). *Management Accounting Reference Book*. Everest Publishing House
10. Drury, Colin. (2007). *Management & Cost Accounting*. Thompson Books

Horngren, C. T & Sundem, G. L & Stratton, W. O. (2013). *Introduction to ManagementAccounting.* PHI Learning

LEARNING OUTCOME BASED CURRICULUM FRAMEWORK

[LOCF]

Sanskar Sarjan Education Society's

DTSS COLLEGE OF COMMERCE

[**AUTONOMOUS**]

COURSE CODE: BC1042

AUDITING

(for Bachelor of Commerce Semester - IV)

w.e.f. 2022-23

COURSE DETAILS

1. **Programme Title:** Bachelor of Commerce (B.Com.)

2. **Duration:** 3 Years

3. **Title of the Course:** Auditing

4. **Semester**: IV

5. **Course Code:** BC1042

6. **Course Objective:**

   a. This course will help the learner to understand the principles of audit, types of audit, their advantages and disadvantages and relevant accounting concepts.

   b. This course will enable learner to understand audit planning, audit programme and concepts related to audit working papers.

   c. It will help the learner to understand the various auditing techniques like test check, audit sampling etc. and obtain information regarding internal audit.

   d. Learner will be equipped with the knowledge and skill to perform auditing techniques like vouching and verification.

   e. The learner will also understand key concepts regarding company audit.

7. **Category of Course**: Discipline Specific Core Course

8. **Duration of course:** One Semester

9. **Intake capacity:** 480 (4 divisions of 120 learners each)

10. **Attendance:** Minimum 75%

11. **Total Credits:** 4 credits

12. **Fee Structure:**

13. **Teacher's Qualification:** M.Com. /C.A. / CS / ICWA with minimum B+ grade or equivalent with NET/SET/Ph.D. (Subject to reservation policy of the Government)

14. **Per week Work-load of the Teacher:** 4 lectures per week

15. **Total modules:** 6 modules

Module	Module Title & Contents	Lectures
I	**Introduction to Auditing** **a) Basics** Financial Statements, Users of Financial Information, Definition of Auditing, Objectives of Auditing - Primary and Secondary, Expression of opinion, Detection of Frauds and Errors, Inherent limitations of Audit **b) Errors and Frauds** Definition, Reasons and Circumstances, Types of Errors - Commission, Omission, Principle and Compensating, Types of Frauds, Risk of fraud and Error in Audit, Auditors Duties and Responsibilities in respect of fraud **c) Principles of Audit** Integrity, Objectivity, and Independence, Confidentiality, skills and Competence, Work Performed by Others, Documentation, Planning, Audit Evidence, Accounting System and Internal Control, Audit Conclusions and Reporting **d) Audit Types** Meaning, Advantages and Disadvantages of Balance sheet Audit, Interim Audit, Continuous Audit, Concurrent Audit, Annual Audit **e) Miscellaneous** Advantages of Independent Audit, Qualities of Auditors, Auditing Vs Accounting, Auditing Vs Investigation, True and Fair **f) Accounting Concepts Relevant to Auditing** Materiality, Going Concern	12
II	**Audit Planning, Procedures and Documentation** **a) Audit Planning** Meaning, Objectives, Factors to be considered, Sources of obtaining information, Discussions with Client, Overall Audit Plan **b) Audit Programme** Meaning, Factors Advantages, Disadvantages, Overcoming Disadvantages, Methods of Work, Instruction before commencing work, Overall Audit Approach **c) Audit Working Papers** Meaning, importance, Factors determining Form and Contents, Main Functions /Importance, Features, Contents of Permanent Audit File, Temporary Audit File, Ownership, Custody, Access of Other Parties to Audit Working Papers, Auditors Lien on Working Papers, Auditors Lien on Client's Books **d) Audit Notebook** Meaning structure, Contents, General Information Current Information Importance	12
III	**Auditing Techniques and Internal Audit introduction** **a) Test Check** Test Checking Vs Routing Checking, test Check meaning, features, factors to be considered, when Test Checks can be used, advantages, disadvantages and precautions **b) Audit Sampling** Audit Sampling, meaning, purpose, factors in determining sample size -Sampling Risk, Tolerable Error and expected error, methods of selecting Sample Items, Evaluation of Sample Results, auditors Liability in conducting audit based on samples **c) Internal Control** meaning and purpose, review of internal control, advantages, auditors duties, review of internal control, Inherent Limitations of Internal control, internal control samples for sales and debtors, purchases and creditors, wages and salaries **d) Internal Checks Vs Internal Control, Internal Checks Vs Test Checks** **e) Internal Audit** meaning, basic principles of establishing Internal audit, objectives, evaluation of internal Audit by statutory auditor, usefulness of Internal Audit, Internal Audit Vs External Audit,, Internal Checks Vs Internal Audit	12
IV	**Auditing Techniques: Vouching** **a) Vouching** **b) Audit of Income**	08

	Cash Sales, Sales on Approval, Consignment Sales, Sales Returns Recovery of Bad Debts written off, Rental Receipts, Interest and Dividends Received, Royalties Received **c) Audit of Expenditure** Purchases, Purchase Returns, Salaries and Wages, Rent, Insurance Premium, Telephone expense Postage and Courier, Petty Cash Expenses, Travelling Commission Advertisement, Interest Expense	
V	**Auditing Techniques: Verification** **a) Audit of Assets** Book Debts / Debtors, Stocks - Auditors General Duties; Patterns, Dies and Loose Tools, Spare Parts, Empties and Containers, Quoted Investments and Unquoted Investment, Trade Marks / Copyrights / Patents / Know-How, Plant and Machinery, Land and Buildings, Furniture and Fixtures **b) Audit of Liabilities** Outstanding Expenses, Bills Payable, Secured loans, Unsecured Loans, Contingent Liabilities	08
VI	**Introduction to Company Audit** Qualifications and Disqualifications Appointments - First and subsequent auditors Reappointment, Removal of auditor	08
	Total	**60**

16. Evaluation Pattern:

a) **Total Marks:** 100 Marks (10 Point Grading)

b) **Passing Criteria:** 40 % (4 Grade Points)

c) **Marking Scheme:** 60:40 Pattern

Marking Scheme	Total Marks	Passing Marks
Semester End Exam (SEE) : Written Exam	60 Marks	24 Marks
Continuous Internal Assessment (CIA) :	40 Marks	16 Marks
Total	**100 Marks**	**40 Marks**

d) **Mode of Evaluation of Answer-book**: Online/Off-line

17. Paper Pattern:

a) SEMESTER END EXAM (SEE): (60 Marks, Passing 24 Marks)

Question No.	Sub-Question	Type of Question	Sub- Question Marks	Total Marks
Q.1.	A. B.	Full length Practical Question OR Full length Practical Question		15
Q.2.	A. B.	Full length Practical Question OR Full length Practical Question		15
Q.3.	A. B.	Full length Practical Question OR i) Practical Question ii) Practical Question	8 7	15
Q.4.	A.	Objective Questions (MCQ / True or False / Match the following) OR		15

	B.	Short Notes (any 3 out of 5)		

b) Continuous Internal Assessment (CIA) : (40 Marks, Passing 16 Marks)

Assessment	Marks
Group Discussion/Periodical Class Tests /Online test	20 Marks
An assignment based on curriculum to be assessed by the teacher concerned	10 Marks
Active participation in routine class instructional deliveries	05 Marks
Overall conduct as a responsible learner, mannerism and articulation and exhibit of leadership qualities in organizing related academic activities	05 Marks
TOTAL	**40 Marks**

18. Course Outcome:

After completion of this course, learner will be able to

CO1: Understand the principles of audit, types of audit, their advantages, disadvantages, and some of the accounting concepts relevant to auditing.

CO2: Develop the skills requited for audit planning, audit programme and concepts related to audit working papers.

CO3: Acquire the skill for the various auditing techniques like test check, audit sampling etc. and obtain information regarding internal audit.

CO4: Perform auditing techniques like vouching and verification.

CO5: Understand key concepts regarding company audit.

19. References:

- Gupta, Kamal. (2004). *Contemporary Auditing*. Tata Mc-Graw Hill. New Delhi
- B.N. Tandon,B.N. (2013). *A Hand-Book of Practical Auditing.* S. Chand and Co. New Delhi
- Gupta, K & and Arora, A. (2004). *Fundamentals of Auditing*. Tata McGraw Hill. New Delhi
- Kumar, R & Sharma,V. (2015). *Auditing: Principles and Practice*. PHI Learning Pvt. Ltd. New Delhi
- Basu, S.K. (2020). *Auditing and Assurance for CA IPC*. Pearson Education. New Delhi
- Gupta, K. (1980). *Contemporary Auditing*. McGrow Hill Education Pvt. Ltd. New Delhi

LEARNING OUTCOME BASED CURRICULUM FRAMEWORK

[LOCF]

Sanskar Sarjan Education Society's

DTSS COLLEGE OF COMMERCE

[**AUTONOMOUS**]

COURSE CODE: BC1043

MANAGEMENT ACCOUNTING-II

(for Bachelor of Commerce Semester - IV)

w.e.f. 2022-2

COURSE DETAILS

1. **Programme Title:** Bachelor of Commerce (B.Com.)

2. **Duration:** 3 Years

3. **Title of the Course:** Management Accounting-II

4. **Semester**: IV

5. **Course Code:** BC1043

6. **Course Objective:**

   a. This course will help the learner to understand the concept and process of preparing the Cash Flow Statement as per Accounting Standard – 3.
   b. This course will enable learner to develop the skill required to estimate or project the requirement of working capital in case of a trading and manufacturing organization.
   c. It will help the learner to understand importance and process of selecting capital expenditure proposals or investment proposals by applying techniques of appraisal like payback period method.
   d. Learner will be equipped with the knowledge of MIS and its role in business.

7. **Category of Course**: Discipline Specific Core Course

8. **Duration of course:** One Semester

9. **Intake capacity:** 480 (4 divisions of 120 learners each)

10. **Attendance:** Minimum 75%

11. **Total Credits:** 3 credits

12. **Fee Structure:**

13. **Teacher's Qualification:** M.Com. /C.A. / CS / ICWA with minimum B+ grade or equivalent with NET/SET/Ph.D. (Subject to reservation policy of the Government)

14. **Per week Work-load of the Teacher:** 3 lectures per week

15. **Total modules:** 4 modules

Module	Module Title & Contents	Lectures
I	**Cash Flow Statement** Preparation of Statement of Sources and Application of Cash as per AS – 3	15
II	**Working Capital - Concept**	10

	Estimation /Projection of Working Capital Requirements in case of Trading and Manufacturing Organization	
III	**Capital Budgeting** **a) Introduction** Types of Capital and Sources of Capital **b) Evaluation of Proposals** Evaluation of Capital Expenditure Proposals from given Cash Flow Concept of Present Value **c) Techniques of Appraisal of Investment Proposal** i) Pay Back Period Method ii) Average Rate of Return Method iii) Net Present Value Method iv) Profitability Index Method	15
IV	**Concept of MIS Reports in Computer Environment** Concept of MIS, Need for MIS, Characteristics of MIS, Role of MIS, Problems in MIS, Knowledge required for studying MIS, MIS and Business, MIS and Computer	05
	Total	**45**

16. Evaluation Pattern:

a) **Total Marks:** 100 Marks (10 Point Grading)

b) **Passing Criteria:** 40 % (4 Grade Points)

c) **Marking Scheme:** 60:40 Pattern

Marking Scheme	Total Marks	Passing Marks
Semester End Exam (SEE) : Written Exam	60 Marks	24 Marks
Continuous Internal Assessment (CIA) :	40 Marks	16 Marks
Total	**100 Marks**	**40 Marks**

d) **Mode of Evaluation of Answer-book**: Online/Off-line

17. Paper Pattern:

a) SEMESTER END EXAM (SEE): (60 Marks, Passing 24 Marks)

Question No.	Sub-Question	Type of Question	Sub- Question Marks	Total Marks
Q.1.	A. B.	Full length Practical Question OR Full length Practical Question		15
Q.2.	A. B.	Full length Practical Question OR Full length Practical Question		15
Q.3.	A. B.	Full length Practical Question OR i) Practical Question ii) Practical Question	8 7	15
Q.4.	A. B.	Objective Questions (MCQ / True or False / Match the following) OR Short Notes (any 3 out of 5)		15

b) Continuous Internal Assessment (CIA) : (40 Marks, Passing 16 Marks)

Assessment	Marks
Group Discussion/Periodical Class Tests /Online test	20 Marks
An assignment based on curriculum to be assessed by the teacher concerned	10 Marks
Active participation in routine class instructional deliveries	05 Marks
Overall conduct as a responsible learner, mannerism and articulation and exhibit of leadership qualities in organizing related academic activities	05 Marks
TOTAL	**40 Marks**

18. Course Outcome:

After completion of this course, learner will be able to

CO1: Prepare the Cash Flow Statement as per Accounting Standard – 3.

CO2: Estimate or project the requirement of working capital in case of a trading and manufacturingorganization.

CO3: Evaluate capital expenditure proposals or investment proposals by applying techniques of appraisal like payback period method.

CO4: Understand the concept of MIS and its role in business.

19. References:

1. Saxena, V &Vashist, C. (2015). *Advanced Cost & Management Accounting*. Sultan Chand& Sons. New Delhi.
2. R.S.N. Pillai & Bhagavati. (2013). *Management Accounting.* Sultan Chand & Sons. NewDelhi.
3. Inamdar, S. M. (1991). *Cost & Management Accounting*. Everest Publishing House
4. Kishore, R. M. (2018). *Cost & Management Accounting*. Taxmann Allied Service
5. Patankar, S. (2019). *Managerial Accounting.* Nirali Prakashan
6. Kishore, R. M. (2019). *Management Accounting & Financial Analysis.* Taxmann AlliedServices
7. Khan, M. Y & Jain, P. K. (2019). *Management Accounting: Text, Problems & Cases*. TataMcGraw Hill
8. Khan, M. Y & Jain, P. K. (2019). *Management Accounting Reference Book*. Tata McGrawHill
9. Rao, A. P. (2018). *Management Accounting Reference Book*. Everest Publishing House
10. Drury, Colin. (2007). *Management & Cost Accounting*. Thompson Books
11. Horngren, C. T & Sundem, G. L & Stratton, W. O. (2013). *Introduction to ManagementAccounting.* PHI Learning

LEARNING OUTCOME BASED CURRICULUM FRAMEWORK

[LOCF]

Sanskar Sarjan Education Society's

DTSS COLLEGE OF COMMERCE

[**AUTONOMOUS**]

COURSE CODE: BC1062

FINANACIAL ACCOUNTING -V

(for Bachelor of Commerce Semester -VI)

w. e. f. 2023-24

COURSE DETAILS

1. **Programme Title:** Bachelor of Commerce (B.Com.)
2. **Duration:** 3 Years
3. **Title of the Course:** Financial Accounting - V
4. **Semester**: VI
5. **Course Code:** BC1062
6. **Course Objective:**

   a. This course will equip the learner to understand with the knowledge and skill to give accounting treatment for underwriting of shares and debentures, transaction of foreign currency and investment accounting
   b. This course will enable the learner to develop the skill required to prepare final account of a company and limited liability partnership
   c. It will build an understanding of process of liquidation of companies

7. **Category of Course**: Discipline Specific Core Course
8. **Duration of course:** One Semester
9. **Intake capacity:** 480 (4 divisions of 120 learners each)
10. **Attendance:** Minimum 75%
11. **Total Credits:** 4 credits
12. **Fee Structure:**
13. **Teacher's Qualification:** M.Com. /C.A. / CS / ICWA with minimum B+ grade or equivalent with NET/SET/Ph.D. (Subject to reservation policy of the Government)
14. **Per week Work-load of the Teacher:** 4 lectures per week
15. **Total modules:** 6 modules

Module	Module Title & Contents	Lectures
I	**Final Accounts of Companies** Relevant provisions of Companies Act related to preparation of Final Account (excluding cash flow statement) Preparation of financial statements as per Companies Act. (excluding cash flow statement) AS 1 in relation to final accounts of companies (disclosure of accounting policies) Adjustment for – 1. Closing Stock 2. Depreciation 3. Outstanding expenses and income 4. Prepaid expenses and Pre received income 5. Proposed Dividend and Unclaimed Dividend 6. Provision for Tax and Advance Tax	12

	7. Bill of exchange (Endorsement, Honour, Dishonour) 8. Capital Expenditure included in Revenue expenditure and vice versa eg- purchase of furniture included in purchases 9. Unrecorded Sales and Purchases 10. Good sold on sale or return basis 11. Managerial remuneration on Net Profit before tax 12. Transfer to Reserves 13. Bad debt and Provision for bad debts 14. Calls in Arrears 15. Loss by fire (Partly and fully insured goods) 16. Goods distributed as free samples. 17. Any other adjustments as per the prevailing accounting standard.	
II	**Investment Accounting as per AS-13** For shares (variable income bearing securities) For debentures/Preference shares (fixed income bearing securities) Accounting for transactions of purchase and sale of investments with ex and cum interest prices and finding cost of investment sold and carrying cost as per weighted average method (Excluding brokerage). Columnar format for investment account.	10
III	**Accounting for Transactions of Foreign Currency (AS-11)** In relation to purchase and sale of goods, services and assets and loan and credit transactions. Computation and treatment of exchange rate differences	10
IV	**Liquidation of Companies** Meaning of liquidation or winding up Preferential payments Overriding preferential payments Preparation of statement of affairs, deficit / surplus account Liquidator's final statement of account	10
V	**Underwriting of Shares & Debentures** Introduction, Underwriting Commission, Provision of Companies Act with respect to Payment of underwriting commission Underwriters, Sub-Underwriters, Brokers and Manager to issues Types of underwriting, Abatement Clause Marked, Unmarked and Firm-underwriting applications, Liability of the underwriters in respect of underwriting contract	08
VI	**Final Accounts of Limited Liability Partnership** Statutory Provisions Conversion of partnership firm into LLP Final Accounts	10
	Total	**60**

***Note: All relevant accounting standards issued by ICAI are applicable.**

16. Evaluation Pattern:

a. **Total Marks**: 100 Marks

b. **Passing Criteria**: 40% in Semester End Exam (SEE) &
40% in Continuous Internal Assessment (CIA)

c. **Marking Scheme**: 40:60 Pattern

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
Semester End Exam (SEE) : Written Exam	60 Marks	24 Marks
Continuous Internal Assessment (CIA) :	40 Marks	16 Marks
TOTAL :	100 Marks	40 Marks

d. **Mode of Evaluation of Answer-books** : Online/Off-line

17. Paper Pattern:

a. Semester End Examination(SEE) (60 Marks , Passing 24 Marks)

Question No.	Sub-Question	Type of Question	Total Marks
Q.1.	A.	Practical question OR	15 Marks
	B.	Practical question (Question can be subdivided into 7 and 8 marks)	
Q.2.	A.	Practical question OR	15 Marks
	B.	Practical question (Question can be subdivided into 7 and 8 marks)	
Q.3.	A.	Practical question OR	15 Marks
	B.	Practical question (Question can be subdivided into 7 and 8 marks)	
Q.4.	A.	Select the most appropriate option and rewrite the full sentence. (Any 8 out of 10)	08 Marks
	B.	State whether the following statements are TRUE or FALSE. (Any 8 out of 10)	07 Marks
	C.	Short Notes (Any 3 out of 5)	15 Marks

Sample Question Paper

Q.1. A] Final Accounts of Companies (15)

OR

Q.1. B] (i) Short question on Final Accounts (08)
Q.1. B] (ii) Short question on Foreign Currency transactions (07)

Q. 2 A] (i) Short question on Investment Accounting (08)
Q. 2 A] (ii) Short Question on Underwriting of Shares /Debentures (07)

OR

Q. 2 B] (i) Short question on Underwriting of Shares/Debentures (08)
Q. 2 B] (ii) Short Question on Investment Accounting (07)

Q. 3 A] (i) Short question on LLP (08)
Q. 3 A] (ii) Short Question on Liquidation of Companies (07)

OR

Q. 3 B] (i) Short Question on Liquidation of Companies (08)

Q. 3 B] (ii) Short Question on LLP (07)

Q. 4. A] Select the most appropriate option and rewrite the full sentence. (Any 8 out of 10)(Minimum one from each module) (08)

Q. 4. B] State whether the following statements are TRUE or FALSE. (Any 8 out of 10) (Minimum one from each module) (07)

OR

Q. 4. C] Write short notes on any 3 out of 5 (5 x3 =15)(Maximum one short note from each module)

b. Continuous Internal Assessment (CIA) (40 Marks , Passing 16 Marks)

Assessment	Marks
Periodical Class Test/ Online Test (2 better of 3)	20
An Assignment based on the curriculum to be assessed by the teacher concerned	10
Active participation in routine instructional deliveries in the class	05
Overall conduct as a responsible learner, mannerism and articulation and exhibit of leadership qualities in organizing related academic activities	05
Total	**40**

18. Course Outcomes:

After completion of this course, learner will be able to

CO1: Developthe skill to prepare final accounts of a companyand limited liabilitypartnership

CO2: Prepare the investment accounts as per AS-13

CO3: Compute liability of underwriters

CO4: Develop the skill to prepare the Statement of Affairs and Liquidator's final statement of account

CO5: Give accounting treatment for transaction of foreign currency

19. References:

- R. L Gupta and M Radhaswamy. (2014). *Advanced Accountancy*. S. Chand and Company (P) Ltd.. New Delhi
- Mukherjee and Hanif. (2018). *Modern Accountancy*. Tata Mc. Grow Hill & Co. Ltd. Mumbai
- Lesile, C. (2001). *FinancialAccounting.* Prentice Hall of India. Adin Bakley (P) Ltd.
- Harsalekar, D. (2014). *Financial Accounting for Management*. Multi-Tech. Publishing Co. Ltd. Mumbai.
- T.S. Grewal S.(2016). *Introduction to Accountancy*. Chand and Co. (P) Ltd. New Delhi
- Shukla and Grewal S.(2018).*Advanced Accounts*. Chand and Co. (P) Ltd. New Delhi
- Barry Elliot and Jamie Elliot. (2011).*Financial Accounting Reporting.* Prentice Hall (14th Edition)
- Tulsian, P. (2002). *Financial Accounting*. Pearson Publications. New Delhi
- Williams. (2018). *Financial Accounting.* Tata Mc.Grow Hill & Co. Ltd.. Mumbai
- Mukherjee,M. & Hanif, M. (2015). *Financial Accounting*. Tata McGraw Hill Education Private Ltd. New Delhi
- Bhattacharyya, Ashish. (2016). *Financial Accounting for Business Managers*. Prentice Hall of India Pvt. Ltd.
- Gupta, Shashi. (2004). *Contemporary Issues in Accounting*. Kalyani Publishers.

- Narayanaswamy, R. (2017). *Financial Accounting*. Prentice Hall of India. New Delhi
- Sehgal, Ashok. (2006). *Fundamentals of Financial Accounting.* Taxmann's Publishers
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- Leonardo, A. Robinson, James R. Qanis, C. Wayne Alderman,(1990). *Accounting Information Systems: A cycle Approach.* Publisher Wiley.
- Marshall, B Romney and Paul, John Steinbart, (2018). *Accounting Information Systems.* Pearson Education Limited.
- Robert, L. Hurt, (2015). *Accounting Information Systems: Basic Concepts and Current Issues.* McGraw Hill.

LEARNING OUTCOME BASED CURRICULUM FRAMEWORK

[LOCF]

Sanskar Sarjan Education Society's

DTSS COLLEGE OF COMMERCE

[**AUTONOMOUS**]

COURSE CODE: BC1063

COST ACCOUNTING-II

(for Bachelor of Commerce Semester - VI)

w.e.f. 2023-24

COURSE DETAILS

1. **Programme Title:** Bachelor of Commerce (B.Com.)
2. **Duration:** 3 Years
3. **Title of the Course:** Cost Accounting-II
4. **Semester**: VI
5. **Course Code:** BC1063
6. **Course Objective:**

   a. This course will help the learner to understand the various cost control accounts and their advantages and disadvantages.

   b. This course will enable learner to understand the concept of contract costing, contract profit and related accounting.

   c. It will help the learner to understand the concept of process costing, joint products, by-products and abnormal gains and losses.

   d. Learner will be equipped with the knowledge regarding marginal costing, its applications, advantages, limitations and break even analysis.

   e. The learner will also understand the concept of standard costing, various types of standards and variance analysis.

   f. The learner will also understand about some of the emerging concepts of cost accounting like target costing, benchmarking etc.

7. **Category of Course**: Discipline Specific Core Course
8. **Duration of course:** One Semester
9. **Intake capacity:** 480 (4 divisions of 120 learners each)
10. **Attendance:** Minimum 75%
11. **Total Credits:** 4 credits
12. **Fee Structure:**
13. **Teacher's Qualification:** M.Com. /C.A. / CS / ICWA with minimum B+ grade or equivalent with NET/SET/Ph.D. (Subject to reservation policy of the Government)
14. **Per week Work-load of the Teacher:** 4 lectures per week
15. **Total modules:** 6 modules

Module	Module Title & Contents	Lectures
I	**Cost Control Accounts** Cost Control Accounts, Principal Accounts, Subsidiary Accounts, Advantages and Disadvantages	10
II	**Contract Costing** Progress payments, Retention money, Contract accounts, Accounting for material, Accounting for Tax deducted at source by the contractee, Accounting for plant used in a contract, treatment of profit on incomplete contracts, Contract profit and Balance sheet entries. Excluding Escalation clause	12
III	**Process Costing** Process loss, Abnormal gains and losses, Joint products and by-products. Excluding Equivalent units, Inter-process profit	12
IV	**Introduction to Marginal Costing** Marginal costing meaning, application, advantages, limitations, Contribution, Break-even analysis and profit volume graph, limiting or key factor, buy or make, accept an order or not, exploring foreign markets, profitable product mix, shut down a segment or continue, expansion or diversification, determination of selling price in different cost conditions, evaluation of different alternatives etc.	12
V	**Introduction to Standard Costing** Various types of standards, Setting of standards, Basic concepts of material and Labour variance analysis	10
VI	**Emerging Concepts of Cost Accounting** a) Target Costing b) Life Cycle Costing c) Benchmarking d) Activity Based Costing	04
	Total	**60**

16. Evaluation Pattern:

a) **Total Marks:** 100 Marks (10 Point Grading)

b) **Passing Criteria:** 40 % (4 Grade Points)

c) **Marking Scheme:** 60:40 Pattern

Marking Scheme	Total Marks	Passing Marks
Semester End Exam (SEE): Written Exam	60 Marks	24 Marks
Continuous Internal Assessment (CIA):	40 Marks	16 Marks
Total	**100 Marks**	**40 Marks**

d) **Mode of Evaluation of Answer-book**: Online/Off-line

17. Paper Pattern:

a) SEMESTER END EXAM (SEE): (60 Marks, Passing 24 Marks)

Question No.	Sub-Question	Type of Question	Total Marks
Q.1.	A.	Practical question OR	15 Marks
	B.	Practical question (Question can be subdivided into 7 and 8 marks OR 10 & 5)	
Q.2.	A.	Practical question OR	15 Marks
	B.	Practical question (Question can be subdivided into 7 and 8 marks OR 10 & 5)	
Q.3.	A.	Practical question OR	15 Marks
	B.	Practical question (Question can be subdivided into 7 and 8 marks OR 10 & 5)	
Q.4.	A.	Select the most appropriate option and rewrite the full sentence. (Any 8 out of 10)	08 Marks
	B.	State whether the following statements are TRUE or FALSE. (Any 8 out of 10)	07 Marks
	C.	Short Notes (Any 3 out of 5)	15 Marks

Sample Question Paper

Q.1. A] Cost Control Accounts (15)

OR

Q.1. B] (i) Short question on Cost Control Accounts (08)
Q.1. B] (ii) Short question on Marginal Costing (07)

Q. 2. A] (i) Contract Costing (10)
Q.2 A] (ii) Short question on Standard Costing (05)

OR

Q. 2. B] (i) Contract Costing (10)
Q.2 B] (ii) Short question on Standard Costing (05)

Q. 3. A] (i) Process Costing (10)
Q.3 A] (ii) Short question on Marginal Costing (05)

OR

Q. 3. B] (i) Process Costing (10)
Q. 3 B] (ii) Short question on Marginal Costing (05)

Q. 4. A] Select the most appropriate option and rewrite the full sentence. (Any 8 out of 10)
(Minimum one from each module) (08)
Q. 4. B] State whether the following statements are TRUE or FALSE. (Any 8 out of 10)
(Minimum one from each module) (07)

OR

Q. 4. C] Write short notes on any 3 out of 5 (5 x3 =15)
(Maximum one short note from each module)

b) Continuous Internal Assessment (CIA) : (40 Marks, Passing 16 Marks)

Assessment	Marks
Periodical Class Tests /Online test (2 better out of 3)	20 Marks
An assignment based on curriculum to be assessed by the teacher concerned	10 Marks
Active participation in routine class instructional deliveries	05 Marks
Overall conduct as a responsible learner, mannerism and articulation and exhibit of leadership qualities in organizing related academic activities	05 Marks
TOTAL	**40 Marks**

18. Course Outcome:

After completion of this course, learner will be able to

CO1: Prepare the various cost control accounts as per requirement.

CO2: Prepare accounts for contract costing and estimate contract profit/loss.

CO3: Prepare accounts for process costing, joint products, by-products and abnormal gains and losses.

CO4: Apply the concept of marginal costing to determine break even point , accept or reject an order

CO5: Apply variance analysis based on standard cost to identify cost deviation for corrective measures

CO6: Acquaint oneself of the emerging concepts of cost accounting like target costing, benchmarking etc.

19. References:

- C.S. Rayudu, C.S. (2015). *Cost Accounting*.Tata Mc. Grow Hill and Co. Ltd. Mumbai
- Jawahar Lal & Srivastava, S. *Cost Accounting.* (2014). Tata Mc. Grow Hill and Co. Ltd. Mumbai
- Kishore, R.M. (2017). *Cost Accounting*. Taxmann Ltd. New Delhi
- Prasad,N.K. (2015). *Principles and Practices of Cost Accounting.* Book Syndicate Pvt. Ltd. Calcutta
- Bhar, B.K. (2014). *Cost Accounting Theory and Practice.* Tata Mc. Grow Hill and Co. Ltd. Mumbai
- Arora, M.N. (2012). *Cost Accounting Principles and Practice*. Vikas Publishing House Pvt. Ltd. New Delhi
- Saxena, V.K. & Vashist, C.D. (2004). *Advanced Cost and Management Accounting: Problems and Solutions* . S. Chand and Company (P) Ltd. New Delhi
- Jain, S.P. & Narang, K.L. (2015).*Cost Accounting*. Kalyani Publishers. Ludhiana Modern
- Hanif, M. (2018). *Cost and Management Accounting.* Tata McGraw Hill Education Pvt. Ltd. New Delhi

LEARNING OUTCOME BASED CURRICULUM FRAMEWORK

[LOCF]

Sanskar Sarjan Education Society's

DTSS COLLEGE OF COMMERCE

[AUTONOMOUS]

COURSE CODE: BC1065

INDIRECT TAX

(For Bachelor of Commerce Semester-VI)

w. e. f. 2023-24

COURSE STRUCTURE

1) **Programme Title:** Bachelor of Commerce (B.Com.)

2) **Duration of Programme:** 3 Years

3) **Title of the Course:** Indirect tax (Goods and Services Tax)

4) **Course Code** : BC1065

5) **Course Objective:**

- This course provides conceptual knowledge of goods and services tax
- This course aims to develop understanding and application of registration procedure under GST.
- This course aims to develop proper identification of time place and value of supply under GST.
- This course aims to develop the skill to prepare statement of tax liability under GST.

6) **Type of course:** Skill Enhancement Course

7) **Duration of course:** One Semester

8) **Intake capacity:** 480 (4 divisions of 120 learners each)

9) **Attendance:** Minimum 75%

10) **Total Credits:** 3 credits

11) **Fee Structure:**

12) **Teacher's Qualification:** M.Com. /C.A. / CS / ICWA with minimum B+ grade or equivalent with NET/SET/Ph.D. (Subject to reservation policy of the Government)

13) **Per week Work-load of the Teacher:** 3 lectures per week

14) **Total modules:** 4 modules

Module-I	**Hours**
• Introduction • What is GST • Need for GST • Dual GST Model • Definitions -Section 2(13) Audit, Section 2(17) Business, Section 2(31) consideration Section 2(45) Electronic Commerce Operator, Section 2(52) Goods, Section 2(56) India, Section 2(78) Non Taxable supply, Section 2(84) Person	**05**

, Section 2(90) Principal supply, Section 2(93) Recipient, Section 2(98) Reverse charge, Section 2(102) Services , Section 2(105) Supplier, Section 2(107) Taxable Person, Section 2(108) Taxable Supply • Goods and Service Tax Network	
Module-II	
• Scope of supply • Non Taxable supply • Composite and Mixed Supplies • Composition levy • Levy and Collection of Tax • Exemption from Tax	**10**
Module-III	
• Time of Supply • Place of Supply • Value of Supply	**15**
Module-IV	
Input Tax Credit & Payment of Tax: • Eligibility for taking input tax credit • Input tax credit in special circumstances • Computation of Tax liability and Payment of Tax	**15**
Registration under GST Law: • Person not liable registration • Compulsory registration • Procedure for registration • Deemed registration • Cancellation of registration	
Total	**45**

16) EVALUATION PATTERN:

- a) **Total Marks:** 100 Marks (10 Point Grading)
- b) **Passing Criteria :** 40 % (4 Grade Points)
- c) **Marking Scheme:** 60:40 Pattern

MARKING SCHEME	**TOTAL MARKS**	**PASSING MARKS**
Semester End Exam (SEE) : Written Exam	60 Marks	24 Marks
Continuous Internal Assessment (CIA) :	40 Marks	16 Marks
TOTAL :	100 Marks	40 Marks

d) **Mode of Evaluation of Answer-book**: Online/Offline

17) Paper Pattern:

a. SEMESTER END EXAM (SEE): (60 Marks, Passing 24 Marks)

Q. No.	Sub Question	Type of Question	Marks
1.	**A**	A practical question (Question may be sub-divided into two parts carrying 7 and 8marks respectively) OR	15
	B	A practical question (Question may be sub-divided into two parts carrying 7 and 8marks respectively)	15
2.	**A**	A practical question (Question may be sub-divided into two parts carrying 7 and 8marks respectively) OR	15
	B	A practical question (Question may be sub-divided into two parts carrying 7 and 8marks respectively)	15
3.	**A**	A practical question (Question may be sub-divided into two parts carrying 7 and 8marks respectively) OR	15
	B	A practical question (Question may be sub-divided into two parts carrying 7 and 8marks respectively)	15
4.	**A** **B**	MCQs (Any 8 out of 10) MCQs (Any 7 out of 10) OR	8 7
	C	Write short notes on any 3 out of 5	15

Sample Question Paper

Q.1. A] Payment of Tax (15)

OR

Q.1. B] Payment of Tax (15)

Q2. A] (i) Input Tax credit (08)

Q.2. A] (ii) Levy and collection of Tax (07)

OR

Q.2. B] (i) Input Tax credit (08)

Q2. B] (ii) Levy and collection of Tax (07)

Q3. A] (i)Value of supply (07)

Q3. A] (ii) Registration under GST Law (08)

OR

Q.3. B] (i) Time of Supply (08)

Q.3. B] (ii) Place of supply (07)

Q.4 A] Select the most appropriate option and rewrite the sentences. (08)
(Any 8 out of 10) [Two questions from each module]

Q.4 B] State whether the following statements are TRUE or FALSE. (07)
(Any 7 out of 10) [Two questions from each module]

OR

Q. 4. C] Write Short Notes (Any 3 out of 5) (15)

(One question from each module)

b) Continuous Internal Assessment (CIA) – (40 Marks, Passing 16 Marks)

ASSESSMENT	**MARKS**
Periodical Class Tests / Online Tests (2 Best out of 3)	20 Marks
An assignment based on curriculum to be assessed by the teacher concerned	10 Marks
Active participation in routine class instructional deliveries	05 Marks
Overall conduct as a responsible learner, mannerism / articulation andexhibit of leadership qualities in organizing related academic activities	05 Marks
TOTAL	40 Marks

17) Course Outcome:

After completing the course, the student shall be able to,

CO1: Understand the theoretical framework of goods and services tax

CO2: Explain and determine value of time, place and value of supply

CO3: Prepare statement of tax liability under GST law.

CO4: Develop practical application of relevant GST laws.

18) REFERENCES:

1. Singhania, V.K. & Singhania, M. (2023). *Individual Tax Planning.* Taxmann Publications Pvt. Ltd. New Delhi.
2. *GST Bare Act (As amended by Finance Bill 2023)*. (2023). Taxmann
3. Datey, V.S. (2023). *GST Ready Reckoner (18th Edition)*.
4. GST Laws. (2023). National Academy of Customs- Indirect Tax
5. Highlights of Budget 23-24, By government of India. https://pib.gov.in/PressReleasePage.aspx?PRID=1895315#:~:text=Budget%20Estimates%202023%2D24%3A,5.9%20per%20cent%20of%20GDP.

Course Details

1. **Program Title**: Bachelor of Commerce.
2. **Duration of programmer:** 3years.
3. **Title of the course:** Indian knowledge system (IKS).
4. **Course code:** ----
5. **Course objective :**
   i) To equip the students with understanding of Indian Knowledge system.
   ii) To make the students understand the basic principles of kautilyan Arthashastra.
   iii) To make the students learn kautilyan Economy and its features.
   iv) TO explain the relevance of kautilyan Arthashastra in present day world.
6. **Eligibility for admission :** HSC : (10+2)
7. **Duration of course:** One Semester.
8. **Intake capacity :** 480 (4 divisions of 120 learners each)
9. **Total credits :** 2
10. **Teachers qualification** : M.A. (Economics) with minimum B+ grade or Equivalent with NET/SET/Ph.D. subject to reservation police of government.
11. **Workload Per week:** 2 lectures.12.Total Modules: 2 modules.
12. Content: Chanakya's Arthshastra (Indian Knowledge system)

Unit I: 1) Introduction – Kautilya – the legend,
2) The Kautilyan state & Society-
a) Country b) Daily Life c) City life d) Village Life

Unit II: <u>The kautilyan Economy</u>

a) Principle of Economic Administration, money & coinage, Tax policy.
b) Relative merits of different types of Economic Activity
c) Land – Use, quality and settlement.
d) Agriculture, animal husbandry, Forestry and Fisheries.
e) Mining and Manufacturing.
f) Labour & Employment.
g) Human & Animal welfare.
h) The role of the King in protecting & promoting welfare.

14.Evaluation Pattern :

i) Total marks : 50 marks (10 point grading)
j) Passing Criteria : 40% (4 grade points)
k) Marking Scheme: 30:20 pattern.

Marking Scheme	Total Marks	Passing Marks
Semester End Exam (SEE) written Exam	30 Marks	12 Marks
Continuous internal assessment (CIA)	20 Marks	08 Marks
Total	50 Marks	20 Marks

Mode of Evaluation: online / off line

Paper pattern: 1) Semester End Exam (SEE)

Question No.	Sub-questions	Types of question	Marks (Sub-question)	Total Marks
Q.1 Module I	A	Full length (2 out of 3)	7.5 x 2	15
	B	Three short notes (out of 5)	3 x 5	15
Q.2 Module II	A	Full length (2 out of 3)	7.5 x 2	15
	B	Three short notes (out of 5)	3 x 5	15

15. Continuous Internal Assessment (CIA): 20 marks.
    i) Class Test / Online Test – 10 marks
    ii) Group discussion / Assignment based on Curriculum

– 10 marks16.References :

i) R.P Kangle (1969): The Kautilyan Arthshastra, Part-I.
ii) Atma Ram and sons, Delhi (1987): Astndy of kautilya's Arthshastra.
iii) Konows (Oslo, 1945): Kautilyan studies.
iv) T.R.Trautmann: Kautilya and Arthshastra.
v) Push Pendra Kumar (Nag Publication, Delhi 1989) Arthshastra: An appraisal.
vi) Krishna Mohan Agrawal (1990): Kautilya on crime and punishment.
vii) Radha Kumud Mukerji, (Delhi 1988): Chandra Gupta Maurya & his times.
viii) Romila Thaper (penglin books, 1966): A History of India.
ix) Bhartiya Vidya Bhavan, Bomby, 5th Ed, 1980: The history and culture of IndianPeople, Vol-II.
x) L.N.Rangarajan: (Penguin books): Kautilya: The Arthshastra.

COURSE DETAILS

1) **Programme Title:** Bachelor of Commerce (B.Com.)
2) **Duration of Programme:** 3 Years
3) **Title of the Course:** Introduction to value education.
4) **Course Code:**
5) **Course Objective:**
   a. To provide exposure and knowledge in the topics given in the syllabus and the happenings of day-to-day life.
   b. To equip learners with the widest range of skills especially life skills.
   c. Help learners develop an attitude which is proactive and sensitive to the needs of others.
   d. To teach the learner self-introspection and find out their hidden skills
   e. To help the learner in exploring job opportunities according to his skills
6) **Eligibility for admission:** HSC/10+2
7) **Duration of course:** One Semester
8) **Intake capacity:** 480 (4 divisions of 120 learners each)
9) **Attendance:** Minimum 75%
10) **Total Credits:** 2credits
11) **Fee Structure:**
12) **Teacher's Qualification:** Masters with minimum B+ grade or equivalent withNET/SET/Ph.D. (Subject to reservation policy of the Government)
13) **Per week Work-load of the Teacher:** 2 lectures per week
14) **Total modules:** 2 modules
15) **Content:**

MODULE – I	**Hours**
Overview of Indian society: Value -based education ➢ Importance and types of values in the life of an individual, importance of value-based education to include the development of humanistic, ethical, and universal human values. ➢ Universal human values like truth, righteous conduct, peace, love non-violence, scientific temper, citizenship values and life skills, empathy, equal opportunities, respect for the environment, care for health and hygiene, positive and critical thinking, Educators of the values both individual and universal problems of the elderly.	**15**
MODULE - II	
Constitutional duties ➢ The structure of the constitution -the preamble, Main Body, and Schedules; ➢ Fundamental Duties of the Indian Citizen: tolerance, peace, and communal harmony as crucial values in strengthening the social fabric of Indian society ➢ Human rights and its awareness	**15**

TOTAL	30

16) EVALUATION PATTERN:

a. **Total Marks:** 50 Marks (10 Point Grading)

b. **Passing Criteria :** 40 % (4 Grade Points)

c. **Marking Scheme:** 30:20 Pattern

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
Semester End Exam (SEE) :Written Exam	30 Marks	12 Marks
Continuous Internal Assessment (CIA) :	20 Marks	8 Marks
TOTAL :	50 Marks	20 Marks

d. **Mode of Evaluation of Answer-book**: Online/Offline

e. **Paper Pattern:** SEMESTER END EXAM (SEE): 30 Marks

Question No.	Type of Question	Sub-Question Marks	Total marks
Q.1.	Any 2 out of 3 questions	7.5 x 2 Marks	15
Q.2.	Any 2 out of 3 questions	7.5 x 2 marks	15

17) Continuous Internal Assessment (CIA) – 20 Marks Classification

ASSESSMENT	MARKS
Objectives questions (MCQs)	10 Marks
An assignment based on curriculum to beassessed by the teacher concerned (Project work)	10 Marks
TOTAL :	20 Marks

18) Course Outcome: After completing the course, the student shall be able to:

CO1: Face the world in every situation competently

CO2: Develop a learning mind-set

CO3: Encourage self-reflection

CO4: Have an understanding of constitutional rights and political processes

CO5: develop into a growth-oriented and positive personality.

19) REFERENCES:

a. Dr. Narula S.S. *Personality development & Communication skills.* Haryana.Taxmann Publications. 2011.

b. Wilfret.P. *Personality development for Successful Interviews.* New Delhi. PerlBooks Publications. 2008.

c. Frances Karnes. Susanne Bean *Leadership for Students*. Waco Texas. PrufrockPress Inc. 2010.

d. Sanjay Gaur. *Mantras for Personality Development.* Jaipur. Yking Books. 2010

e. Harold R. Wallace. Ann Masters *Personality Development.* New Delhi. CengageLearning India. 2009

f. Barun K Mitra. *Personality Development and Soft skills.* 2011.

COURSE DETAILS

1) **Programme Title:** Bachelor of Commerce (B.Com.)
2) **Duration of Programme:** 3 Years
3) **Title of the Course:** Environment Education (Value education).
4) **Course Code**:
5) **Course Objective:**

- To create environmental awareness among students
- To make students aware about various environmental factors and their relation tothe field of commerce
- To highlight functional and spatial links between environment, economy and society
- To create an insight into environmental issues at various levels
- To enlighten students about various environmental movements, their contributions and impacts.

6) **Eligibility for admission:** HSC/10+2
7) **Duration of course:** One Semester
8) **Intake capacity:** 480 (4 divisions of 120 learners each)
9) **Attendance:** Minimum 75%
10) **Total Credits:** 2 credits
11) **Fee Structure:**
12) **Teacher's Qualification:** Masters with minimum B+ grade or equivalent withNET/SET/Ph.D. (Subject to reservation policy of the Government)
13) **Per week Work-load of the Teacher: 2 lectures**
14) **Total modules:** 2

Content:

MODULE – I	**Hours**
Environment and Ecosystem ➢ Environmental education: Meaning, definition, importance, goals and objectives, scope: concept of an ecosystem: definition, characteristics, components, and types, functioning and structure. ➢ Principles of Environmental education, Various spheres of environment (Horticulture, lithosphere, hydrosphere, biosphere, atmosphere). ➢ Climate change, pollution and waste management, sanitation and its importance, conservation of biological diversity, management of biological resources and bio diversity, forest and wild life conservation, energy conservation etc. ➢ Resource conservation- meaning and methods-conventional and non-conventional resources.	**15**

MODULE – II	
Environmental Problems ➢ Environmental problems associated with Agriculture: Loss of Productivity, land degradation, Desertification-Uneven Production-Hunger, Malnutrition and Food security -Sustainable Agricultural Practices ➢ Environmental Problems associated with industries-Pollution-Global warming, Ozone Layer depletion, Acid Rain,-Sustainable Industrial Practices-Green Business and Green Consumerism, Corporate Social Responsibility towards environment.	**15**
TOTAL	**30**

15) Total Marks: 50 Marks (10 Point Grading)

a. **Passing Criteria :** 40 % (4 Grade Points)

b. **Marking Scheme:** 30:20 Pattern

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
Semester End Exam (SEE) :Written Exam	30 Marks	12 Marks
Continuous Internal Assessment (CIA) :	20 Marks	8 Marks
TOTAL :	50 Marks	20 Marks

c. **Mode of Evaluation of Answer-book**: Online/Offline

d. **Paper Pattern:** SEMESTER END EXAM (SEE): 30 Marks

Question No.	Type of Question	Sub-Question Marks	Total marks
Q.1.	Any 2 out of 3 questions	7.5 x 2 Marks	15
Q.2.	Any 2 out of 3 questions	7.5 x 2 marks	15

16) Continuous Internal Assessment (CIA) – 20 Marks Classification

ASSESSMENT	MARKS
Objectives questions (MCQs)	10Marks
An assignment based on curriculum to beassessed by the teacher concerned (Project work)	10 Marks
TOTAL :	20 Marks

17) Learning Outcome (CO): The Course intends to:

CO1: deliver the understanding of basic concepts of environment and ecosystem.

CO2: highlight the current status of natural resources, impact of human activities onenvironment and issues arising out of it.

CO3: discuss need of smart, safe and sustainable cities on the backdrop of urbanizationenhance learning capability through map reading and filling work.

18) References:

- Agarwal, K.C. 2001. *Environmental Biology*, Nidi Publ. Lid. Bikaner.
- Bharucha, Erach, *The Biodiversity of India*, Mapin Publishing Pvt. Ltd., Ahmedabad-380013, India, Email:mapin@icenet.net
- Cunningham, W.P. Cooper, T.H. Gorhani, E & Hepworth, M.T. 2001,*Environmental Encyclopedia*, Jaico Publ. House, Mumbai, 1196p.
- Hawkins R.E., *Encyclopedia of Indian Natural History*, Bombay Natural HistorySociety.
- Mckinney, ML. & School, R.M 1996. *Environmental Science systems & Solutions*,Web enhanced edition. 639p
- Miller T.G. Jr *Environmental Science*, Wadsworth Publishing Co.
- Odum, EP.1971. *Fundamentals of Ecology*. W.B. Saunders Co. USA, 574p
- Trivedi RK., *Handbook of Environmental Laws, Rules Guidelines, Compliances andStandards, Vol I and II* , Enviro Media (R)
- *Ecotourism Economics and Environment* by Nagarajan K and Alex K Thottunke
- *Ecotourism and Sustainable Development* by Ravishanker Singh
- W.W. Collins and C.O. Qualset (1998) *Biodiversity in Agro-ecosystem*, CRC,Boston.

COURSE DETAILS

1) **Programme Title:** Bachelor of Commerce (B.Com.)
2) **Duration of programme:** 3 Years
3) **Title of the Course:** Minor Economics – II
4) **Course Code :**
5) **Course Objective:**
   - To equip the students with understanding of working of a business unit in theeconomy
   - To make the students understand the basic principles of the market economy
   - To make the students learn microeconomics and its application to business
   - To develop sound knowledge of business economics and its application through thestudy of case studies
   - To create understanding of business decision making process
6) **Eligibility for admission:** HSC/10+2 or equivalent
7) **Duration of course:** One Semester
8) **Intake capacity:** 480 (4 divisions of 120 learners each)
9) **Attendance:** Minimum 75%
10) **Total Credits:** 2 credits
11) **Fee Structure:**
12) **Teacher's Qualification:** M. A (Economics) with minimum B+ grade or equivalentwith NET/SET/Ph.D. (Subject to reservation policy of the Government)
13) **Per week Work-load of the Teacher:** 2 lectures
14) **Total modules:** 02
15) **Content:**

Module-I	**Hours**
Introduction: Business Economics- meaning, nature, scope andsignificance: Introduction & meaning**:** Nature of business economics, scope of businesseconomics **Supply and production decisions:** Production function, isoquants, properties of isoquant, least cost factor combination. Short run analysis with law of variable proportions, long run production function and laws of returns to scale, economies and diseconomies of scale.	**15**
Module-II	
Cost of production: Various concepts of cost: accounting cost and economic cost, explicit and implicit cost, Private Cost and social cost, sunk cost and incremental cost, fixed cost and variable cost, short run total cost and per unit cost function, long runaverage cost curve (LAC) & learning curve.	**15**
Total	**30**

16) **EVALUATION PATTERN:**
   a) **Total Marks:** 50 Marks (10 Point Grading)
   b) **Passing Criteria :** 40 % (4 Grade Points)

c) **Marking Scheme:** 30:20 Pattern

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
Semester End Exam (SEE) :Written Exam	30 Marks	12 Marks
Continuous Internal Assessment (CIA) :	20 Marks	8 Marks
TOTAL :	50 Marks	20 Marks

d) **Mode of Evaluation of Answer-book:** Online/Offline

e) Paper Pattern: SEMESTER END EXAM (SEE):

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1. Module 1	A.	Full length question (2 out3)	7.5x2	15 Marks
	B.	Three short notes (out of 5)	3 x 5	
Q.2. Module 2	A.	Full length question (2 out3)	7.5x2	15 Marks
	B.	Three short notes (out of 5)	3 x 5	

17) Continuous Internal Assessment (CIA) – 40 Marks Classification

ASSESSMENT	MARKS
Group Discussion/Periodical Class Tests /Online test	10 Marks
An assignment based on curriculum to be assessed by the teacherconcerned	05 Marks
TOTAL	20 Marks

18) Course Outcome (CO):

After completing the course, the student shall be able:

CO1: To learn & understand the tools of micro economics and their application in businessdecision - making

CO2: To understanding the basic concepts of business economics

CO3: To help the students understand the functioning of market mechanism

CO4: To gain insight of business - decision making process

CO5: To analyse the working of a business firm

19) REFERENCES:

- Sameulsan & Nordhas. *Economics* (Tata Mc Graw Hill, New Delhi).
- Pal, Sumitra. *Managerial Economics- cases & concepts* (Mcmillan-New Delhi)
- Salvatore, D. *Managerial Economics in a Global Economy* (Thomson southwestern, Singapore)

COURSE DETAILS

1) Programme Title: Bachelor of Commerce (B.Com.)

2) Duration of programme: 3 Years

3) Title of the Course: BUSINESS ECONOMICS III (MACRO ECONOMICS)

4) Course Code : BC4MINBE

5) Course Objective: • Objective: 1. Public Finance issues are central to economic and political discourse worldwide, as one of the primary functions of government is to generate resources from its people to spend money for improving the lives of its people.

2. The primary objective of this course is to provide students with the tools to understand the underlying concepts and practical trade-offs entailed in Public finance policy alternatives.

3. To make the students understand how the government runs its budget.

6) Eligibility for admission: FYBCom/10+3 or equivalent

7) Duration of course: One Semester

8) Intake capacity: 480 (4 divisions of 120 learners each)

9) Attendance : Minimum 75%

10) Total Credits: 4 credits

11) Fee Structure:

12) Teacher's Qualification :M. A) with minimum B+ grade or equivalent with NET/SET/Ph.D. (Subject to reservation policy of the Government)

13) Per week Work-load of the Teacher : 4 lectures

14) Total modules: 04

15) Content: Modules at a Glance

Sr. No.	**Modules**	**No. of Lectures**	**Marks**
Module 1	Introduction To Public Finance	15	15
Module 2	Public Revenue	15	15
Module 3	Public Expenditure And Public Debt	15	15
Module 4	Fiscal Policy And Management	15	15
	Total	60	60

Module-I Module I: INTRODUCTION TO PUBLIC FINANCE	15 HOURS

1. Meaning and Scope of Public finance: Difference between public income and public. 2.Importance and scope of public Finance Sound and Functional Finance 3.Important Fiscal functions : Allocation , Distribution & Stabilization 4 .Difference between Dalton's and Musgrave's approach to the Principle of Maximum Social Advantage. 5.Role of the Government in an economy: Reasons of Market Failure and importance of the Government in the Economy	
Module-II Module II: PUBLIC REVENUE (12) 1.Sources of Public Revenue : Meaning of Public revenue Types of Public Revenue: Tax and non-tax revenue 2.Taxation: Objectives ,- Canons - Types of taxes : direct and indirect – Goods and Service Tax (GST) - Tax Base and Types of taxation : proportional, progressive and regressive taxation 3.Tax burden: Impact, incidence and shifting of burden - factors influencing incidence of taxation 4.Economic Effects of taxation: on Income and Wealth, Consumption, Savings, Investments, Production, Inflation and Redistribution 5.Effects of taxation(Nature of Taxation): Redistributors effect and anti- inflationary effect of Taxation.	15 HOURS

Module-III Module III: PUBLIC EXPENDITURE AND PUBLIC DEBT (10) 1. Meaning of Public Expenditure: Canons - classification - economic effects of public spending - on production,	15 HOURS
consumption, distribution, employment and stabilization – 2.Theories of Public Expenditure: Wagner's Hypothesis and Wiseman Peacock Hypothesis 3. Causes for Public Expenditure Growth - Significance of Public Expenditure: Major Subsidies and Recent Programmes . 4.Public Debt : Types of Public borrowing – Burden of public borrowing - Methods of Redemption- Public Debt and Fiscal Solvency	
Module-IV Module IV: FISCAL POLICY AND MANAGEMENT (13) .Fiscal Policy: Meaning, Objectives, Tools limitations, Types of fiscal policy: expansionary and contractionary and Discretionary Fiscal Policy, Limitations . Budget- Meaning objectives and types - Structure of Union budget – Analysis of Latest Budget- Deficit concepts and Deficit Financing, Fiscal Responsibility and Budget Management Act	15 HOURS
TOTAL	60 HOURS

EVALUATION PATTERN:

a.Total Marks: 100 Marks (10 Point Grading)

b.Passing Criteria : 40 % (4 Grade Points)

c.Marking Scheme: 60:40 Pattern

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
Semester End Exam (SEE) : Written Exam	60 Marks	24 Marks
Continuous Internal Assessment (CIA) :	40 Marks	16 Marks

TOTAL	100 Marks	40 marks

a) Mode of Evaluation of Answer-books: Online/Offline

b) Paper Pattern: SEMESTER END EXAM (SEE):

Question No.	Sub Question	Types of Question	Sub-Question Marks	Total Marks
Q1 Module 1	A	Full length question (2 out of 3)	7.5*2	15 Marks
Q2 Module 2	A	Full length question (2 out of 3)	7.5*2	15 Marks
Q3 Module 3	A	Full length question (2 out of 3)	7.5*2	15 Marks
Q4 Module 4	A	Full length question (2 out of 3)	7.5*2	15 Marks

17) Course Outcome (CO):

After completing the course, the student shall be able:

CO1: To learn & understand the tools of macro economics and their application in
Economies decision - making

CO2: Demonstrate a good understanding of the fiscal framework for taxing and spending and of fiscal policy principles

CO3: Understand and discuss the revenue, expenditure, and debt patterns of modern governments.

CO4: Discuss the efficiency and distributional effects of taxation ,in order to bring stability in the economy .

CO5: Describe the government budget and how the government manages its budget to run the economy

18) REFERENCES:

References

1)Ahuja H.L. : Modern Economics, 19th edition, 2015, S.Chand & Co. Pvt. Ltd., New Delhi

2)Bhatia H.L(2017).: Public Finance. 28th edition, Vikas Publishing House Pvt. Ltd.

3) Hajela T.N (2015): Public Finance – Ane Books Pvt.Ltd

4)Houghton E.W.(1998) : Public Finance, Penguin, Baltimore

5) Hyman, David N. (2014): Public Finance A Contemporary Application of theory of policy,
11th edition, Krishna Offset, Delhi

6) Jha, R (1998) : Modern Public Economics, Route Ledge, London

7) Mithani, D.M (1998) : Modern Public Finance, Himalaya Publishing House, Mumbai

8)Musgrave, R.A and P.B. Musgrave (1976) : Public Finance in Theory and Practice,

Tata McGraw Hill, Kogakusha, Tokyo

9) Singh.S.K. (2014): Public finance in Theory and Practice, S.Chand &co Pvt Ltd, New Delhi

COURSE DETAILS

1) Programme Title: Bachelor of Commerce (B.Com.)
2) Duration of programme: 3 Years
3) Title of the Course: International Trade –VI
4) Course Code : BC1054
5) Course Objective:

- To acquaint the learners with various aspects of international trade
- To acquaint the learners with commercial policy and exchange rates.
- To acquaint the learners with concept of balance of payment & WTO.
- To acquaint the learners with foreign exchange market & rate management.

6) Eligibility for admission: S.Y.B.Com.
7) Duration of course: One Semester
8) Intake capacity: 480 (4 divisions of 120 learners each)
9) Attendance: Minimum 75%
10) Total Credits: 3 credits
11) Fee Structure:
12) Teacher's Qualification: M. A (Economics) with minimum B+ grade or equivalentwith NET/SET/Ph.D. (Subject to reservation policy of the Government)
13) Per week Work-load of the Teacher: 3 lectures
14) Total modules: 04
15) Content:

Module-I	**Hours**
Introduction to International Trade: A. Theories of International Trade - Ricardo's Theory of Comparative Costsand the Heckscher- Ohlin Theory. B. Terms of Trade - Types and Limitations. C. Gains from International trade - Offer Curves and Reciprocal Demand.	**12**
Module-II	
Commercial Policy **A.** Commercial Trade Policy –Free Trade and Protection – Pros and Cons.Tariff And Non-Tariff Barriers: Meaning, Types and Effects **B.** International Economic Integration – Types and Objectives:- EU andBrexit, ASAEN	**12**
Module-III	
Balance of payments and International Economic Organization: A. Balance of Payment: Meaning, Structure, Types of Disequilibrium.Causes and measures to correct the disequilibrium in Balance of Payments B. WTO- Recent Developments in TRIPS, TRIMS and GATS.	**9**
Module-IV	
Foreign Exchange market: A. Foreign Exchange Market: Meaning, Functions, Determination ofEquilibrium B. Rate of Exchange	**12**
Total	**45**

16) EVALUATION PATTERN:

a) **Total Marks:** 100 Marks (10 Point Grading)
b) **Passing Criteria :** 40 % (4 Grade Points)
c) **Marking Scheme:** 60:40 Pattern

MARKING SCHEME	**TOTAL MARKS**	**PASSING MARKS**
Semester End Exam (SEE) :Written Exam	60 Marks	24 Marks
Continuous Internal Assessment (CIA) :	40 Marks	16 Marks
TOTAL :	100 Marks	40 Marks

d) **Mode of Evaluation of Answer-book:** Online/Offline
e) **Paper Pattern:** SEMESTER END EXAM (SEE):

Question No.	**Sub-Question**	**Type of Question**	**Sub-Question Marks**	**Total Marks**
Q.1. Module 1	A.	Full length question (2 out 3)	7.5x2	15 Marks
	B.	Three short notes (2 out of 3)	3 x 5	
Q.2. Module 2	A.	Full length question (2 out 3)	7.5x2	15 Marks
	B.	Three short notes (out of 5)	3 x 5	
Q.3. Module 3	A.	Full length question (2 out 3)	7.5x2	15 Marks
	B.	Three short notes (out of 5)	3 x 5	
Q.4. Module 4	A.	Full length question (2 out 3)	7.5x2	15 Marks
	B.	Three short notes (out of 5)	3 x 5	

17) Continuous Internal Assessment (CIA) – 40 Marks Classification

ASSESSMENT	**MARKS**
Periodical Class Tests /Online test	20 Marks
Group Discussion/An assignment based on curriculum to be assessed bythe teacher concerned	20 Marks
TOTAL	40 Marks

18) Course Outcome (CO):

After completing the course, the student shall be able:
CO1: learners are acquainted with international trade & its related aspects.
CO2: learners are acquainted with commercial policy and foreign exchange rates.
CO3: learners are acquainted with concept of balance of payment & functioning of WTO
CO4: learners are acquainted with foreign exchange market & working of managed float.

19) REFERENCES:

• Kindleberger, C.P. (1973) International Economics, Homewood
• Kenan, P.B. (1994), The International Economy, Cambridge University Press, London
• Krugman, P.R. and M. Obstgold (1994), International Economics: Theory and Policy,Glenview, Foreman Dwivedi D N (2013) International Economics: Theory and Policy, Vikas publishing HouseNew Delhi
• M.L. Jhingan – International Economics – Vrinda publication Pvt. Ltd – Delhi
• Francis Cheunilam International Economics Tata McGraw – Hill Publishing co.Ltd.NewDelhi.
• Dominick Salvatore – International Economics – John Wiley & sons, Inc Singapore.
• https://europa.euasean.org

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Cost Accounting - I**
2) **Course Code :** SF-AF-1-MJ-COST
3) **Course Objective:** The Course will help the learner –
   - To ascertain the cost of different products manufactured by a business concern.
   - To identify the differences between Cost accounting and Financial Accounting.
   - To handle documentation with regard to inventory in an organisation and classify the Levels of stock lying in a company into different categories and examine them accordingly.
   - To study Labour Incentive System for getting maximum productivity from Labour at optimum cost and create labour cost records for an organization.
   - To classify the overhead costs on different basis and examine the overhead breakup structure and technique of absorption of overheads.
4) **Course Outcome (CO) :**

   CO1 – The learner will understand basic concepts of cost and cost accounting, classification of cost and importance of Cost Accounting.

   CO2 – The Course would help a learner to understand how to allocate Cost in a Manufacturing Concern with respect to Material, Labor & Overheads.

   CO3 – It will help a learner to get knowledge on various inventory control techniques.

   CO4 – Learner will get better understanding about the methods of remuneration and incentive System in calculation of wages and bonus.

   CO5 – It will help a learner to understand methods of allocation, apportionment and absorption of overheads.
5) **Category of Course** : **Major- Mandatory**
6) **Semester :** I
7) **Total Hours:** 45 Hours
8) **Total Credits:** 03 Credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)

d. Mode of Evaluation of Answer-book : Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	**Objectives** (Any 8 out of 10)	08 marks	**15 marks**
	B.	**Objectives** (Any 7 out of 10)	07 marks	
Q.2.	A.	**Practical Question** (1 question for 15 marks or may be divided into 2 sub questions of 7 marks and 8 marks)	**……..**	**15 marks**
	OR			
	B.	**Practical Question** (1 question for 15 marks or may be divided into 2 sub questions of 7 marks and 8 marks)	**……..**	
Q.3.	A.	**Practical Question** (1 question for 15 marks or may be divided into 2 sub questions of 7 marks and 8 marks)	**……..**	**15 marks**
	OR			
	B.	**Practical Question** (1 question for 15 marks or may be divided into 2 sub questions of 7 marks and 8 marks)	**……..**	
Q.4.	A.	**Practical Question** (1 question for 15 marks or may be divided into 2 sub questions of 7 marks and 8 marks)	**……..**	**15 marks**
	OR			
	B.	**Short Notes/Short Practical question (Any 3 out of 5) -5 marks each**	**……..**	

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules/Units :

MODULE NO.	MODULE TOPIC	CONTENTS COVERED
I	**Introduction to Cost Accounting**	• Evolution, Objectives and Scope of Cost Accounting, Importance and Advantages of Cost Accounting , Difference between Cost Accounting and Financial Accounting, Limitations of Financial Accounting • Definitions: Cost, Costing and Cost Accounting Classification of Cost on Different Bases, • Cost Allocation and Apportionment • Coding System Essentials of Good Costing System.
II	**Material Cost**	• Material Cost: The Concept. Material Control Procedure, Documentation, Stock Ledger, Bin Card. • Stock Levels, Economic Order Quantity (EOQ).
III	**Labour Cost**	• Labour Cost: The Concept, Composition of Labour Cost, Labour Cost Records, Overtime / Idle Time / Incentive Schemes.
IV	**Overheads**	• Overheads: The Concept, Classification of overheads on different bases, Apportionment and Absorption of Overheads

11) References:

- Arora, M.N. *A Textbook of Cost and Management Accounting*. New Delhi. Vikas Publishing House Pvt. Ltd. 2012.
- Arora, M.N. *Cost Accounting; Principles and Practice*. New Delhi. Vikas Publishing House Pvt.Ltd. 2011.
- Arora, M.N. *Cost and Management Accounting; Theory, Problems and Solutions*. Mumbai. Himalaya Publishing House. 2016.
- Banerjee, Bhabatesh. *Cost Accounting; Theory and Practice.* New Delhi. PHI Learning Pvt. Ltd.2014.
- Jain, S.P. Narang, K.L. and Agarwal, Simmi. *Cost Accounting; Principles and Practice.* New Delhi. Kalyani Publication. 2016.
- Kishore, R.M. *Cost Accounting*. New Delhi. Taxmann Publication. 2008.
- Kishore, R.M. *Cost and Management Accounting*. New Delhi. Taxmann Publication. 2006

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Financial Accounting - I**
2) **Course Code :** SF-AF-1-MJ-FA
3) **Course Objective:** The Course will help the learner –
   - To understand the concept of Accounting Standards and its use in recording financial transactions and in preparation of financial statements.
   - To identify the differences between capital & revenue receipts and expenditures.
   - To know the process of preparation in final account of a manufacturing concern, departmental account and accounting treatment in case of Hire Purchase Transactions.
4) **Course Outcome (CO) :**

   CO1 – Learner will be aware of Accounting Standards and its importance in preparation of financial statements and in Inventory Valuation.
   CO2 – Learner will understand the concept of capital & revenue receipts and expenditures.
   CO3 – Learner will acquire the knowledge as how to prepare final account of a manufacturing concern, departmental account and accounting treatment in case of Hire Purchase Transactions.

5) **Category of Course : Major- Mandatory**
6) **Semester :** I
7) **Total Hours:** 45 Hours
8) **Total Credits:** 03 Credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	**Objectives** (Any 8 out of 10)	08 marks	**15 marks**
	B.	**Objectives** (Any 7 out of 10)	07 marks	
Q.2.	A.	**Practical Question** (1 question for 15 marks or may be divided into 2 sub questions of 7 marks and 8 marks)	**……..**	**15 marks**
	OR			
	B.	**Practical Question** (1 question for 15 marks or may be divided into 2 sub questions of 7 marks and 8 marks)	**……..**	
Q.3.	A.	**Practical Question** (1 question for 15 marks or may be divided into 2 sub questions of 7 marks and 8 marks)	**……..**	**15 marks**
	OR			
	B.	**Practical Question** (1 question for 15 marks or may be divided into 2 sub questions of 7 marks and 8 marks)	**……..**	
Q.4.	A.	**Practical Question** (1 question for 15 marks or may be divided into 2 sub questions of 7 marks and 8 marks)	**……..**	**15 marks**
	OR			
	B.	**Short Notes/Short Practical question (Any 3 out of 5) -5 marks each**	**……..**	

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules/Units :

MODULE NO.	MODULE TOPIC	CONTENTS COVERED
I	**Accounting Standards Issued by ICAI and Inventory Valuation**	Accounting Standards: Concepts, Benefits, Procedures for Issue of Accounting Standards Various AS • AS – 1: Disclosure of Accounting Policies: (a) Purpose (b) Areas of Policies (c) Disclosure of Policies.(d)Disclosure of Change in Policies(e) Illustrations. • AS – 2: Valuation of Inventories (Stock) (a) Meaning, Definition (b) Applicability (c) Measurement of Inventory (d) Disclosure in Final Account (e) Explanation with Illustrations. • AS – 9: Revenue Recognition (a) Meaning and Scope (b) Transactions Excluded (c) Sale of Goods (d) Rendering of Services (e) Effects of Uncertainties (f) Disclosure (g) Illustrations • Inventory Valuation Meaning of Inventories Cost for Inventory Valuation Inventory Systems: Periodic Inventory System and Perpetual Inventory System Valuation: Meaning and Importance Methods of Stock Valuation as per AS – 2: FIFO and Weighted Average Method Computation of Valuation of Inventory as on Balance Sheet Date: If Inventory is taken on a Date After the Balance Sheet or Before the Balance Sheet.
II	**Final Accounts**	Expenditure a) Capital (b) Revenue Receipts a) Capital (b) Revenue, Adjustments and Closing Entries, Final Accounts of Manufacturing Concerns (Proprietary Firm)
III	**Departmental Accounts**	Meaning, Basis of Allocation of Expenses and Incomes / Receipts, Inter Departmental Transfer: At Cost Price and Invoice Price Stock Reserve, Departmental Trading and Profit and Loss Account and Balance Sheet.
IV	**Accounting for Hire Purchase**	Meaning, Calculation of Interest, Accounting for Hire Purchase Transactions by Asset Purchase Method Based on Full Cash Price, Journal Entries, Ledger Accounts and Disclosure in Balance Sheet for Hirer and Vendor (Excluding Default, Repossess and Calculation of Cash Price)

11) References:

- Grewal, T.S. and Gupta, S.C. *Introduction to Accountancy* .New Delhi. Chand & Company Ltd.2010.
- Hanif, Ad*vanced Accounting*. Mumbai. Tata Mc. Grow Hill and Co. Ltd.2006.
- Lingisetti, Venu. *Accounting and its applications*. Hyderabad. The Icfai University Press.2009.
- Maheshwari,S.N. *Financial Accounting*. New Delhi. Vikas Publishing House Pvt. Ltd.2011.
- Mukhopadhyay, Dinabandhu. *Financial Accounting*. New Delhi. Chand & Company Ltd. 2011.
- Rao, Thukaram. *Advanced Accountancy*. New Delhi. New Age International (P) Ltd.Publishers.2005.
- Sujatha, B. *Accounting Standards in India:* Towards Coverage. Hyderabad. The Icfai University Press. 2007.
- Shukla, M.C. *Advanced Accounts*. New Delhi. S.Chand & Company Ltd. 2012.
- Sharma, D.G. *Accounting Standards*. New Delhi. Taxmann Allied Services (P.) Ltd.2006.
- Wood, Frank. And Sangster, Alan. *Business Accounting*. United Kingdom. Dorling Kindershey (India) Pvt. Ltd. 2010.

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Business Economics - I**
2) **Course Code :** SF-AF-1-OE-ECO
3) **Course Objective:** The Course will help the learner –

- To learn the working of micro variables of the economy.
- To analyze the working of demand and supply curves, while being able to see the impact of it on the economy.
- To analyze the different types of economies through various predefined characteristics.
- To analyze the supply patterns and understand the scales of economies and the level of diseconomies in an industry.
- To identifying different variables influencing the pricing of a product in a firm; and being able to calculate the price in different working scenarios.

4) **Course Outcome (CO) :**

CO1 - The learner will be able to analyze different types of economies and the working of demand and supply curves, while being able to see the impact of it on the economy.

CO2 - The learner will be able to identify different variables which influences the pricing of a product in a firm; and being able to calculate the price in different working scenarios.

CO3 - The learner will be able to analyze the supply patterns and understand the scales of economies and the level of diseconomies in an industry.

5) **Category of Course : Open Elective**
6) **Semester :** I
7) **Total Hours:** 60 hours
8) **Total Credits:** 04 Credits
9) **Evaluation Pattern** :

a. **Total Marks:** 100 Marks (10 Point Grading System)
b. **Passing Criteria:** 40% Marks (04 Grade Points)
c. **Marking Scheme :** 60:40 Pattern
    - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
    - 40 Marks – Internal Exam (Passing: 16 Marks)
d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : Any 8 out of 10 FIB/MCQ/T or F	8 Marks	**15 Marks**
	B.	Objectives : Any 7 out of 10 FIB/MCQ/T or F	7 Marks	
Q.2.	A.	Full Length Question (Module 1)	08 Marks	**15 Marks**
	B.	Full Length Question (Module 2)	07 Marks	
	OR			
	C.	Full Length Question (Module 2)	07 Marks	
	D.	Full Length Question (Module 1)	08 Marks	
Q.3.	A.	Full Length Question (Module 3)	08 Marks	**15 Marks**
	B.	Full Length Question (Module 4)	07 Marks	
	OR			
	C.	Full Length Question (Module 4)	07 Marks	
	D.	Full Length Question (Module 3)	08 Marks	
Q.4.	Short Notes (Any 3 out of 4) – All Modules			**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam (Objectives , Answer in one sentence, Short Notes)	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Business Economics and Supply and Production decisions**	**Introduction:** Nature of business economics, scope of business economics & Production function, isoquants, properties of isoquant, Iso cost line least cost factor combination and expansion path. Short run analysis with law of variable proportions, long run production function and laws of returns to scale, economies and diseconomies of scale
II	**Cost Analysis**	**Cost of production:** Various concepts of cost: accounting cost and economic cost, explicit and implicit cost, Private Cost and social cost, sunk cost and incremental cost, fixed cost and variable cost, short run total cost and per unit cost function, long run average cost curve (LAC) & learning curve. Concept of revenue and breakeven Analysis.
III	**The Economics of Aggregates**	**Macroeconomics:** Meaning, Scope and Importance. Circular flow of aggregate income and expenditure: closed and open economy models. Measurement of national income: Meaning, Importance and its different concepts. Short run economic fluctuations: Features and Phases of Trade cycles. The Keynesian Principle of Effective demand: Aggregate Demand and Aggregate Supply- Consumption Function- Investment Function- effects of Investment Multiplier on Changes in Income and Output.
IV	**Money, Inflation and Monetary Policy**	**Money, Inflation and Monetary Policy** • Money Supply: Determinants of Money Supply - Factors influencing Velocity of Circulation of Money • Demand for Money: Classical approach - Keynes' liquidity preference theory. • Inflation: Types, Causes, - measures to control inflation. • Monetary policy: Meaning, objectives and instruments.

11) References:

- M.L.Jhingan, *Micro Economic Theory,* Vrinda Publications Private Limited, Delhi, 2011
- W.Bruce Allen, Neil Doherty, Keith Weigelt, Edwin Mansfield, *Managerial Economics ,Applications, And Causes,* W.W Norton & Company, New York, London, 2005
- Sampat Mukherjee, *Modern Economic Theory*, New Age (P) Limited, New Delhi, 2008
- Rahul.A.Shastri, *Microeconomic Theory,* Universities Press (India) Limited, Hyderabad, 2000.
- S.K.Misra, V .K. Puri, *Modern Microeconomics (Theory and Applications)* Himalaya Publishing House, Delhi, 1996.
- Dr.D.D.Chathurvedi, Dr. S.L. Gupta, *Business Economics (Theory & amp; Applications)* International Book House Pvt. Ltd .New Delhi, 2013.

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Business Maths - 1**
2) **Course Code :** SF-AF-1-OE-MTS
3) **Course Objective:** The Course will help the learner –
   - To understand the mathematical foundations in various stream of finance.
   - To understand how to process and interpret information to arrive at conclusions to common business math applications.
   - To demonstrate their knowledge of the basic of solving problem in a wide range of business discipline including economics, finance and operations managements.
4) **Course Outcome (CO) :**

   CO1- The learner will be able to have a good working practice of mathematical tools for taking appropriate decisions in managerial situations.

   CO2- The learner will be able to provide primary knowledge regarding mathematical techniques to be used in managerial decision making.

   CO3- The learner will be able to gain knowledge about basic mathematical tools used in business and statistical techniques that facilitate comparison and analyze business data.

5) **Category of Course:** Open Elective Course.
6) **Semester :** I
7) **Total Hours:** 60 Hours
8) **Total Credits:** 04 Credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question/ Sum	08 Marks	**15 Marks**
	B.	Full Length Question/ Sum	07 Marks	
	OR			
	C.	Full Length Question/ Sum	08 Marks	
	D.	Full Length Question/ Sum	07 Marks	
Q.3.	A.	Full Length Question/ Sum	08 Marks	**15 Marks**
	B.	Full Length Question/ Sum	07 Marks	
	OR			
	C.	Full Length Question/ Sum	08 Marks	
	D.	Full Length Question/ Sum	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules/Units:

MODULE NO.	MODULE TOPIC	CONTENTS COVERED
I	**Ratio, Proportion and Percentage**	Ratio- Definition, Continued ratio, Inverse Ratio, Proportion- Continued proportion, Direct proportion, Inverse proportion, Variation - Inverse variation, Joint variation Percentage- Meaning and computation of percentage
II	**Profit and Loss**	Terms and formulae, Trade discount, Cash discount, problems involving cost price, selling price, trade discount, cash discount. Introduction to Commission and brokerage – problems on commission and brokerage
III	**Interest and Annuity**	Simple interest, compound interest, Equated monthly instalments, reducing balance and flat rate of interest Annuity immediate- present value and future value Stated annual rate and effective annual rate
IV	**Shares and Mutual Fund**	Shares- Concept, face value, market value, dividend, Equity shares, preference shares, bonus shares, Mutual Fund- Simple problems on calculation of net income after considering entry load, exit load, dividend, change in net asset value

11) References:

- Ramasastri A.S, *Quantitative Methods for Banking and Finance*, Delhi, Macmillan, 2008.
- Verma A.P, *Business Mathematics*, New Delhi, Asian Book Private Limited, 2007.

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Introduction to Information Technology - I**
2) **Course Code :** SF-AF-1-VSC-IT
3) **Course Objective:** The Course will help the learner –
   - To be familiar with the essential contrivances for steering business transactions through the various resources of information technology.
   - To have basic knowledge about computers, networks and information technology.
4) **Course Outcome (CO) :**

   CO1 – To provide the learners with fundamental knowledge of the use of computers in business.
   CO2 - To provide exposure to the Learner about information technology, networks and MS Office.
   CO3 – The learner will be able to understand the various terms and concepts of information technology.
5) **Category of Course :** VSC (Vocational & Skill Enhancement Course)
6) **Semester :** I
7) **Total Hours:** 30 hours
8) **Total Credits:** 2 credits
9) **Evaluation Pattern** :

   a. **Total Marks:** 50 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 30 Marks – Written Semester End Exam (Passing: 12 Marks)
      - 20 Marks – Internal Exam (Passing: 08 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline
   e. **Paper Pattern of Semester End Exam (S.E.E.): 30 Marks Classification**

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	**10 Marks**
	B.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	
Q.2.		Attempt any two questions : Module 1	5 Marks each	**10 Marks**
Q.3.		Attempt any two questions : Module 2	5 Marks each	**10 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 20 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam (Objectives + Short Notes)	10 Marks
Subject Oriented Activities / PRACTICAL EXAM • PPT Presentations • Assignments • Case Studies • Field Research	07 Marks
Class Participation & Attendance	03 Marks
TOTAL	**20 marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Computers & MS- Word** **(15 hours - including Practicals)**	**Introduction to Computers :** History of Computers, Parts of Computers, Hardware: Specifications and Data Storage Management, Soft wares: Concept of System Software and Applications, Networking: Introduction and Types of Network Topologies **MS- Word**: Creating/Saving of Document, Editing and Formatting Features, Designing a title page, Preparing Index, Use of Smart Art, Cross Reference, Bookmark and Hyperlink.
II	**Spreadsheet /MS-Excel and Functioning of an E-Mail.** **(15 hours – including Practicals)**	**Spreadsheet /MS-Excel:** Creating/Saving and editing spreadsheets, Drawing charts. Using Basic Functions: text, math & trig, statistical, date & time, database, financial, logical, Data analysis - sorting data, filtering data, data validation, what-if analysis (using data tables/scenarios), creating sub-totals and grand totals, pivot table/chart. **Functioning of an E-Mail:** Understanding the E-Mail contents, Creating an account and its features, Writing email, Creating digitally signed documents.

11) References:

- Fundamentals of Computers – Rajaram V – Prentice Hall
- Computer today (3rd edition) – Sanders, Donald H – McGraw Hill
- Computers and Common sense – Hunt, Roger and Shelly John – Prentice Hall
- Computers – Subramaniam N – Wheeler
- Introduction to Computers – Xavier C. – New Age
- Computer in Business – Sanders D – McGraw Hill
- Computers and Information Management – S C Bhatnagar & V Ramant – Prentice Hall
- Internet for Business – Brummer, Lavrej – Cambridge
- E-mail for Everyone – Leon Alexis & leon – Methews

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Business Communication - I**
2) **Course Code :** SF-AF-1-SEC-BC
3) **Course Objective:**
   - This course will give a comprehensive view of communication, Language and Writing Skills which are pre-requisites in the outside market.
   - This course will highlight the role and importance of communication in the business world.
4) **Course Outcome (CO) :**
   CO1 – The learner will be able to develop interpersonal communication skills which can be effectively applied in the outside market.

   CO2 - The learner will be able to write effective Business / Personal letters.

   CO3- The course will make the learner competent enough in business correspondence
5) **Category of Course : SEC (Skill Enhancement Course)**
6) **Semester :** I
7) **Total Hours:** 30 Hours
8) **Total Credits:** 02 Credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 50 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 30 Marks – Written Semester End Exam (Passing: 12 Marks)
      - 20 Marks – Internal Exam (Passing: 08 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline
   e. **Paper Pattern of Semester End Exam (S.E.E.): 30 Marks Classification**

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	**10 Marks**
	B.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	
Q.2.		Attempt any two questions : Module 1	5 Marks each	**10 Marks**
Q.3.		Attempt any two questions : Module 2	5 Marks each	**10 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 20 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam (Objectives + Short Notes)	10 Marks
Subject Oriented Activities / PRACTICAL EXAM • PPT Presentations • Assignments • Case Studies • Field Research	07 Marks
Class Participation & Attendance	03 Marks
TOTAL	**20 marks**

10) Modules/Units :

MODULE NO.	MODULE TOPIC	CONTENTS COVERED
I	**Theory of Communication and Obstacles to Communication in Business World** **(12 hours)**	**Theory of Communication:** Meaning, Definition, Process, Need, Feedback, Channels and Objectives of Communication, Channels: Formal and Informal- Vertical, Horizontal, Diagonal, Grapevine Objectives of Communication, Methods of Communication: Verbal and Nonverbal Communication. **Obstacles to Communication in Business World**: Problems in Communication /Barriers to Communication: Physical/ Semantic/Language / Socio-Cultural / Psychological / Barriers, Ways to Overcome the Barriers. Listening, Importance of Cultivating good Listening Skills.
II	**Business and Personnel Correspondence** **(18 hours)**	**Business Correspondence-** Theory of Business Letter Writing: Parts, Structure, Layouts- Full Block, Modified Block, Semi - Block ; Principles of Effective Letter Writing; Principles of effective Email Writing. **Personnel Correspondence-** Job Application Letter and Resume, Letter of Acceptance of Job Offer, Letter of Resignation (to be tested); Statement of Purpose (not to be tested)

11) References:

- Ashley,A(1992) A Handbook Of Commercial Correspondence, Oxford University Press.
- Aswalthapa, K (1991) Organisational Behaviour, Himalayan Publication, Mumbai.
- Banerjee, Bani P (2005) Foundation of Ethics in Mangement Excel Books 10.Businessworld Special Collector's Issue: Ethics and the Manager
- Barkar, Alan(1993) Making Meetings Work, Sterling Publications Pvt. Ltd., New Delhi.
- Darrow, Richard, Forrstal, Dan and Coolman, Aubrey (1967) Public Relations Handbook, The Dartwell Co., Chicago.
- Dayal, Ishwar (9810) Managing Large Organizations: A Comparative Study.
- Ecouse Barry, (1999), Competitive Communication: A Rhetoric for Modern Business, OUP.
- Fisher Dalmar, (1999), Communication in Organisation, Jaico Pub House, Mumbai, Delhi.
- Frailley, L.E. (1982) Handbook of Business Letters, Revised Edn. Prentice Hall Inc.
- French, Astrid (1993) Interpersonal Skills. Sterling Publishers, New delhi
- Gupta, Anand Das (2010) Ethics, Business and Society: Managing Responsibly Response Books 32.Gupta, Dipankar (2006) Ethics Incorporated: Top Priority and Bottom Line Response Books
- Krevolin, Nathan (1983) Communication Systems and Procedures for Modern Office, Prentice Hall, New Jersey.
- Lesikar, Raymond V and Petit, John D.(1994) Business Communication: Theory and Application , Richard D. Irwin Inc. Ilinois.
- Parry, John (1968) The Psychology of Human Communication.
- Parson, C.J. and Hughes (1970) Written Communication for Business Learner, Great Britain.
- Peterson, Robert A and Ferrell, O.C (2005) Business Ethics: New Challenges for Business Schools and Corporate Leaders Prentice Hall of India Pvt., Ltd
- Stephenson, James (1988) Principles and Practice of Commercial Correspondence, Pilman and Sons Ltd. London.
- Shurter, Robert L. (1971) Written Communication in Business, McGraw Hill, Tokyo

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***NEP Course Details For Semester: I & II***

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COURSE DETAILS (APPROVED)

1) **Title of the Course: Modern English Language- I**
2) **Course Code :** SF-AF-1-AEC-MEL
3) **Course Objective:**
   - To develop LSRW (Listening, Speaking, Reading and Writing) skills in the learner.
   - To improve creativity and skills of expression in the learner.
   - To improve reading speed and comprehension.
   - To develop the ability to read and write analytically.
   - To nurture an appreciation for literary texts.
4) **Course Outcome (CO) :** After completing this course, the learner will be able:

   CO1: To improve their reading and comprehension skills.
   CO2: To improve their speaking skills for social and professional purposes
   CO3: To listen in an active and comprehensive manner.
   CO4: To write more expressively and efficiently.
   CO5: To develop an appreciation for literary texts and how these interpret the world around us.

5) **Category of Course : AEC (Ability Enhancement Course)**
6) **Semester :** I
7) **Total Hours:** 30 Hours
8) **Total Credits:** 02 Credits
9) **Evaluation Pattern :**
   a. **Total Marks:** 50 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 30 Marks – Written Semester End Exam (Passing: 12 Marks)
      - 20 Marks – Internal Exam (Passing: 08 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

10) Modules/Units :

MODULE NO.	MODULE TOPIC	CONTENTS COVERED
I	**Receptive Skills - Reading and Listening Skills**	• Skimming and Scanning – Comprehension passages (e.g. News Articles) reading and understanding • Interpretation skills: Bar graphs, Pie charts, Flow charts, Active and Passive listening
II	**Productive Skills – Speaking and Writing Skills**	• Introducing oneself, giving information, giving directions • Rearranging words in a sentence, rearranging sentences in a paragraph, Paragraph writing
III	**Literary Appreciation Skills:**	**Poems:** • The Heart of the Tree – Henry Cuyler Bunner • Caged Bird – Maya Angelou **Prose:** • My Teacher – Helen Keller Towards a Competitive Nation – A.P.J. Abdul Kalam

11) REFERENCES:

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BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Indian Ethos**
2) **Course Code :** SF-AF-1-IKS-ETHOS
3) **Course Objective:**
   - To understand the concept of Ethos in Management
   - To understand the traditional learning system and modern learning system
4) **Course Outcome (CO) :**
   - The learner will be able to understand the importance of Ethos in Commerce
   - The learner will be able to link the traditional learning system with modern learning system and learn various lessons from it related to Commerce
5) **Category of Course : IKS (Indian Knowledge System)**
6) **Semester :** I
7) **Total Hours:** 30 Hours
8) **Total Credits:** 02 Credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 50 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 30 Marks – Written Semester End Exam (Passing: 12 Marks)
      - 20 Marks – Internal Exam (Passing: 08 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline
   e. **Paper Pattern of Semester End Exam (S.E.E.): 30 Marks Classification**

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	**10 Marks**
	B.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	
Q.2.		Attempt any two questions : Module 1	5 Marks each	**10 Marks**
Q.3.		Attempt any two questions : Module 2	5 Marks each	**10 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 20 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam (Objectives + Short Notes)	10 Marks
Subject Oriented Activities / PRACTICAL EXAM • PPT Presentations • Assignments • Case Studies • Field Research	07 Marks
Class Participation & Attendance	03 Marks
TOTAL	**20 marks**

10) Modules/Units :

MODULE NO.	MODULE TOPIC	CONTENTS COVERED
I	**Ethos – An Overview** **(15 hours)**	• **Indian Ethos**: Meaning, Features, Need, History, Relevance, Principles Practised by Indian Companies, Requisites, Elements, Role of Indian Ethos in Managerial Practices • **Work Ethos:** Meaning, Levels, Dimensions, Steps, Factors Responsible for Poor Work Ethos • **Personality Development:** Meaning, Determinants, Indian Ethos and Personality Development • **Karma:** • Meaning, Importance of Karma to Managers, Nish Kama Karma, Laws of Karma: The Great Law, Law of Creation, Law of Humility, Law of Growth, Law of Responsibility, Law of Connection, Corporate Karma: Meaning, Methodology, Guidelines for good Corporate Karma.
II	**Ancient Indian Learning System & Management Lessons from Scriptures** **(15 hours)**	• Gurukul System of Learning: Meaning, Features, Advantages, and Disadvantages • Modern System of Learning: Meanings, Features, Advantages, Disadvantages • Self-Management: Personal growth and Lessons from Ancient Indian Education System • Management Lessons from Vedas, Management Lessons from Mahabharata, Management Lessons from Bible, Management Lessons from Quran, and Management Lessons from Kautilya's Arthashastra Indian Heritage in Business, Management, Production and Consumption. Ethics v/s Ethos Indian Management v/s Western Management.

11) References:

- R Nandagopal, Ajith Sankar RN: Indian Ethics and Values in Management, Tata Mc Graw Hill
- Bhatta, S.K., Business Ethics & Managerial Values.
- Dave, Nalini V: Vedanta and Mana
- Chakraborty, S.K.: Foundation of Managerial Work-Contributions from Indian Thought, Himalaya Publication House, Delhi 1998
- Chakraborty, S.K.: Managerial Effectiveness and Quality of Work life – Indian Insights, Tata McGraw Hill Publishing Company, New Delhi – 1987
- Chakraborty, S.K.: Management by Values, Oxford University Press 1991.
- Nandagopal, Ajith Shankar, Indian Ethos and Values in Management, Tata Mc Graw Hill, 2010
- Khandelwal Indian Ethos and Values for Managers, Himalaya Publishing House, 2009
- Biswanath Ghosh, Ethics In Management and Indian Ethos, Vikas Publishing House, 2009
- Joseph Des Jardins, An Introduction to Business Ethics , Tata Mc Graw Hill, 2009

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Organisational Behaviour**
2) **Course Code** : SF-AF-1-VEC-OB
3) **Course Objective:** The Course will help the learner –
   - To develop the importance of human behavior and their values to run an organisation.
   - To describe how people behave under different conditions and understand why people behave as they do. It will provide the Learner to analyze specific strategic human resources demands for future action.
   - To synthesize related information and evaluate options for the most logical and optimal solution such that they would be able to predict and control human behavior and improve results.
4) **Course Outcome (CO)** :

   CO1- The learner will be able to apply the concept of organizational behavior and values to understand the behavior of people in the organization.

   CO2- The learner will be able to analyze the complexities associated with management of individual and group behavior in the organization.

   CO3- The learner will be able to understand how organizational behavior can integrate in understanding the motivation (why) behind behavior of people in the organization.

5) **Category of Course : Value Education Course (VEC)**
6) **Semester :** I
7) **Total Hours:** 30 Hours
8) **Total Credits:** 02 Credits
9) **Evaluation Pattern** :

a. **Total Marks:** 50 Marks (10 Point Grading System)

b. **Passing Criteria:** 40% Marks (04 Grade Points)

c. **Marking Scheme :** 60:40 Pattern
   - 30 Marks – Written Semester End Exam (Passing: 12 Marks)
   - 20 Marks – Internal Exam (Passing: 08 Marks)

d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 30 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	**10 Marks**
	B.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	
Q.2.		Attempt any two questions : Module 1	5 Marks each	**10 Marks**
Q.3.		Attempt any two questions : Module 2	5 Marks each	**10 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 20 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam (Objectives + Short Notes)	10 Marks
Subject Oriented Activities / PRACTICAL EXAM • PPT Presentations • Assignments • Case Studies • Field Research	07 Marks
Class Participation & Attendance	03 Marks
TOTAL	**20 marks**

10) Modules/Units :

MODULE NO.	MODULE TOPIC	CONTENTS COVERED
I	**Introduction to Behaviour, Organisational Behaviour and Group dynamics (15 hours)**	• Individual behaviour: Factors influencing individual differences and Influence of Environment. • Personality: Traits and determinants (Big 5 Model) and Johari window. • Organisational Behaviour: Goals of organisational behaviour, Scope of organisational behaviour. • Group formation and its types • Power and politics • Teams and types of teams • Negotiations.
II	**Organisation Culture (15 hours)**	• Work culture, Transmission of culture. • Organisational Change:- Factors influencing Organisational change, ways of resistance • Motivational Theories: - Maslow theory, ERG, X &Y theory and carrot and stick approach. • Stress: Types, causes, consequences and coping. • Time Management • Conflict management

11) References:

- Aswathappa, K. *Organizational Behaviour; Text, Cases and Games.* Mumbai. Himalaya Publishing House Pvt. Ltd. 2011.
- Ghanekar, Dr. Anjali. *Organizational Behaviour; Concept and Cases.* Pune. Everest Publishing House. 2006.
- Luthans, Fred. *Organizational Behaviour.* Singapore. McGraw – Hills Book Co. 1995.
- Luthans, Fred. *Organizational Behaviour.* Singapore. McGraw – Hills Book Co. 2002
- Luthans, Fred. *Organizational Behaviour.* Singapore. McGraw – Hills Book Co. 2004
- Singh, Yogendra. Pandey, Mamta. *Organizational Behaviour.* Delhi. A.I.T.B.S. Publishers. 2004.

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title : Department of Lifelong Learning & Extension (DLLE)**
2) **Course Code** : SF-AF-1-CC-DLLE
3) **Category of Course : CC (Co-Curricular)**
4) **Semester :** I / III
5) **Total Hours: Minimum 30 Hours**
6) **Total Credits:** 02 Credits
7) **Evaluation Pattern : Completion of required hours**

CONTENT	HOURS	PROJECT/ACTIVITIES
MAJOR PROJECT **(COMPULSORY:ANY 1)**	MINIMUM 30 HOURS	1) Annapoorna Yojana (APY) 2) Career Project (CP) 3) Status of Women Survey (SWS) 4) Population Education Club (PEC)
MINOR PROJECTS	MINIMUM 25 Hours	1) Poster Making Competition 2) Cleanliness/ Awareness Drives 3) Essay Writing Competition 4) Waste Management & Energy Saving 5) Other Social Activities
MEETINGS & REPORT WRITING	MINIMUM 05 Hours	Attend Orientation Programmes, Meetings and Filling of Final Semester Report

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Cost Accounting - II**
2) **Course Code :** SF-AF-2-MJ-COST
3) **Course Objective:** The Course will help the learner –

- To discuss the meaning, scope, objectives of Cost accounting.
- To discuss various concepts of cost sheet and cost units.
- To understand the concept of reconciliation of Financial and cost accounting statement.
- To discuss the importance of costing and analysis of equivalent units, abnormal gain and losses and inter process profit.

4) **Course Outcome (CO) :**

CO1-The learner will understand the concept of cost accounting.

CO2- The learner will be able to prepare the Cost sheet and allocation of its cost unit cost center and investment center.

CO3- The learner will be able to Reconcile financial and cost accounting statements and will also be able to get an overview of contract costing adhering to retention money, treatment of profit on incomplete contract.

CO4- The learner can solve practical problems related to process costing and analysis of equivalent units, abnormal gain and losses and inter process profit.

5) **Category of Course** : **Major- Mandatory**
6) **Semester :** II
7) **Total Hours:** 45 Hours
8) **Total Credits:** 03 Credits
9) **Evaluation Pattern** :

a. **Total Marks:** 100 Marks (10 Point Grading System)
b. **Passing Criteria:** 40% Marks (04 Grade Points)
c. **Marking Scheme :** 60:40 Pattern
    - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
    - 40 Marks – Internal Exam (Passing: 16 Marks)
d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	**Objectives** (Any 8 out of 10)	08 marks	**15 marks**
	B.	**Objectives** (Any 7 out of 10)	07 marks	
Q.2.	A.	**Practical Question** (1 question for 15 marks or may be divided into 2 sub questions of 7 marks and 8 marks)	**……..**	**15 marks**
	OR			
	B.	**Practical Question** (1 question for 15 marks or may be divided into 2 sub questions of 7 marks and 8 marks)	**……..**	
Q.3.	A.	**Practical Question** (1 question for 15 marks or may be divided into 2 sub questions of 7 marks and 8 marks)	**……..**	**15 marks**
	OR			
	B.	**Practical Question** (1 question for 15 marks or may be divided into 2 sub questions of 7 marks and 8 marks)	**……..**	
Q.4.	A.	**Practical Question** (1 question for 15 marks or may be divided into 2 sub questions of 7 marks and 8 marks)	**……..**	**15 marks**
	OR			
	B.	**Short Notes/Short Practical question (Any 3 out of 5) -5 marks each**	**……..**	

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules/Units :

MODULE NO.	MODULE TOPIC	CONTENTS COVERED
I	**Classification of Costs and Cost Sheet**	Classification of costs, Cost of Sales, Cost Centre, Cost Unit, Profit Centre and Investment Centre Cost Sheet, Total Costs and Unit Costs, Different Costs for different purpose Problems on preparation of cost sheet & Estimated Cost sheet
II	**Reconciliation of cost and financial accounts**	Practical problems based on reconciliation of cost and Financial accounts
III	**Contract Costing**	Progress payments, Retention money, Contract accounts, Accounting for material, Accounting for Tax deducted at source by the contractee, Accounting for plant used in a contract, treatment of profit on incomplete contracts, Contract profit and Balance sheet entries. Escalation clause, practical problems
IV	**Process Costing**	Process loss, Abnormal gains and losses, Joint products and by products. Excluding Equivalent units, Inter-process profit Practical problems Process Costing and joint and by products

11) References:

- Arora, M.N. *A Textbook of Cost and Management Accounting*. New Delhi. Vikas Publishing House Pvt. Ltd. 2012.
- Arora, M.N. *Cost Accounting; Principles and Practice*. New Delhi. Vikas Publishing House Pvt.Ltd. 2011.
- Arora, M.N. *Cost and Management Accounting; Theory, Problems and Solutions*. Mumbai. Himalaya Publishing House. 2016.
- Ravi M Kishore. Cost Accounting. New Delhi. Taxmann allied services.2008.
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- Jain, S.P. Narang, K.L. and Agarwal, Simmi. *Cost Accounting; Principles and Practice.* New Delhi. Kalyani Publication. 2016.
- Kishore, R.M. *Cost Accounting*. New Delhi. Taxmann Publication. 2008.

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Financial Accounting - II**
2) **Course Code :** SF-AF-2-MJ-FA
3) **Course Objective:** The Course will help the learner –
   - To study the basic concepts in relation to special accounting areas
   - To understand the cause and effect of incomplete records and prepare financial report from incomplete records.
   - To know how to record the entries for consignment accounts.
   - To ascertain branch income, branch expenses, branch assets and branch liabilities for the purpose of Branch Accounting.
   - To compute fire insurance claims for loss of stocks of a manufacturing concern.
4) **Course Outcome (CO) :**

   CO1 - In this course, learner acquires brief understanding about the basic concept of Financial Accounting in relation to special accounting areas

   CO2 - It help a learner to learn the concept of incomplete records and distinguish between double entry system and accounts from incomplete records.

   CO3 - This course will help a learner to prepare statement of loss to find actual claims in the case of fire in an organization

   CO4 - It also helps to prepare accounts in relation to Consignment and Branch Accounting

5) **Category of Course : Major- Mandatory**
6) **Semester :** II
7) **Total Hours:** 45 Hours
8) **Total Credits:** 03 Credits
9) **Evaluation Pattern** :

a. **Total Marks:** 100 Marks (10 Point Grading System)

b. **Passing Criteria:** 40% Marks (04 Grade Points)

c. **Marking Scheme :** 60:40 Pattern
   - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
   - 40 Marks – Internal Exam (Passing: 16 Marks)

d. **Mode of Evaluation of Answer-book :** Online/Offline

e. **Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification**

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***NEP Course Details For Semester: I & II***

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Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	**Objectives** (Any 8 out of 10)	08 marks	**15 marks**
	B.	**Objectives** (Any 7 out of 10)	07 marks	
Q.2.	A.	**Practical Question** (1 question for 15 marks or may be divided into 2 sub questions of 7 marks and 8 marks)	**……..**	**15 marks**
	OR			
	B.	**Practical Question** (1 question for 15 marks or may be divided into 2 sub questions of 7 marks and 8 marks)	**……..**	
Q.3.	A.	**Practical Question** (1 question for 15 marks or may be divided into 2 sub questions of 7 marks and 8 marks)	**……..**	**15 marks**
	OR			
	B.	**Practical Question** (1 question for 15 marks or may be divided into 2 sub questions of 7 marks and 8 marks)	**……..**	
Q.4.	A.	**Practical Question** (1 question for 15 marks or may be divided into 2 sub questions of 7 marks and 8 marks)	**……..**	**15 marks**
	OR			
	B.	**Short Notes/Short Practical question (Any 3 out of 5) -5 marks each**	**……..**	

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules/Units :

MODULE NO.	MODULE TOPIC	CONTENTS COVERED
I	**Accounting from Incomplete Records**	Introduction Problems on Preparation of Final Accounts of Proprietary Trading Concern (Conversion Method)
II	**Consignment Accounts**	Accounting for Consignment Transactions Valuation of Stock Invoicing of Goods at Higher Price (Excluding Overriding Commission, Normal/Abnormal Losses)
III	**Branch Accounts**	Meaning / Classification of Branches Accounting for Dependent Branch Not Maintaining Full Books Debtors Method Stock and Debtors Method
IV	**Fire Insurance Claims**	Computation of Loss of Stock by Fire Ascertainment of Claim as per the Insurance Policy Exclude: Loss of Profit and Consequential Loss

11) References:

- Grewal,T.S. and Gupta, S.C. *Introduction To Accountancy*. New Delhi. S.Chand & Company Ltd.2010.
- Hanif, M. *Advanced Accounting.* Mumbai. Tata Mc. Grow Hill and Co. Ltd.2006.
- Lingisetti,Venu. *Accounting and its applications*. Hyderabad. The Icfai University Press.2009.
- Maheshwari,S.N. *Financial Accounting*. New Delhi. Vikas Publishing House Pvt. Ltd.2011.
- Mukhopadhyay, Dinabandhu. *Financial Accounting*. New Delhi. S.Chand & Company Ltd.2011.
- Rao, Thukaram. *Advanced Accountancy.* New Delhi. New Age International (P)
- Ltd.Publishers.2005.
- Sujatha, B. *Accounting Standards in India*: Towards Coverage. Hyderabad. The Icfai University Press. 2007.
- Shukla, M.C. *Advanced Accounts*. New Delhi. S.Chand & Company Ltd. 2012.

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Business Environment**
2) **Course Code :** SF-AF-2-MIN-BE
3) **Course Objective:** The Course will help the learner –
   - To get knowledge on the concept of Business, it's Types, Business Environment and factors influencing Business activities.
   - To know concept of Corporate Social Responsibility.
   - To understand the framework of Business in International Market as well as the concept and regulations under Liberalization, Privatization and Globalization.
4) **Course Outcome (CO) :**

   CO1 – The learner will get an overall view of business structure.

   CO2 – The learner will understand the concept of Corporate Social Responsibility and its importance in the business as well as social environment.

   CO3 – The learner will understand the framework of businesses and various policies related to Liberalization, Privatization and Globalization which will make him able to understand and conduct the business activities effectively.
5) **Category of Course : Minor**
6) **Semester :** II
7) **Total Hours:** 30 Hours
8) **Total Credits:** 02 Credits
9) **Evaluation Pattern** :

a. **Total Marks:** 50 Marks (10 Point Grading System)

b. **Passing Criteria:** 40% Marks (04 Grade Points)

c. **Marking Scheme :** 30:20 Pattern
   - 30 Marks – Written Semester End Exam (Passing: 12 Marks)
   - 20 Marks – Internal Exam (Passing: 08 Marks)

d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 30 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	**10 Marks**
	B.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	
Q.2.		Attempt any two questions : Module 1	5 Marks each	**10 Marks**
Q.3.		Attempt any two questions : Module 2	5 Marks each	**10 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 20 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam (Objectives + Short Notes)	10 Marks
Subject Oriented Activities / PRACTICAL EXAM • PPT Presentations • Assignments • Case Studies • Field Research	07 Marks
Class Participation & Attendance	03 Marks
TOTAL	**20 Marks**

10) Modules/Units :

MODULE NO.	MODULE TOPIC	CONTENTS COVERED
I	**Business Environment and Entrepreneurial Development (15 hours)**	**Business Environment:** Business and Types of Business Organizations, Business Objectives, Business Environment components, Environmental Analysis: Importance, PESTEL Analysis, SWOT Analysis, LPG. **Entrepreneurial Development**: Entrepreneurship and Economic Development, Micro, Small and Medium Enterprises Development (MSMED) Act, 2006, Entrepreneurship as a Career Option c) Consumerism and Consumer Protection: Consumerism in India, Consumer Protection Act 1986.
II	**Corporate Social Responsibility and International Environment** **(15 hours)**	**Corporate Social Responsibility :** Social Responsibility of Business , Competitive Environment, Social Audit, Social Audit v/s Commercial Audit. **International Environment :** a) Regional Trade Blocs b) MNC and TNC c) WTO d) Foreign Trade in India.

11) References:

- Business Environment Text and Cases by M.B. Shukla, Taxman Publications, New Delhi
- Global Economy and Business Environment by Francis Cherunilam, Himalaya Publication House, Mumbai
- Business Environment: Text and Cases by Francis Cherunilam, Himalaya Publication House, Mumbai Indian Economy by Dutt and Sundaram, S. Chand and Company Pvt. Ltd., New Delhi
- Essentials of Business Environment by K. Aswathappa, Himalaya Publication House, Mumbai
- Business Environment by Justin Paul, Tata McGraw Hill Education Pvt. Ltd., New Delhi
- Indian Economy by Misra and Puri, Himalaya Publishing House, Mumbai
- Entrepreneurial Development by S.S. Khanka, S. Chand and Company Pvt. Ltd., New Delhi
- Dynamics of Entrepreneurship by Vasanta Desai, Himalaya Publishing House, Mumbai
- Entrepreneurship and Small Development Business Management by C.B. Gupta and S.S. Khanka, Sultan Chand and Sons, New Delhi
- Entrepreneurship by David H. Holt, PHI Learning Pvt. Ltd., New Delhi
- Management of Small-Scale Industries by Vasant Desai, Himalaya Publishing House, Mumbai

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Introduction to Management**
2) **Course Code :** SF-AF-2-OE-MGMT
3) **Course Objective:** The Course will help the learner –
   - To understand the basic concepts of management.
   - To get introduced to the features and process of planning and decision making.
   - To learn extensively about proper directing, organizing and leading.
4) **Course Outcome (CO) :**

   CO1 – The learner will be able to plan and organize as an entrepreneur.

   CO2 - The learner will be able to understand the process of recruitments, selection and interviews.

   CO3 – The learner will be able to know the importance of directing, leadership, motivation and coordination.
5) **Category of Course : Open Elective**
6) **Semester :** II
7) **Total Hours:** 60 hours
8) **Total Credits:** 4 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 30 Marks – Written Semester End Exam (Passing: 12 Marks)
      - 20 Marks – Internal Exam (Passing: 08 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Basic Management Concepts And Planning**	• Introduction to Management • Nature of Management • Objectives of Management • Levels of Management • Principles of Management. • Definition and Importance of Planning • Process of Planning • Limitations of Planning • Features of Sound Planning • Features and process of decision making
II	**Organizing**	• Definition, nature and significance • Organisational structures • Formal and Informal organisation - features, advantages and disadvantages • Centralization and decentralization – factors, merits and demerits • Departmentation and Delegation.
III	**Staffing**	• Meaning, Importance of Staffing • Recruitment and its sources • Selection procedure • Distinction between Recruitment and Selection • Employment tests and types of interviews.
IV	**Directing and Controlling**	• Meaning and Importance of directing • Principles of Directing • Leadership traits and Styles • Motivation – Importance and Factors • Co-ordination – Meaning, features and Importance • Meaning and steps in controlling • Essentials of a good control system.

11) References:

- *Essentials of Management* by Koontz H & W published by McGraw Hill
- *Principles of Management* by Ramaswamy published by Himalaya
- *Management Concept and Practice* by Hannagain T published by McMillan
- *Basic Managerial Skills for All* by McGrath E.H published by Prentice Hall of India
- *Management – Text and Cases* by VSP Rao published by Excel Books
- *Essentials of Management* by Massie Joseph published by Prentice Hall of India
- *Management: Principles and Guidelines* by Thomas Duening & John Ivancevich published by Biztantra
- *Management Concepts and Strategies* by J S Chandran published by Vikas Publishing House
- *Principles of Management* by Tripathy P C published by Tata McGraw Hill
- *Principles of Management: Theory and Practice* by Sarangi S K published by V M P Publishers

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Business Maths- 2**
2) **Course Code :** SF-AF-2-OE-MTS
3) **Course Objective:**
   - This course aims to equip Learner with a broad based knowledge of mathematics with emphasis on its applications in business.
   - The basic objective of this course is to impart knowledge of different quantitative methods and mathematical tools in business decisions.
4) **Course Outcome (CO) :**

   CO1 – The learner will be able to explain and have a good working practice of mathematical tools for taking appropriate business decisions.

   CO2 – The learner will be able to compare and analyze business data by gaining knowledge about basic mathematical tools used in business.
5) **Category of Course : Open Elective**
6) **Semester :** II
7) **Total Hours:** 60 hours
8) **Total Credits:** 4 credits
9) **Evaluation Pattern** :

   a. **Total Marks:** 100 Marks (10 Point Grading System)

   b. **Passing Criteria:** 40% Marks (04 Grade Points)

   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)

   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks
Q.1.	A.	**Objectives** (Any 8 out of 10)	08 marks
	B.	**Objectives** (Any 7 out of 10)	07 marks
Q.2.	A.	**Practical Question** (1 question for 15 marks or may be divided into 2 sub questions of 7 marks and 8 marks)	**15 Marks**
	OR		
	B.	**Practical Question** (1 question for 15 marks or may be divided into 2 sub questions of 7 marks and 8 marks)	**15 Marks**
Q.3.	A.	**Practical Question** (1 question for 15 marks or may be divided into 2 sub questions of 7 marks and 8 marks)	**15 Marks**
	OR		
	B.	**Practical Question** (1 question for 15 marks or may be divided into 2 sub questions of 7 marks and 8 marks)	**15 Marks**
Q.4.	A.	**Practical Question** (1 question for 15 marks or may be divided into 2 sub questions of 7 marks and 8 marks)	**15 Marks**
	OR		
	B.	**Short Notes/Short Practical question (Any 3 out of 5) -5 marks each**	**15 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Elementary Financial Mathematics**	• Simple and Compound Interest: Interest compounded once a year, more than once a year, continuous, nominal and effective rate of interest • Annuity-Present and future value-sinking funds • Depreciation of Assets: Equated Monthly Installments (EMI) - using flat interest rate and reducing balance method. • Functions: Algebraic functions and the functions used in business and economics, Break Even and Equilibrium point.

		• Permutation and Combination: (Simple problems to be solved with the calculator only)
II	**Matrices and Determinants**	• Matrices: Some important definitions and some important results. Matrix operation (Addition, scalar multiplication , matrix multiplication, transpose of a matrix) • Determinants of a matrix of order two or three: properties and results of Determinants • Solving a system of linear equations using Cramer's rule • Inverse of a Matrix (up to order three) using ad-joint of a matrix and matrix inversion method • Case study: Input Output Analysis
III	**Derivatives and Applications of Derivatives •**	Introduction and Concept: Derivatives of constant function, logarithmic functions, polynomial and exponential function • Rules of derivatives: addition, multiplication, quotient • Second order derivatives • Application of Derivatives: Maxima, Minima, Average Cost and Marginal Cost. Total revenue, Marginal revenue, Average revenue. Average and Marginal profit. Price elasticity of demand
IV	**Numerical Analysis [Interpolation]**	• Introduction and concept: Finite differences – forward difference operator – Newton's forward difference formula with simple examples • Backward Difference Operator. Newton's backward interpolation formula with simple examples

11) References:

- Ramasastri A.S, *Quantitative Methods for Banking and Finance*, Delhi, Macmillan, 2008.
- Verma A.P, *Business Mathematics,* New Delhi, Asian Book Private Limited, 2007.

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Introduction to Information Technology - II**
2) **Course Code :** SF-AF-2-VSC-IT
3) **Course Objective:**

   The Course will help the learner –

   - To be familiar with the essential contrivances for steering business transactions through the various resources of information technology.
   - To have knowledge about the E-Commerce, Cyber Law, use of Tally and PowerPoint

4) **Course Outcome (CO) :**

CO1 – The learners will be able to gain knowledge of E-Commerce and its importance in today's business world.

CO2 – The learner will be able to understand Cyber Law, application of Tally in accounting and use of PowerPoint in business.

5) **Category of Course : VSC (Vocational & Skill Enhancement Course)**
6) **Semester :** II
7) **Total Hours:** 30 hours
8) **Total Credits:** 2 credits
9) **Evaluation Pattern** :

   a. **Total Marks:** 50 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 30 Marks – Written Semester End Exam (Passing: 12 Marks)
      - 20 Marks – Internal Exam (Passing: 08 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 30 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	**10 Marks**
	B.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	
Q.2.		Attempt any two questions : Module 1	5 Marks each	**10 Marks**
Q.3.		Attempt any two questions : Module 2	5 Marks each	**10 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 20 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam (Objectives + Short Notes)	10 Marks
Subject Oriented Activities / PRACTICAL EXAM • PPT Presentations • Assignments • Case Studies • Field Research	07 Marks
Class Participation & Attendance	03 Marks
TOTAL	**20 marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**E-commerce, M-Commerce and Cyber Law in India (10 hours)**	**E-commerce, M-Commerce :** Concept of E-commerce and M-Commerce, Definition of E-commerce and M-Commerce, Business models of e-commerce: models based on transaction party (B2B, B2C, B2G, C2B, C2C, E-Governance), Models based on revenue models, Electronic Funds Transfer, Electronic Data Interchange. **Cyber Law in India:** Cyber Crimes: internet fraud Various threats and attacks, Phishing, Key Loggers, Identity Theft, Call & SMS forging, e-mail related crimes, Denial of Service Attacks, Hacking, Online shopping frauds, Credit card frauds, Cyber Stalking • Cyber Security: Computer Security, E-Security, Password Security and Reporting

II	**Basics of Tally Software and PowerPoint Presentations (20 hours including Practicals)**	**Basics of Tally Software:** • Introduction to Tally and its Features • Installing and activating Tally Software • Setting up New Company, Alteration and Shutting own Company in Tally • Security Controls in Tally III Voucher Entry in Tally Software • Types of vouchers in Tally • Entering Transactions in Tally **PowerPoint Presentations:** Creating a presentation with minimum 20 slides with a script. Presenting indifferent views, Inserting Pictures, Videos, Creating animation effects on them, Slide Transitions, Timed Presentations and Rehearsal of presentation.

11) References:

- Fundamentals of Computers – Rajaram V – Prentice Hall
- Computer today (3rd edition) – Sanders, Donald H – McGraw Hill
- Computers and Common sense – Hunt, Roger and Shelly John – Prentice Hall
- Computers – Subramaniam N – Wheeler
- Introduction to Computers – Xavier C. – New Age
- Computer in Business – Sanders D – McGraw Hill
- Computers and Information Management – S C Bhatnagar & V Ramant – Prentice Hall
- Internet for Business – Brummer, Lavrej – Cambridge
- E-mail for Everyone – Leon Alexis & Leon – Methews

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Business Communication - II**
2) **Course Code :** SF-AF-2-SEC-BC
3) **Course Objective:**
   - This course will give a comprehensive view of Presentation Skills, Group Communication, Business Correspondence and Language & Writing Skills which are pre-requisites in the outside market.
   - This course will make learners to acquire Presentation, Communication and Language & Writing Skills which will make them competent enough to stand in outside market.
4) **Course Outcome (CO) :**

   CO1 – The learner will be able to develop Presentation and Group Communication skills which can be effectively applied in the outside market to deliver effective presentations

   CO2- The course will make the learner competent enough in business correspondence

   CO3- The course will make a learner competent in report writing.
5) **Category of Course : SEC (Skill Enhancement Course)**
6) **Semester :** II
7) **Total Hours:** 30 Hours
8) **Total Credits:** 02 Credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 50 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 30 Marks – Written Semester End Exam (Passing: 12 Marks)
      - 20 Marks – Internal Exam (Passing: 08 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 30 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	**10 Marks**
	B.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	
Q.2.		Attempt any two questions : Module 1	5 Marks each	**10 Marks**
Q.3.		Attempt any two questions : Module 2	5 Marks each	**10 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 20 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam (Objectives + Short Notes)	10 Marks
Subject Oriented Activities / PRACTICAL EXAM • PPT Presentations • Assignments • Case Studies • Field Research	07 Marks
Class Participation & Attendance	03 Marks
TOTAL	**20 marks**

10) Modules/Units :

MODULE NO.	MODULE TOPIC	CONTENTS COVERED
I	**Individual & Group Communication (15 hours)**	• Interviews, Preparing for an Interview, Types of Interviews, Group Discussion. • Meetings: Meaning & Conducting of a Meeting, Types of a meeting, Drafting of Notice & Agenda. • Conference: Meaning and Organizing a Conference.
II	**Business Correspondence: Trade Letters, Sales Letters and Consumer Letters (15 hours)**	**Trade Letters**: Letters of Inquiry, Letters of Complaints, Order, Credit and Status Enquiry, Collection, Claims & Adjustments Letter. **Sales Letters:** Sales Letters, Promotional leaflets and fliers. **Consumer Letters:** Consumer Grievance Letters, Letter under Right to Information (RTI) Act.

11) References:

- Agarwal, Anju D A Practical Handbook for Consumers, IBH.1989
- Alien, R.K. Organisational Management through Communication.1970
- Ashley,A A Handbook Of Commercial Correspondence, Oxford University Press. 1992
- Ecouse Barry, Competitive Communication: A Rhetoric for Modern Business, OUP. 1999
- Ghanekar,A Communication Skills for Effective Management. Everest Publishing House, Pune.1996
- Martson, John E. The Nature of Public Relations, McGraw Hill, New Delhi. 1963
- Majumdar,P.K. Commentary on the Consumer protection Act, Prentice, New Delhi.1992

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***NEP Course Details For Semester: I & II***

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COURSE DETAILS (APPROVED)

1) **Title of the Course: Modern English Language- II**
2) **Course Code :** SF-AF-2-AEC-MEL
3) **Course Objective:**
   - To develop LSRW (Listening, Speaking, Reading and Writing) skills in the learner.
   - To improve creativity and skills of expression in the learner.
   - To improve reading speed and comprehension.
   - To develop the ability to read and write analytically.
   - To nurture an appreciation for literary texts.
4) **Course Outcome (CO) :**

   After completing this course, the learner will be able:
   CO1: To improve their reading and comprehension skills.
   CO2: To improve their speaking skills for social and professional purposes
   CO3: To listen in an active and comprehensive manner.
   CO4: To write more expressively and efficiently.
   CO5: To develop an appreciation for literary texts and how these interpret the world around us.

5) **Category of Course : AEC (Ability Enhancement Course)**
6) **Semester :** II
7) **Total Hours:** 30 Hours
8) **Total Credits:** 02 Credits
9) **Modules/Units :**

MODULE NO.	MODULE TOPIC	CONTENTS COVERED
I	**Receptive Skills - Reading and Listening Skills:**	• Vocabulary building: Synonyms, antonyms, homonyms • Types, functions, and transformation of sentences • Listening to a passage and suggesting a title
II	**Productive Skills – Speaking and Writing Skills:**	Introducing guests, welcome speech, vote of thanks, Cloze test, Dialogue writing
III	**Literary Appreciation Skills:**	**Poems:** • The Cold Within – James Patrick Kinney • Small Towns and the River – Mamang Dai

		Prose: • The Gift of the Magi – O'Henry • Excerpt from Malgudi Days – R.K. Narayan

10) REFERENCES:

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BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Indian Demographics & Value Education**
2) **Course Code** : SF-AF-2-VEC-IDVE
3) **Course Objective:** The Course will help the learner –
   - To know multi-cultural diversity of Indian Society
   - To make them aware of The Indian Constitution and Fundamental Duties of the Indian Citizen
   - To understand Concept of Human Rights and Rights of Citizens in India
   - To understand Concept of Human Values and various values which is to be acquired to be a successful person.
4) **Course Outcome (CO) :**

   CO1 – Learner will get to know multi-cultural diversity of Indian Society

   CO2 – Learner will get aware of The Indian Constitution and Fundamental Duties of the Indian Citizen

   CO3 – Learner will understand Concept of Human Rights and Rights of Citizens in India

   CO4 – Learner will understand Concept of Human Values and various values which is to be acquired to be a successful person.
5) **Category of Course : Value Education Course (VEC)**
6) **Semester :** II
7) **Total Hours:** 30 Hours
8) **Total Credits:** 02 Credits
9) **Evaluation Pattern** :

a. **Total Marks:** 50 Marks (10 Point Grading System)

b. **Passing Criteria:** 40% Marks (04 Grade Points)

c. **Marking Scheme :** 60:40 Pattern
   - 30 Marks – Written Semester End Exam (Passing: 12 Marks)
   - 20 Marks – Internal Exam (Passing: 08 Marks)

d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 30 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	**10 Marks**
	B.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	
Q.2.		Attempt any two questions : Module 1	5 Marks each	**10 Marks**
Q.3.		Attempt any two questions : Module 2	5 Marks each	**10 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 20 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam (Objectives + Short Notes)	10 Marks
Subject Oriented Activities / PRACTICAL EXAM • PPT Presentations • Assignments • Case Studies • Field Research	07 Marks
Class Participation & Attendance	03 Marks
TOTAL	**20 marks**

10) Modules/Units :

MODULE NO.	MODULE TOPIC	CONTENTS COVERED
I	**Overview of Indian Society and Indian Constitution** **(Indian Demographics)** **15 hours**	• Overview of Indian Society: multi-cultural diversity of Indian society, linguistic diversity in India, situation; regional variations (rural, urban and tribal characteristics) • Indian Constitution : The features and structure of the Constitution: the Preamble, Main Body and Schedules; Fundamental Duties of the Indian Citizen • Human Rights : Concept of Human Rights; The Universal Declaration of Human Rights • Rights of Citizens in India as stated in the Indian Constitution • Aspects of Indian Politics: The party system in Indian politics; Local self-government in urban and rural areas; Role and significance of women in politics

III	**Value Education** **15 hours**	• Concept of Human Values • Types of Values : Social Values, Professional Values, Religious Values, Aesthetic Values, National Integration and International understanding • Distinction between Moral Education and Value Education • Negative Traits to be avoided : Resentment, Irritating habits, Envy or Jealousy, Self-pity • Tolerance, peace and communal harmony as crucial values in strengthening the social fabric of Indian society

11) References:

- Asthana, D. K., and Asthana, Meera, Environmental Problems and Solutions, S. Chand, New Delhi, 2012.
- Bajpai, Asha, Child Rights in India, Oxford University Press, New Delhi, 2010.
- Bhatnagar Mamta and Bhatnagar Nitin, Effective Communication and Soft Skills, Pearson India,New Delhi, 2011.
- G Subba Rao, Writing Skills for Civil Services Examination, Access Publishing, New Delhi, 2014
- Kaushal, Rachana, Women and Human Rights in India, Kaveri Books, New Delhi, 2000.
- Mohapatra, Gaur Krishna Das, Environmental Ecology, Vikas, Noida, 2008.
- Motilal, Shashi, and Nanda, Bijoy Lakshmi, Human Rights: Gender and Environment, Allied Publishers, New Delhi, 2007.
- Murthy, D. B. N., Disaster Management: Text and Case Studies, Deep and Deep Publications,New Delhi, 2013.
- Parsuraman, S., and Unnikrishnan, ed., India Disasters Report II, Oxford, New Delhi, 2013
- Reza, B. K., Disaster Management, Global Publications, New Delhi, 2010.
- Sathe, Satyaranjan P., Judicial Activism in India, Oxford University Press, New Delhi, 2003.
- Singh, Ashok Kumar, Science and Technology for Civil Service Examination, Tata McGraw Hill, New Delhi, 2012
- Thorpe, Edgar, General Studies Paper I Volume V, Pearson, New Delhi, 2017.

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title : Department of Lifelong Learning & Extension (DLLE)**
2) **Course Code** : SF-AF-2-CC-DLLE
3) **Category of Course : CC (Co-Curricular)**
4) **Semester :** I / III
5) **Total Hours: Minimum 30 Hours**
6) **Total Credits:** 02 Credits
7) **Evaluation Pattern : Completion of required hours**

CONTENT	HOURS	PROJECT/ACTIVITIES
MAJOR PROJECT **(COMPULSORY:ANY 1)**	MINIMUM 30 HOURS	1) Annapoorna Yojana (APY) 2) Career Project (CP) 3) Status of Women Survey (SWS) 4) Population Education Club (PEC)
MINOR PROJECTS	MINIMUM 25 Hours	1) E-Waste Management 2) Cleanliness/ Awareness Drives 3) Paper bag making (Say No to Plastic) 4) Street Plays 5) Other Social Activities
MEETINGS & REPORT WRITING	MINIMUM 05 Hours	Attend Orientation Programmes, Meetings and Filling of Final Semester Report

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: III & IV***

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SEMESTER – III

COURSE DETAILS

1) **Title of the Course: Business Economics- II**
2) **Course Code :** SF-AF-III-C-BEC
3) **Course Objective:**

The Course will help the learner -

- To know about the determinants of macroeconomic conditions (national output, employment, and inflation), causes of business cycles, and interactions of monetary and financial markets with the real economy, familiarizing themselves in the process with major economic theories of relevance.

4) **Course Outcome (CO) :**

CO1 – The learner will be able to use the concepts of Macroeconomics and its interrelations with Microeconomics and can apply the principle of Macroeconomics in explaining the behaviour of Macroeconomic variables at national as well as global level.

5) **Category of Course :** Core Course
6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :

a. **Total Marks:** 100 Marks (10 Point Grading System)
b. **Passing Criteria:** 40% Marks (04 Grade Points)
c. **Marking Scheme :** 60:40 Pattern
    - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
    - 40 Marks – Internal Exam (Passing: 16 Marks)
d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: III & IV***

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10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**The Economics of Aggregates** **(15 lectures)**	• Macroeconomics: Meaning and Importance. • Circular flow of aggregate income and expenditure: closed and open economy models • Short run economic fluctuations : Features and Phases of Trade Cycles • The Keynesian Principle of Effective Demand: Aggregate Demand and Aggregate Supply - Consumption Function - Investment function & Multiplier
II	**Money, Inflation and Monetary Policy** **(15 lectures)**	• Money, Inflation and Monetary Policy • Money Supply: Determinants of Money Supply - Factors influencing Velocity of Circulation of Money • Demand for Money: Classical approach- Keynes' liquidity preference theory • Inflation: Causes - Effects of Inflation- Measures to control inflation. • Monetary policy: Meaning, objectives and instruments.
III	**Public Finance** **(15 lectures)**	• Meaning of Public Finance- Sources of Public Revenue • Tax & Non tax Revenue - Canons of taxation • Public Expenditure – Causes of increasing Public Expenditure - Public Debt – Types (Internal & External) • Fiscal Policy – Objectives & Instruments • Budget & Types of Budget • FRBM Act, 2003.
IV	**International Trade** **(15 lectures)**	• International Trade - Meaning & Advantages • Ricardo's Theory of comparative cost advantage , Heckscher – Ohlin theory of factor endowments. • Terms of trade - Gains from trade - Free trade versus protection • Foreign Investment : Foreign Direct Investment & Importance - Role of Multinational corporations • FPI – Meaning ,Difference between FDI & FPI • Balance of Payments: Structure- Types of Disequilibrium- Measures to correct disequilibrium in BOP.

11) References:

- Reference Books Business Economics –II
- Ackley.G (1976), Macro Economic Theory and Policy, Macmillan Publishing Co. New York
- Ahuja. H.L., Modern Economics — S.Chand Company Ltd. New Delhi.
- Bhatia H.L.: Public Finance. Vikas Publishing House Pvt. Ltd
- Dornbush , Fisher and Startz, Macroeconomics, Tata-Mac Graw Hill, New Delhi
- . Dwivedi, D.N. (2001), Macro Economics: Theory and Policy, Tata-Mac Graw Hill, New Delhi.
- Friedman Hilton (1953) Essays in Positive Economics, University of Chicago Press, London.
- Francis Cherunilam International Economics Tata McGraw – Hill Publishing Co. Ltd. New Delhi.
- Gregory .N. Mankiw, Macroeconomics, Fifth Edition (2002) New York:Worth Publishers
- Jhingan, M.L., Principles of Economics — Vrinda Publications (P) Ltd
- Jhingan M.L. – International Economics – Vrinda publication Pvt. Ltd - Delh
- Musgrave, R.A and P.B. Musgrave (1976) : Public Finance in Theory and Practice, Tata McGraw Hill, Kogakusha, Tokyo
- Shapiro, E (1996), Macro-Economic Analysis, Golgotha Publication, New Delhi.
- Singh.S.K. (2014): Public finance in Theory and Practice, S.Chand &co Pvt Ltd, New Delhi
- Salvatore Dominick – International Economics – John Wiley & sons, Inc Singapore
- Vaish .M.C. (2010) Macro Economic Theory 14th edition, Vikas Publishing House(P)Ltd

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Cost Accounting - III**
2) **Course Code :** SF-AF-III-C-COST
3) **Course Objective:**

The Course will help the learner –

- To solve cost sheet problems and acquired skill of application of cost sheet
- To calculate pricing for large size contract by contract costing.
- To determination of price at the time of running manufacturing process

4) **Course Outcome (CO) :**

CO1 – The learner will be able to Solve cost sheet problems and acquired skill of application of cost sheet. One of the important techniques to determine prices

CO2 - The learner will be able to find reasons of distinction between financial accounting and cost accounting and to solve practical problems

CO3 – The learner will be able to apply calculation of pricing of large size contract by contract costing and to solve practical problems

CO4 - The learner will be able to apply technique of determination of price at the time of running manufacturing process by process costing in practical manner.

5) **Category of Course :** Core Course
6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :

a. **Total Marks:** 100 Marks (10 Point Grading System)
b. **Passing Criteria:** 40% Marks (04 Grade Points)
c. **Marking Scheme :** 60:40 Pattern
    - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
    - 40 Marks – Internal Exam (Passing: 16 Marks)
d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

New (Revised)
Q.1 A. Objectives : (Any 8 out of 10) MCQ/True or False /Match the Column-08 Marks OR Q.1 B. Objectives : (Any 7 out of 10) MCQ/True or False/Match the Column- 07 Marks
Q.2 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.2 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.3 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.3 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.4 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.4 B. Short Notes / Short practical questions - 15 Marks (Any 3 out of 5)

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC
I (15 lectures)	Uniform Costing and Inter-Firm Comparison
II (15 lectures)	Integrated Systems and Non-Integrated Systems of Accounts
III (15 lectures)	Operating Costing
IV (15 lectures)	Process Costing - Equivalent units of Production and Inter Process Profit and Activity Based Costing

11) References:

- *Lecture on costing* by Swaminathan published by S.Chand & Co.
- *Practical costing* by Khanna Pandey and Ahuja published by S.Chand & Co.
- *Cost Accounting* by C S Rayudu published by Tata McGraw Hills
- *Cost Accounting* by Jawaharlal published by Tata McGraw Hills
- *Theory and problems of Cost and Management accounting* by M Y Khan and P K Jain published by Tata McGraw Hills
- *Cost Accounting* by Ravi M Kishore published by Taxmann ltd.
- *Cost Accounting*- Theory and Practice by M N Arora Publications
- *Practical Costing* by P C Tulsian published by Vikas Publishing house
- *Cost Accounting*- Text and problems by M C Shukla, T S Grewal and M P Gupta published by S.Chand
- *Cost Accounting*- Problems and solutions by V K Saxena C D Vashist published by S.Chand

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Financial Accounting -III**
2) **Course Code :** SF-AF-III-C-FA
3) **Course Objective:**

   The Course will help the learner –

   - To understand the concept conversion of partnership firm.
   - To get detailed knowledge about the amalgamation of firms and its accounting treatment.
   - To learn the concept of piecemeal distribution of cash.
   - To study the accounting transactions of foreign currencies.

4) **Course Outcome (CO) :**

   CO1 – It will provide knowledge to the Learner with regards to Partnership Final Accounts, Amalgamation of firms, and Conversion of partnership firm into a company.

   CO2 - The Learner will be able to understand about foreign trade and exchange fluctuations for his practical life experiences.

5) **Category of Course :** Core Course
6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :

   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

New (Revised)
Q.1 A. Objectives : (Any 8 out of 10) MCQ/True or False /Match the Column-08 Marks OR Q.1 B. Objectives : (Any 7 out of 10) MCQ/True or False/Match the Column- 07 Marks
Q.2 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.2 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.3 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.3 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.4 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.4 B. Short Notes / Short practical questions - 15 Marks (Any 3 out of 5)

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Partnership Final Accounts based on Adjustment of Admission or Retirement / Death of a Partner during the Year** **(15 lectures)**	• Simple final accounts questions to demonstrate the effect on final Accounts when a partner is admitted during the year or when partner Retires / dies during the year • Allocation of gross profit prior to and after admission / retirement / death when stock on the date of admission / retirement is not given and apportionment of other expenses based on time / Sales/other given basis • Ascertainment of gross profit prior to and after admission/retirement / death when stock on the date of admission / retirement is given and apportionment of other expenses based on time / Sales / other given basis • Excluding Questions where admission / retirement / death takes place in the same year
II	**Piecemeal Distribution of Cash** **(15 lectures)**	• Excess Capital Method only • Asset taken over by a partner • Treatment of past profits or past losses in the Balance sheet • Contingent liabilities / Realization expenses/amount kept aside for expenses and adjustment of actual • Treatment of secured liabilities • Treatment of preferential liabilities like Govt. dues / labour dues etc • Excluding: Insolvency of partner and Maximum Loss Method
III	**Amalgamation of Firms and Conversion / Sale of a Partnership Firm into a Ltd. Company** **(15 lectures)**	• Realization method only • Calculation of purchase consideration • Journal/ledger accounts of old firms • Preparing Balance sheet of new firm • Adjustment of goodwill in the new firm • Realignment of capitals in the new firm by current accounts / cash or a combination thereof Excluding : Common transactions between the amalgamating firms Realization method only • Calculation of New Purchase consideration, Journal / Ledger Accounts of old firms. • Preparing Balance sheet of new company

IV	**Accounting of Transactions of Foreign Currency** **(15 lectures)**	• In relation to purchase and sale of goods, services and assets and loan and credit transactions. • Computation and treatment of exchange rate differences

11) References:

- Grewal, T.S. and Gupta, S.C. *Introduction to Accountancy*. New Delhi. S.Chand & Company Ltd. 2010.
- Hanif, Ad*vanced Accounting*. Mumbai. Tata Mc. Grow Hill and Co. Ltd.2006.
- Lingisetti, Venu. *Accounting and its applications*. Hyderabad. The Icfai University Press.2009.
- Maheshwari, S.N. *Financial Accounting*. New Delhi. Vikas Publishing House Pvt. Ltd.2011.
- Mukhopadhyay, Dinabandhu. *Financial Accounting*. New Delhi. S.Chand & Company Ltd. 2011.
- Rao, Thukaram. *Advanced Accountancy*. New Delhi. New Age International (P) Ltd.Publishers.2005.
- Sujatha, B. *Accounting Standards in India: Towards Coverage*. Hyderabad. The Icfai University Press. 2007.
- Shukla, M.C. *Advanced Accounts*. New Delhi. Chand & Company Ltd. 2012.
- Sharma, D.G. *Accounting Standards*. New Delhi. Taxmann Allied Services (P.) Ltd.2006.
- Wood, Frank. And Sangster, Alan. *Business Accounting*. United Kingdom. Dorling Kindershey (India) Pvt. Ltd. 2010.

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Direct Tax - I**
2) **Course Code :** SF-AF-III-E-DT
3) **Course Objective:**

   The Course will help the learner –

   - To get aware of the various provisions of Income Tax Law in India
   - To develop the understanding of the various provisions of Income Tax Law
   - To acquire the ability to analyze and interpret the provisions of Income Tax Law
   - To develop the ability to apply the knowledge of Income Tax provisions in making basic Computation of Total Income
4) **Course Outcome (CO) :**

   CO1 - The learner will understand the Basic concepts of Income Tax Act

   CO2 - The learner will be able to determine Residential Status of a person in India on the basis of which He/she will be able determine the Scope of Total Income

   CO3 - The learner will understand five heads of income and will be able to classify all the incomes in the respective heads

   CO4 - The learner will understand the benefits of Deductions available under Chapter VI-A of Income Tax and will be able to make basic Computation of Total Income after taking available deductions

5) **Category of Course :** Elective Course
6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 Credits
9) **Evaluation Pattern** :

   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

New (Revised)
Q.1 A. Objectives : (Any 8 out of 10) MCQ/True or False /Match the Column-08 Marks OR Q.1 B. Objectives : (Any 7 out of 10) MCQ/True or False/Match the Column- 07 Marks
Q.2 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.2 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.3 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.3 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.4 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.4 B. Short Notes / Short practical questions - 15 Marks (Any 3 out of 5)

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: III & IV***

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10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Definitions, Basis of Charge and Exclusions from Total Income** **(15 lectures)**	• **Definitions u/s 2 :** Assessee, Assessment Year, Assessment, Annual value, Business, Capital asset, Income, Person, Previous Year, Transfer • **Basis of Charge :** Section 3 to 9 - Previous Year, Residential Status, Scope Of Total Income, Deemed Income • **Exclusions from Total Income:** Section 10 - restricted to, Agricultural Income, Sums Received from HUF by Member, Share of Profit from Firm, Casual & Non – Recurring Receipts, Scholarships, Income of Minor Child, Allowance to Members of Parliament and Legislative Assembly. **Note -Exemptions related to specific Heads of Income to be covered with Relevant Provisions.**
II	**Heads of Income** **(15 lectures)**	• **Income from Salary :** Section 15 – 17, Including Section 10 relating to House Rent Allowance, Travel Concession, Special Allowance, Gratuity, Pension, Leave Encashment, Compensation, Voluntary Retirement, Payment from Provident Fund • **Income From House Property :** Section 22 – 27, Including Section 2 – Annual Value • **Profits & Gains From Business & Profession :** Section 28-32, 36, 37, 40, 40A, 43B, 44AD, 44ADA & 44AE including : Section 2 – Business • **Capital Gains :** Section 45, 48, 49, 50, 54 and 55 • **Income from Other Sources:** Section 56 – 59
III	**Deductions under Chapter VI – A** **(15 lectures)**	• **80 A -** Restriction on claim in Chapter VI- A deductions • **80 C -** Payment of LIC/PF and other eligible investments • **80CCC** - Contribution to certain Pension Fund • **80D** - Medical Insurance Premium • **80 DD -** Maintenance and medical treatment of handicapped dependent • **80E** - Interest on Educational Loan • **80 TTA** - Interest on Saving Bank account • **80U** - Deduction in the case of totally blind or physically handicapped or mentally retarded resident person

IV	**Computation of Total Income** **(15 lectures)**	• Computation of Total Income of Individual and HUF with respect to above heads and deductions

11) References :

- V. K. Singhania, *Direct Taxes Law & Practice*, Taxmann
- Ahuja, Gupta, *Systematic Approach to Direct Tax*, Bharat Law House
- V. K. Singhania, *Income Tax Ready Recknoner*, Taxmann
- T. N. Manoharan, *Direct Tax Laws*, Snow White

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Management Accounting**
2) **Course Code :** SF-AF-III-E-MA
3) **Course Objective:**

   The Course will help the learner –

   - To acquire learners with the basic management accounting fundamentals.
   - To develop financial analysis skills among learner
   - To explain the core concepts of Working Capital and its importance in managing a business

4) **Course Outcome (CO) :**

CO1 – The learner will be in a position to analyze the Financial Statement of a concern for future actions

CO2 - The learner will be able to make and analyze the Cash Flow Statements of a concern

CO3 - Knowledge of Working Capital will help the learner to manage and fulfill the requirements of Business finance effectively

5) **Category of Course :** Elective Course
6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 Credits
9) **Evaluation Pattern** :

   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

New (Revised)
Q.1 A. Objectives : (Any 8 out of 10) MCQ/True or False /Match the Column-08 Marks OR Q.1 B. Objectives : (Any 7 out of 10) MCQ/True or False/Match the Column- 07 Marks
Q.2 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.2 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.3 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.3 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.4 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.4 B. Short Notes / Short practical questions - 15 Marks (Any 3 out of 5)

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Management Accounting and Analysis and Interpretation of Accounts** **(15 lectures)**	• **Introduction to Management Accounting :** Meaning, Features, Scope, Importance, Functions, role of Management Accounting, Management Accounting Framework, Tools, Management Accounting and Financial Accounting • **Analysis and Interpretation of Accounts :** a) Vertical Forms of Balance Sheet and Profit and Loss Account suitable for analysis b) Trend Analysis. c) Comparative Statement. d) Common Size Statement.
II	**Financial Statement analysis: Ratio analysis** **(15 lectures)**	• Meaning of financial Statement Analysis, steps, Objective and types of Analysis. • Ratio analysis: Meaning, classification, Du Point Chart, advantages and Limitations. • Balance Sheet Ratios • Revenue Statement Ratios • Combined Ratio
III	**Cash Flow Analysis** **(15 lectures)**	• Preparation of Cash Flow Statement with reference to Accounting Standard 3 (Indirect method only)
IV	**Working Capital Management** **(15 lectures)**	• Concept, Nature of Working Capital , Planning of Working Capital • Estimation / Projection of Working Capital Requirement in case of Trading and Manufacturing Organization • Operating Cycle Practical Problems

11) References:

- Saxena, Vashist, Cost Management
- Ravi N. Kishor, Cost & Management Accounting, Publication Taxmonth
- P. N. Reddy, Essential of Management Accounting, Himalaye
- Robert S Kailar, Advanced Management Accounting, Holl
- S. R. Varshney, Financial Of Management Accounting, Wisdom
- I. M. Pandey, Management Accounting, Vikas
- D. K. Mattal, Cost & Management Accounting,Galgotia
- Khan & Jain, Management Accounting, Tata Megaw
- R.P. Resstogi, Management Accounting

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Operation Research**
2) **Course Code :** SF-AF-III-E-OR
3) **Course Objective:**

   The Course will help the learner –

   - To understand operations research methodologies
   - To solve various problems practically
   - To proficient in case analysis and interpretation

4) **Course Outcome (CO) :**

   CO1- The learner will be able to Formulate and solve mathematical model (linear programming problem) for a physical situation like production, distribution of goods and economics.

   CO2- The learner will be able to Use appropriate techniques to represent and analyze projects with a view to managing resources, minimizing costs, and coping with uncertainty.

   CO3- The learner will be able to Solve numerical on Transportation Models and Assignment Models.

5) **Category of Course :** Elective Course
6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :

   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Operational Research and Linear Programming** **(15 lectures)**	a) **Introduction To Operations Research** • Operations Research - Definition, Characteristics of OR, OR Techniques, Areas of Application, Limitations of OR. b) **Linear Programming Problems: Introduction and Formulation** • Introduction to Linear Programming • Applications of LP • Components of LP • Requirements for Formulation of LP Problem • Assumptions Underlying Linear Programming • Steps in Solving LP Problems • LPP Formulation (Decision Variables, Objective Function, Constraints, Non • Negativity Constraints) c) **Linear Programming Problems: Graphical Method** • Maximization & Minimization Type Problems. (Max. Z & Min. Z) • Two Decision Variables and Maximum Three Constraints Problem • Constraints can be "less than or equal to", "greater than or equal to" or a combination of both the types i.e. mixed constraints. • Concepts: Feasible Region of Solution, Unbounded Solution, Redundant • Constraint, Infeasible Solution, Alternative Optima. d) **Linear Programming Problems: Simplex Method** • Only Maximization Type Problems. (Only Max. Z). No Minimization problems. • (No Min. Z) Numerical on Degeneracy in Maximization Simplex Problems. • Two or Three Decision Variables and Maximum Three Constraints Problem. (Upto Maximum Two Iterations) • All Constraints to be "less than or equal to" Constraints. ("Greater than or Equal to" Constraints not included.) • Concepts : Slack Variables, Surplus Variables, Artificial Variables, Duality, • Product Mix and Profit, Feasible and Infeasible Solution, Unique or Alternate

		• Optimal Solution, Degeneracy, Non Degenerate, Shadow Prices of Resources, Scarce and Abundant Resources, Utilized and Unutilized Capacity of Resources, • Percentage Utilization of Resources, Decision for Introduction of a New Product.
II	**Assignment and Transportation Models** **(15 lectures)**	a) **Assignment Problem – Hungarian Method** • Maximization & Minimization Type Problems. • Balanced and Unbalanced Problems. • Prohibited Assignment Problems, Unique or Multiple Optimal Solutions. • Simple Formulation of Assignment Problems. • Maximum 5 x 5 Matrix. Up to Maximum Two Iterations after Row and Column • Minimization. b) **Transportation Problems** • Maximization & Minimization Type Problems. • Balanced and Unbalanced problems. • Prohibited Transportation Problems, Unique or Multiple Optimal Solutions. • Simple Formulation of Transportation Problems. • Initial Feasible Solution (IFS) by: • a. North West Corner Rule (NWCR) • b. Least Cost Method (LCM) • c. Vogel's Approximation Method (VAM) • Maximum 5 x 5 Transportation Matrix. • Finding Optimal Solution by Modified Distribution (MODI) Method. (u, v and Δ) • Maximum Two Iterations (i.e. Maximum Two Loops) after IFS.
III	**Network Analysis** **(15 lectures)**	• Critical Path Method (CPM) • Concepts: Activity, Event, Network Diagram, Merge Event, Burst Event, • Concurrent and Burst Activity, • Construction of a Network Diagram. Node Relationship and Precedence • Relationship. • Principles of Constructing Network Diagram. • Use of Dummy Activity • Numerical Consisting of Maximum Ten (10) Activities. • Critical Path, Sub-critical Path, Critical and Non-critical Activities, Project

		• Completion Time. • Forward Pass and Backward Pass Methods. • Calculation of EST, EFT, LST, LFT, Head Event Slack, Tail Event Slack, Total Float, • Free Float, Independent Float and Interfering Float • b) Project Crashing • Meaning of Project Crashing. • Concepts: Normal Time, Normal Cost, Crash Time, Crash Cost of Activities. • Cost Slope of an Activity. • Costs involved in Project Crashing: Numericals with Direct, Indirect, Penalty,crash cost and Total Costs. • Time – Cost Trade off in Project Crashing. • Optimal (Minimum) Project Cost and Optimal Project Completion Time. • Process of Project Crashing. • Numerical Consisting of Maximum Ten (10) Activities. • Numerical based on Maximum Four (04) Iterations of Crashing c) Program Evaluation and Review Technique (PERT) • Three Time Estimates of PERT: Optimistic Time (a), Most Likely Time (m) and Pessimistic Time (b). • Expected Time (te) of an Activity Using Three Time Estimates. • Difference between CPM and PERT. • Numerical Consisting of Maximum Ten (10) Activities. • Construction of PERT Network using tevalues of all Activities. • Mean (Expected) Project Completion Time. • Standard Deviation and Variance of Activities. • Project Variance and Project Standard Deviation. • 'Prob. Z' Formula. • Standard Normal Probability Table. Calculation of Probability from the • Probability Table using 'Z' Value and Simple Questions related to PERT Technique. • Meaning, Objectives, Importance, Scope, RORO/LASH
IV	**Job Sequencing and Theory of Games** **(15 lectures)**	• Job Sequencing Problem • Processing Maximum 9 Jobs through Two Machines only. • Processing Maximum 6 Jobs through Three Machines only. • Calculations of Idle Time, Elapsed Time etc.

		b) Theory of Games • Introduction • Terminology of Game Theory: Players, Strategies, Play, Payoff, Payoff matrix, • Maximin, Maximax, Saddle Point. • Types of Games. • Numericals based on: • Two Person Zero Sum Games including strictly determinable and Fair Game • - Pure Strategy Games (Saddle Point available). Principles of Dominance method.

11) References:

- Dr. Mrs. Anjali Ghanekar, Essentials of Organisation Development, Everest Publishing House
- French,W.L. and Bell, C.H., Organisation Development, Prentice-Hall, New Delhi,1995.
- Harvey, D.F. and Brown, D.R., An Experimental Approach to Organization Development, Prentice-Hall, Englewood Cliffs,N.J.,1990
- Cummings, T. G. & Worley, C. G. (2009).Organization Development and Change (9th edition). Canada: South-Western Cengage Learning
- Thomas G. Cummings and Christopher G. Worley, Organization Development and Change, Thomson South-Western, 8th Edition 2004.
- Cummings, T. G., Theory of Organization Development and Change, South Western.
- Ramanarayan, S. and Rao, T.V., Organization Development: Accelerating Learning and Transformation, 2nd Edition, Sage India, 2011.
- Richard L, Organisation, Theory, Change and Design , India Edition(Cenage Learning)
- Garath R Jones, Mary Mathew , Organisation Theory, Design and Change: Sixth Edition, Pearson
- Wendell L French, Cecil H Bell, Jr, Veena Vohra ,Organisation Development , Sixth Edition, Pearson Education

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Information Technology - I**
2) **Course Code :** SF-AF-III-AB-IT
3) **Course Objective:**

   The Course will help the learner –

   - To be familiar with the essential contrivances for steering business transactions through the various resources of information technology.
   - To have basic knowledge about computers, networks and information technology.

4) **Course Outcome (CO) :**

CO1 – To provide the learners with fundamental knowledge of the use of computers in business.

CO2 - To provide exposure to the Learner about information technology, networks and MS Office.

CO3 – The learner will be able to understand the various terms and concepts of information technology.

5) **Category of Course :** Skill/Ability Enhancement Courses
6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Computers** **(15 lectures)**	• History of Computers • Parts of Computers • Hardware: Specifications and Data Storage Management • Soft wares: Concept of System Software and Applications • Networking: Introduction and Types of Network Topologies
II	**Office Productivity Tools** **(15 lectures)**	• MS Word: Creating, Editing, Formatting and Printing of Documents, Using Tools, Mail merge and Print Review and Set-up • MS Excel: Creating Worksheet, Creating Various Formulae, Creating Charts, Rename and Copy of Worksheets, Using Tools, Printing Review and Set-up • Power Point: Create Project Report, Create Slides, Animation, Page Designing, Insert Image, View Page, Print Review and Set-up. • Use of Tools In Accounting : Preparation of vouchers, invoices and reports, Calculation of Interest, Depreciation, TDS, Salary, Taxes, inventory and reconciliation
III	**Web & Electronic Commerce** **(15 lectures)**	• Use of Various Web Browser, Information Searching Tools, Downloading, Create New email ID, Sending Data through email, Search Engine Optimization. • Meaning, Advantages and Limitations of E-Commerce, The Role of Strategy in • E-Commerce, Value Chains in E-Commerce, Infrastructure for Electronic Commerce • Web Based Tools for Electronic Commerce, Electronic Commerce software, Security Threats to electronic Commerce, Implementing Security for Electronic Commerce, Electronic Payment Systems, Strategies for Marketing, Sales & Promotion • Strategies for Purchasing Logistics & Support Activities, Electronic Markets & Communities, Business Plans for Implementing Electronic Commerce
IV	**Introduction to Internet and other emerging technologies** **(15 lectures)**	• Introduction – Internet Components – Electronic Commerce – E-commerce Applications – Electronic Data Exchange – Extranet – Payment Systems – Risks and Security Considerations – Legal Issues – Other Emerging Technologies

11) References:

- Fundamentals of Computers – Rajaram V – Prentice Hall
- Computer today (3rd edition) – Sanders, Donald H – McGraw Hill
- Computers and Common sense – Hunt, Roger and Shelly John – Prentice Hall
- Computers – Subramaniam N – Wheeler
- Introduction to Computers – Xavier C. – New Age
- Computer in Business – Sanders D – McGraw Hill
- Computers and Information Management – S C Bhatnagar & V Ramant – Prentice Hall
- Internet for Business – Brummer, Lavrej – Cambridge
- E-mail for Everyone – Leon Alexis & leon – Methews

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Foundation Course – II (Financial Market Operations)**
2) **Course Code :** SF-AF-III-ID-FC
3) **Course Objective:**

   The Course will help the learner –

   - To understand various components of financial market
   - To analyze various terminologies associated with the financial markets
   - To understand special category of securities such as derivatives and types of derivatives

4) **Course Outcome (CO) :**

CO1 –Leaner learns different components of a financial system and their role.

CO2 – Leaner understands various instruments, participants and operation of the money market

CO3 – Learner can analyze various types of derivatives.

5) **Category of Course :** Multi-disciplinary/ Interdisciplinary course
6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 2 Credits
9) **Evaluation Pattern** :

a. **Total Marks:** 100 Marks (10 Point Grading System)
b. **Passing Criteria:** 40% Marks (04 Grade Points)
c. **Marking Scheme :** 60:40 Pattern
   - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
   - 40 Marks – Internal Exam (Passing: 16 Marks)
d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	An Overview of the Financial System (05 lectures)	• Saving and Investment Money, Inflation and Interest Banking and Non-Banking Financial Intermediaries
II	Financial Markets (15 lectures)	• Financial Markets: Introduction and meaning, Government Economic Philosophy and Financial Market, Structure of Financial Market in India • Capital Market: Introduction and meaning, Concept, Role, Importance, Evolution in India, Primary Market System and Regulations in India, Secondary Market System Bond Market in India Debt Market in India
III	Financial Instruments (10 lectures)	• Meaning and types of Financial Instruments Characteristics of Financial Instruments: Liquidity, Maturity, Safety and Yield REPO, TBs, Equities, Bonds, Derivatives, others
IV	Financial Services (15 lectures)	• Merchant Banking: Managing of Public Equity / Debenture Issues Mobilizing Fixed Deposits, Arranging Inter-corporate Loans, Raising term Finance and Loan Syndication. • Other Financial Services: Consumer Finance, Credit Cards, Mutual Funds and Commercial Paper

11) References:

- Khan M.Y, Financial Services, Mc Graw Hill Education.
- Dr.S. Gurusamy, Financial Services, Vijay Nicole Imprints.
- E. Gordon and K. Natarajan – Financial Markets and Services
- Niti Chatnani- Commodity markets McGraw Hill Publication
- S. Kevin, - Commodities & financial derivatives PHI Learning Pvt ltd

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Advanced Excel**
2) **Course Code:** SF-AF-III-AD-AEX
3) **Course Objective:**

   The course will help the learner to -

   - Enter and edit data.
   - Format data and cells.
   - Construct formulas, including the use of built-in functions, and relative and absolute references.
   - Create Pivot tables and charts.
   - Convert text and validate and consolidate data.
   - Import and Export Data

4) **Course Outcome (CO):**

   CO1- The learner will be able to master Microsoft Excel from Beginner to Advanced

   CO2- The learner will be able to build a solid understanding on the Basics of Microsoft Excel

   CO3- The learner will be able to learn the most common Excel functions used in the Office

   CO4- The learner will be able to maintain large sets of Excel data in a list or table

   CO5- The learner will be able to create dynamic reports by mastering one of the most popular tools, PivotTables

5) **Category of Course :** Additional Course
6) **Semester:** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 2 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Excel and Logical Functions** **(15 lectures)**	• Using Basic Functions • Formatting and Proofing • Mathematical functions • Protecting files • Date and time functions • Printing workbook • What if analysis • If analysis • Nested Ifs • Complex if functions
II	**Data Validations and Look Up functions** **(15 lectures)**	• Manage primary and secondary axis. • Dynamic Dropdown • V Lookup and H Look functions • Index and match • Nested V Lookup • Worksheet linking
III	**Pivot Tables** **(15 lectures)**	• Creating pivot tables • Advance value field setting • Grouping based on numbers and dates • Array functions • Using array formulas • Array with if and lookup functions
IV	**Chart and Slicers** **(15 lectures)**	• Bar Chart, Pie Chart, Line chart, etc • Filter data using slicers • Manage primary and secondary axis • Excel Dashboard • Planning a dash board • Adding tables and charts to dashboard • Adding dynamic content to dashboard

11) References:

- Microsoft Excel 2016 Bible: The Comprehensive Tutorial Resource.
- Excel 2016 ALL-IN-ONE for Dummies.
- Excel: QuickStart Guide from Beginner to Expert.
- Excel 2016: Pivot Table Data Crunching. ...
- Power Pivot and Power BI: The Excel User's Guide to DAX, Power Query, Power BI, and Power Pivot.
- Microsoft Excel Dashboards and Reports

SEMESTER – IV

COURSE DETAILS

1) **Title of the Course: Business Law- II**
2) **Course Code :** SF-AF-IV-C-BL
3) **Course Objective:**

   The Course will help the learner –

   - To know the concept of partnership and procedure of registration of partners with their rights and duties and other relevant provisions under The Indian Partnership Act 1932.
   - To study the relevant provisions under Limited Liability Partnership Act, 2008.
   - To understand the laws related to health, safety and welfare of the employees in a factory under Factories Act, 1948.
   - To study relevant definitions, incorporation of companies and other important provisions under Companies Act, 2013.

4) **Course Outcome (CO) :**

   CO1 – It will help or Learner to understand rights and liabilities of partners, Registration, Incorporation and Dissolution of partnership firm.

   CO2 – It will help a Learner to understand nature of LLP, merits of LLP and process of winding up of LLP.

   CO3-- Learner can acquire in depth knowledge about the provisions of Health safety and welfare measures for workers and its inspection.

   CO4-- Learner will understand various definitions that are required to learn provision of company Act 2013.

5) **Category of Course :** Core Course
6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 Credits

9) Evaluation Pattern :

a. Total Marks: 100 Marks (10 Point Grading System)

b. Passing Criteria: 40% Marks (04 Grade Points)

c. Marking Scheme : 60:40 Pattern

- 60 Marks – Written Semester End Exam (Passing: 24 Marks)
- 40 Marks – Internal Exam (Passing: 16 Marks)

d. Mode of Evaluation of Answer-book : Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	**Sub-Question**	**Type of Question**	**Sub-Question Marks**	**Total Marks**
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	**TOPIC**	**CONTENTS COVERED**
I	**The Indian Partnership Act – 1932** **(15 lectures)**	• Concept of Partnership - Partnership and Company - Test for determination of existence for partnership - Kinds of partnership • Registration and effects of non-registration of Partnership • Rights and Duties of Partners • Authority and Liability of partners • Admission, Retirement and Expulsion of Partner • Dissolution of Partnership
II	**Limited Liability Partnership Act – 2008** **(15 lectures)**	• Nature of Limited Liability Partnership • Incorporation of Limited Liability Partnership • Extent and Limitation of Liability of Limited Liability Partnership and Partners • Contributions • Conversion Into Limited Liability Partnership • Winding Up and Dissolution
III	**Factories Act – 1948** **(15 lectures)**	• Definitions • Section 2 (k) – Manufacturing Process, • Section2 (l) –Workers • Section 2 (m)– Factory • Provisions pertaining to i. Health- Section 11 to Section 20 ii. Safety- Section 21 to Section 41 iii. Welfare- Section 42 to Section 49

IV	**Company Law (Companies Act, 2013)** **(15 lectures)**	• Definitions • Section 2 o Clause (2) – Accounting Standard o Clause (7) – Auditing Standard o Clause (13) – Books of Accounts o Clause (31) – Deposit o Clause (41) – Financial Year o Clause (42) – Foreign Company o Clause (47) – Independent Director o Clause (48) – Indian Depository Receipts o Clause (62) – One Person Company o Clause (85) – Small Company Incorporation of companies (Section 3 to Section 20) Public Offer (Sections 23, 25 to 28, 33, 35, 39) Private Placement (Section 42) Share Capital and Debentures (Sections 43, 46, 47, 52 to 56, 61 to 72)

11) References:

- Gulshan, S.S. Company Law. New Delhi. Excel Books. (2008)
- Gulshan, S.S. Kapoor, G.K. Patiwal, Manisha. And Basu, Sanjibkumar. Law, Ethics and Communication. New Delhi. New Age International Publishers. 2008.
- Jagota, Dr. Rajni. Company Law. New Delhi. Taxmann Publication. 2020.
- Kuchhal, M.C. Business Law. New Delhi. Vikas Publishing House Pvt. Ltd. 2011.
- Nadhani, Asok. Business and Corporate Laws. New Delhi. BPB Publications. 2009.
- Singh, Avtar. Business Law. Lucknow. EBC Publishing Ltd. 2011.

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Cost Accounting - IV**
2) **Course Code :** SF-AF-IV-C-COST
3) **Course Objective:**

   The Course will help the learner –

   - To be aware of various techniques of analysis in Cost Accounting
   - To develop skills of analysis and evaluation in cost accounting
   - To understand, develop and apply the techniques of Costing in the decision making process in the business

4) **Course Outcome (CO) :**

   CO1 – The learner will be able to prepare different types of budgets required for the business

   CO2 – The learner will be in a position to apply Cost Accounting techniques of budgeting, Marginal Costing and Standard Costing in decision making in the business

5) **Category of Course :** Core Course
6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 Credits
9) **Evaluation Pattern** :

a. **Total Marks:** 100 Marks (10 Point Grading System)
b. **Passing Criteria:** 40% Marks (04 Grade Points)
c. **Marking Scheme :** 60:40 Pattern
   - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
   - 40 Marks – Internal Exam (Passing: 16 Marks)
d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

New (Revised)
Q.1 A. Objectives : (Any 8 out of 10) MCQ/True or False /Match the Column-08 Marks OR Q.1 B. Objectives : (Any 7 out of 10) MCQ/True or False/Match the Column- 07 Marks
Q.2 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.2 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.3 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.3 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.4 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.4 B. Short Notes / Short practical questions - 15 Marks (Any 3 out of 5)

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Budgeting and Budgetary Control** **(15 lectures)**	• Meaning & objectives, Advantages and limitations of budgets • Functional budgets, fixed and flexible budgets, Zero based budgeting, performance budgeting • Practical problems of preparing flexible budgets and functional budgets
II	**Absorption Costing and Marginal Costing, Cost Volume and Profit Analysis** **(15 lectures)**	• **Absorption Costing and Marginal Costing** Meaning of absorption costing, Introduction to marginal costing, Distinction between absorption costing and marginal costing, Advantages and limitations of marginal costing • **Cost Volume and Profit Analysis** Break even analysis meaning and graphic presentation, Margin of safety, Key factor Practical problems based on using the marginal costing formulae and key factor
III	**Managerial Decision Making** **(15 lectures)**	• Make or buy • Sales mix decisions • Exploring new markets • Plant shut down decision • Practical problems
IV	**Standard Costing and Variance Analysis** **(15 lectures)**	• Material Cost variance • Labour cost variance • Variable overhead variances • Fixed Overhead variances • Sales variances • Practical problems

11) References:

- Swaminathan, Lectures on Costing, S. Chand and Company (P) Ltd., New Delhi
- C.S. Rayudu, Cost Accounting, Tata Mc. Grow Hill and Co. Ltd., Mumbai
- Jawahar Lal and Seema Srivastava, Cost Accounting, Tata Mc. Grow Hill and Co. Ltd., Mumbai
- Ravi M. Kishore, Cost Accounting, Taxmann Ltd., New Delhi
- N.K. Prasad, Principles and Practices of Cost Accounting, Book Syndicate Pvt. Ltd., Calcutta

- B.K. Bhar, Cost Accounting Theory and Practice, Tata Mc. Grow Hill and Co. Ltd., Mumbai
- M.N. Arora, Cost Accounting Principles and Practice, Vikas Publishing House Pvt. Ltd., New Delhi
- V.K. Saxena, C.D. Vashist, Advanced Cost and Management Accounting: Problems and Solutions, S. Chand and Company (P) Ltd., New Delhi
- S.P. Jain and K.L. Narang, Cost Accounting, Kalyani Publishers, Ludhiana
- M. Hanif, Modern Cost and Management Accounting, Tata McGraw Hill Education Pvt. Ltd., New Delhi

COURSE DETAILS

1) **Title of the Course: Financial Accounting - IV**
2) **Course Code :** SF-AF-IV-C-FA
3) **Course Objective:**

The Course will help the learner –

- To study relevant provisions of Companies Act related to preparation of Final Account and prepare financial statements as per Companies Act.
- To obtain in depth knowledge about issue of preference shares and the methods of redemption of fully paid up preference shares as per Companies Act, 2013.
- To understand the provisions regarding redemption of debentures under the Companies Act, 2013 and explain the accounting treatment for the same.
- To understand the concept of Profit Prior to Incorporation and calculate the Profit/Loss for pre and post incorporation periods separately.
- To study the conversion of currencies and incorporation in head office account of Foreign Branch.

4) **Course Outcome (CO) :**

The learner will be able to -

CO1 – Apply to formats of Company Final Accounts as per Indian Company's Act, 2013 in practical manner with notes to accounts.

CO2-- Understand provisions regarding issue and redemption of preference shares as per Company's Act, 2013 and applying practically to solve practical problems.

CO3 – Understand various types of redemption of debentures and they are able to understand provisions regarding redemption of debentures.

CO4 – Apply conversion of Foreign currency into Indian currency when, to solve practical problems about foreign branches.

CO5 – Classify appropriate basis for allocation regarding Profit Prior to Incorporation and applying when to solve practical problem.

5) **Category of Course :** Core Course

6) **Semester :** IV

7) **Total Hours:** 60 hours

8) **Total Credits:** 3 credits

9) **Evaluation Pattern** :

a. **Total Marks:** 100 Marks (10 Point Grading System)

b. **Passing Criteria:** 40% Marks (04 Grade Points)

c. **Marking Scheme :** 60:40 Pattern

- 60 Marks – Written Semester End Exam (Passing: 24 Marks)
- 40 Marks – Internal Exam (Passing: 16 Marks)

d. **Mode of Evaluation of Answer-book :** Online/Offline

e. **Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification**

New (Revised)
Q.1 A. Objectives : (Any 8 out of 10) MCQ/True or False /Match the Column-08 Marks OR Q.1 B. Objectives : (Any 7 out of 10) MCQ/True or False/Match the Column- 07 Marks
Q.2 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.2 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.3 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.3 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.4 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.4 B. Short Notes / Short practical questions - 15 Marks (Any 3 out of 5)

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	**TOPIC**	**CONTENTS COVERED**
I	**Preparation of Final Accounts of Companies** **(15 lectures)**	• Relevant provisions of Companies Act related to preparation of Final Account (excluding cash flow statement) • Preparation of financial statements as per Companies Act. (excluding cash flow statement) • AS 1 in relation to final accounts of companies (disclosure of accounting policies)
II	**Redemption of Preference Shares** **(15 lectures)**	• Provision of the Companies Act for issue of Shares (application of money , allotment, receipt of money and refund to shareholder only) and redemption of Preference Shares (Sec 55 of the Companies Act, 2013), Companies (Share and Debentures) Rules. • Methods of Redemption of Preference Shares as per Companies Act, 2013: The proceed of a fresh issue of shares, the Capitalisation of undistributed profits and a combination of both, calculation of minimum fresh issue to provide the fund for redemption, (Question on entries and/or Balance Sheet).
III	**Redemption of Debentures** **(15 lectures)**	• Introduction : Provisions of Section 71 (1) and (4) of the Companies Act, 2013, • Creation and investment of DRR including The Companies (Share Capital and

		• Debentures) Rules, 2014, the methods of writing-off discount/loss on issue of debentures; Terms of issue of debentures • Methods of redemption of debentures: By payment in lump sum and by payment in instalments (excluding from by purchase in open market), Conversion. (Question on entries. ledgers and/or Balance Sheet and /or redemption of preference shares)
IV	• **Ascertainment and Treatment of Profit Prior to Incorporation** • **Foreign Branch** **(15 lectures)**	• Principles for ascertainment • Preparation of separate, combined and columnar Profit and Loss Account including different basis of allocation of expenses/ incomes • Conversion as per AS 11 and incorporation in HO accounts

11) References:

- Grewal, T.S. and Gupta, S.C. *Introduction To Accountancy*. New Delhi. S.Chand & Company Ltd. 2010.
- Hanif, Ad*vanced Accounting*. Mumbai. Tata Mc. Grow Hill and Co. Ltd.2006.
- Lingisetti, Venu. *Accounting and its applications*. Hyderabad. The Icfai University Press.2009.
- Maheshwari,S.N. *Financial Accounting*. New Delhi. Vikas Publishing House Pvt. Ltd.2011.
- Mukhopadhyay, Dinabandhu. *Financial Accounting*. New Delhi. S.Chand & Company Ltd. 2011.
- Rao, Thukaram. *Advanced Accountancy*. New Delhi. New Age International (P) Ltd.Publishers.2005.
- Sujatha, B. *Accounting Standards in India: Towards Coverage*. Hyderabad. The Icfai University Press. 2007.
- Shukla, M.C. *Advanced Accounts*. New Delhi. S.Chand & Company Ltd. 2012.
- Sharma, D.G. *Accounting Standards*. New Delhi. Taxmann Allied Services (P.) Ltd.2006.
- Wood, Frank. And Sangster, Alan. *Business Accounting*. United Kingdom. Dorling Kindershey (India) Pvt. Ltd. 2010.

COURSE DETAILS

1) **Title of the Course: Direct Tax - II**
2) **Course Code :** SF-AF-IV-E-DT
3) **Course Objective:**

   The Course will help the learner –

   - To understand the provisions of Income Tax Law related to Clubbing of Income and Set off and Carry Forward of Losses
   - To develop the ability to Compute Total Income and Income Tax liability thereon
   - To understand different types of Income Returns under Income Tax Act in India
   - To understand the concepts and provisions of Advance Tax, Tax Deducted at Source (TDS) and Double Taxation Avoidance Agreement (DTAA)

4) **Course Outcome (CO) :**

   CO1 - The learner will be able to compute the Total Income and Income Tax liability of an Individual and Firm

   CO2 - The learner will be able to prepare the Return of Income under Income Tax Act

   CO3 - The learner will be able to determine the Advance Tax liability of a person which is considered as an important aspect of Income Tax Planning

   CO4 - Knowledge of different aspects of Income Tax Law including TDS and DTAA will help the learner in securing jobs in the current Accounting and Tax Market

5) **Category of Course :** Elective Course
6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 Credits
9) **Evaluation Pattern** :

   a. **Total Marks:** 100 Marks (10 Point Grading System)

   b. **Passing Criteria:** 40% Marks (04 Grade Points)

   c. **Marking Scheme :** 60:40 Pattern

      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)

   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

New (Revised)
Q.1 A. Objectives : (Any 8 out of 10) MCQ/True or False /Match the Column-08 Marks OR Q.1 B. Objectives : (Any 7 out of 10) MCQ/True or False/Match the Column- 07 Marks
Q.2 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.2 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.3 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.3 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.4 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.4 B. Short Notes / Short practical questions - 15 Marks (Any 3 out of 5)

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: III & IV***

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10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Clubbing of Income and Set Off & Carry Forward of Losses (15 lectures)**	• Clubbing of Income - Section 60 to 65 • Set Off & Carry Forward of Losses – Section 70, 81, 71B, 72, 73, 74
II	**Computation of Income and Tax liability.** **(15 lectures)**	• Computation of Tax liability of Individual & HUF • Computation of Income of Partnership Firm in Relation to Sec: 40(b) & Tax Thereon With Applicable Rate of Tax
III	**Basic aspects of Tax Deducted at Source** **(15 lectures)**	• **Basic Aspects of Deduction of Taxes at Source :** Sec: 192 – TDS on Salary, Sec: 194A – TDS on Interest, Sec: 194C – TDS on Contractor, Sec: 194H – TDS on Commission, Sec: 194I – TDS on Rent, Sec 194IA - TDS on purchase of immovable property, Sec 194IB – TDS on rent , Sec: 194J – TDS on Professional Fees. 194 K – TDS on dividend, 194 Q – TDS on purchases.
IV	**Return of Income section 139, Advance Tax and Interest u/s 234A, 234B, 234C, and 244A. and Tax Planning & Ethics in Taxation** **(15 lectures)**	• Return of Income – Sec 139 (Excluding u/s 139(4A), 139(4B), 139(4C) & 139 (4D) **)** • **Advance Tax U/S 207, 208, 209, 210 & 211 :** Sec: 207 – Income Liable to Advance Tax, Sec: 208 – Liability of Advance Tax, Sec: 209 – Computation of Advance Tax, Sec: 210 – Payment of Advance Tax by Assessee on His Own Account, Sec: 211 – Due Dates of Payment of Advance Tax • **Interest Payable U/S 234A, 234B, 234C & Interest on income tax refund u/s 244A :** Sec: 234A – Interest for default in furnishing return of income, Sec: 234B – Interest for default in payment of advance tax, Sec: 234C – Interest for deferment of advance tax and 244A Interest on income tax refund. • **Tax Planning & Ethics in Taxation** – Basic Concepts

11) References:

- V.K. Singhania, Direct Taxes Law & Practice, Taxman
- Ahuja, Gupta, Systematic Approach to Direct Tax, Bharat Law House
- V.K. Singhania, Income Tax Ready Recknoner, Taxman
- T.N. Manoharan, Direct Tax Laws, Snow White

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Financial Management - I**
2) **Course Code:** SF-AF-IV-E-FM
3) **Course Objective:**

   The Course will help the learner –

   - To develop ability to analyze and interpret various tools of financial analysis and planning.
   - To gain knowledge of management and financing of working capital
   - To understand concepts relating to financing and investment decisions

4) **Course Outcome (CO):** After studying this course, learner will be able to-

   CO1 – Learn about different sources of funds available to business, both internal and external.

   CO2 - Understand the concept of time value of money and relationship between present value and future value of money.

   CO3 – Discuss and interpret the types of leverages.

   CO4 - Evaluate investment projects using various capital budgeting techniques like Payback period, NPV, ARR, IRR, etc.

   CO5: Discuss meaning and measure cost of individual component capital

5) **Category of Course :** Elective Course
6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :

   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

New (Revised)
Q.1 A. Objectives : (Any 8 out of 10) MCQ/True or False /Match the Column-08 Marks OR Q.1 B. Objectives : (Any 7 out of 10) MCQ/True or False/Match the Column- 07 Marks
Q.2 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.2 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.3 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.3 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.4 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.4 B. Short Notes / Short practical questions - 15 Marks (Any 3 out of 5)

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Financial Management and Concepts in Valuation** **(15 lectures)**	• Introduction to FM • Meaning • Importance, Scope and Objectives • Profit vs Value Maximization • Types of financing • The Time Value of Money • Present Value • Internal Rate of Return • Bonds Returns • The Returns from Stocks • Annuity • Techniques of Discounting • Techniques of Compounding
II	**Leverage** **(15 lectures)**	• Introduction • EBIT & EPS • Analysis Types of Leverages: Operating Leverage, Financial Leverage & Composite • Leverage Relationship between Operating Leverage and Financial Leverage (Including Practical Problems)
III	**Capital Budgeting** **(15 lectures)**	• Payback Period • Discounted Payback period • Average Rate of Return • Net Present Value • Profitability Index
IV	**Cost of Capital** **(15 lectures)**	• Introduction • Definition and Importance of Cost of Capital • Measurement of Cost of Capital • WACC (Including Practical Problems)

11) References:

- Fundamentals of Financial Management by D. Chandra Bose, PHI Learning Pvt. Ltd., New Delhi
- Fundamentals of Financial Management by Bhabotosh Banerjee, PHI Learning Pvt. Ltd., New Delhi
- Fundamentals of Financial Management by Vyuptakesh Sharma, Pearson Education, New Delhi
- Financial Management: Text and Problems by M.Y. Khan and P.K. Jain, Tata McGraw Hill, New Delhi
- Financial Management: Theory and Practice by Prasanna Chandra, Tata McGraw Hill, New Delhi
- Financial Management by I.M. Pandey, Vikas Publishing House, New Delhi

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Equity & Debt Market**
2) **Course Code :** SF-AF-IV-E-EDM
3) **Course Objective:**

   The Course will help the learner –

   - To understand the evaluation of various aspects of financial markets.
   - To study financial policies and development of financial instruments.
   - To examine process and evolving the strategies during crisis.

4) **Course Outcome (CO) :**

   CO1 – The learner will help them develop good understanding of primary market and secondary market in equity market.

   CO2 – The learner will understand the role and functioning of the market.

   CO3 – The learner will be aware of the legislative, executive and judicial functions of such regulatory authorities.

5) **Category of Course :** Elective Course
6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Financial Market** **(15 lectures)**	• Equity market – meaning & definitions of equity share; Growth of Corporate sector & simultaneous growth of equity shareholders; divorce between ownership and management in companies; development of Equity culture in India & current position. • Debt market – Evolution of Debt markets in India; Money market & Debt markets in India; Regulatory framework in the Indian Debt market.
II	**Dynamics of Equity Market** **(15 lectures)**	• Primary: 1)IPO – methods followed (simple numerical) 2) Book building 3)Role of merchant bankers in fixing the price 4)Red herring prospectus – unique features 5)Numerical on sweat equity, ESOP & Rights issue of shares • Secondary: 1) Definition & functions of stock exchanges 2) Evolution & growth of stock exchanges 3)Stock exchanges in India 4)NSE, BSE OTCEI & overseas stock exchanges 5)Recent developments in stock exchanges 6)Stock market Indices
III	**Players in debt markets** **(15 lectures)**	• Players in debt markets: 1)Govt. securities 2)Public sector bonds & corporate bonds 3)open market operations 4)Security trading corp. of India 5)Primary dealers in Govt. securities • Bonds: 1)Features of bonds 2)Types of bonds
IV	**Valuation of Equity & Bonds** **(15 lectures)**	• Valuation of equity: 1. Balance sheet valuation 2. Dividend discount model (zero growth, constant growth & multiple growth) 3. Price earning model • Valuation of bonds 1. Determinants of the value of bonds 2. Yield to Maturity 3. Interest rate risk 4. Determinants of Interest Rate Risk

11) References:

- Allen, Larry.1750-2000. *The Global Financial System*.
- Ian H, Giddy. 1994. *Global Financial Markets*. Houghton Mifflin.
- Saunders, Anthony. and Cornett, Marica Millon. *Financial markets & institutions: A modern perspective: TMIT.*
- L,M Bhole. *Financial institutions & markets: Structure, growth & innovations*. 5th ed. T MH.
- Chandra, P. 2011.*Corporate Valuation and Value Creation.*1st ed. TMH.

COURSE DETAILS

1) **Title of the Course: Information Technology - II**
2) **Course Code :** SF-AF-IV-AB-IT
3) **Course Objective:**

The Course will help the learner –

- To study Business process management
- To study automation of business process.
- To study computerized accounting system software like Tally ERP
- To study Management Information System which helps organization like HR, Market and Finance
- To study Internal audits to evaluate the effectiveness of a operation's internal controls

4) **Course Outcome (CO) :**

CO1 – Learner will know need and importance of business process, business process management in IT, BPM life cycle

CO2 - Learner will learn importance and applications of information system in management, role of computer in MIS

CO3 – Learner will learn different IT auditing techniques

5) **Category of Course :** Skill/Ability Enhancement Courses
6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 Credits
9) **Evaluation Pattern** :

a. **Total Marks:** 100 Marks (10 Point Grading System)
b. **Passing Criteria:** 40% Marks (04 Grade Points)
c. **Marking Scheme :** 60:40 Pattern
    - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
    - 40 Marks – Internal Exam (Passing: 16 Marks)
d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Business Process** **(15 lectures)**	• Introduction, Definition and Meaning of Business Process • Flow of business process for accounting, purchase, sales and finance • Classification of business processes • Introduction, Definition and Meaning of Business Process Management • Principles and practices of Business Process Management • Business Process Management life cycle • Theories of Business Management Process • Implementation of Business Process Management – need, key factors and importance • Automation of business Processes – benefits, risks, challenges • Accounting systems automation • IT and Business Process Management • Information Systems – Meaning, Use of IT in Accountancy
II	**Computerized Accounting System** **(15 lectures)**	• Introduction and Meaning • Uses and Benefits , Role • Need and requirements of computerized accounting • Basic requirements of computerized accounting system • Limitations of computerized accounting system • Understand the development and design of a computerized accounting system; determining how the accounting data will be processed, i.e. what accounts and books are needed and what is the desired output i.e. financial reports and other reports • **Accounting Software** -Introduction and Meaning, Advantages of Accounting Software -Uses of Accounting Software, Various Accounting Softwares Accounting Software TALLY – Accounting and Reports
III	**Concept of MIS Reports in Computer Environment** **(15 lectures)**	• Introduction, Concept of MIS • Need for MIS, Characteristic of MIS • Outputs of MIS, Role of MIS • Guidelines for Developing MIS reports • Functional Aspects of the MIS • Problems in MIS • Knowledge required for studying MIS • MIS and Computer

IV	**IT and Auditing** **(15 lectures)**	• Need and importance of IT in Auditing • Auditing in IT Environment • Additional Information

11) References:

- Fundamentals of Computers – Rajaram V – Prentice Hall
- Computer today (3rd edition) – Sanders, Donald H – McGraw Hill
- Computers and Common sense – Hunt, Roger and Shelly John – Prentice Hall
- Computers – Subramaniam N – Wheeler
- Introduction to Computers – Xavier C. – New Age
- Computer in Business – Sanders D – McGraw Hill
- Computers and Information Management – S C Bhatnagar & V Ramant – Prentice Hall
- Internet for Business – Brummer, Lavrej – Cambridge
- E-mail for Everyone – Leon Alexis & leon – Methews
- Basic Computer Programmes for Business – Sternberg C – New Jersey Hayden

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Foundation Course – III (Introduction to Management)**
2) **Course Code :** SF-AF-IV-ID-FC
3) **Course Objective:**

   The Course will help the learner –

   - To understand the basic concepts of management.
   - To get introduced to the features and process of planning and decision making.
   - To learn extensively about proper directing, organizing and leading.

4) **Course Outcome (CO) :**

CO1 – The learner will be able to plan and organize as an entrepreneur.

CO2 - The learner will be able to understand the process of recruitments, selection and interviews.

CO3 – The learner will be able to know the importance of directing, leadership, motivation and coordination.

5) **Category of Course :** Multi-disciplinary/ Interdisciplinary courses
6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 2 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: III & IV***

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10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Basic Management Concepts And Planning** **(15 lectures)**	• Introduction to Management, • Definition of Management • Nature of Management • Objectives of Management • Administration vs Management • Levels of Management • Principles of Management. • Definition and Importance of Planning • Process of Planning • Limitations of Planning • Features of Sound Planning • Features and process of decision making
II	**Organizing** **(10 lectures)**	• Definition, nature and significance • Process of organization • Principles of organisation • Formal and Informal organisation - features, advantages and disadvantages • Centralization and decentralization – factors, merits and demerits • Departmentation and Delegation.
III	**Staffing** **(10 lectures)**	• Meaning, Importance of Staffing • Recruitment and its sources • Selection procedure • Distinction between Recruitment and Selection • Employment tests and types of interviews.
IV	**Directing and Controlling** **(10 lectures)**	• Meaning and Importance of directing • Principles of Directing • Leadership trails and Styles • Motivation – Importance and Factors • Co-ordination – Meaning, features and Importance • Meaning and steps in controlling Essentials of a good control system.

11) References:

- Essentials of Management by Koontz H & W published by McGraw Hill
- Principles of Management by Ramaswamy published by Himalaya
- Management Concept and Practice by Hannagain T published by McMillan
- Basic Managerial Skills for All by McGrath E.H published by Prentice Hall of India
- Management – Text and Cases by VSP Rao published by Excel Books
- Essentials of Management by Massie Joseph published by Prentice Hall of India
- Management: Principles and Guidelines by Thomas Duening & John Ivancevich published by Biztantra
- Management Concepts and Strategies by J S Chandran published by Vikas Publishing House
- Principles of Management by Tripathy P C published by Tata McGraw Hill
- Principles of Management: Theory and Practice by Sarangi S K published by V M P Publishers

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Introduction to Tally**
2) **Course Code:** SF-AF-IV-AD-TAL
3) **Course Objective:**

The Course will help the learner –

- To learn Basics of Accountancy, its principles, concepts, conventions, recording procedures, Bank reconciliation, final accounts etc.
- To learn and practice Computerized Accounting Systems using Tally.ERP.9

4) **Course Outcome (CO):**

After studying this course, learner will be able to-

CO1 – Maintain Books of accounts in electronic form.

CO2 – Generate various financial reports in electronic forms

CO3 – Use Financial Analysis Tools in Tally Software.

5) **Category of Course:** Additional Course
6) **Semester:** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 2 Credits
9) **Evaluation Pattern**:

a. **Total Marks:** 100 Marks (10 Point Grading System)
b. **Passing Criteria:** 40% Marks (04 Grade Points)
c. **Marking Scheme :** 60:40 Pattern
    - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
    - 40 Marks – Internal Exam (Passing: 16 Marks)
d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.): 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Basic of Accounting** **(15 lectures)**	• Meaning of Accounting and Process of Financial Accounting System. • Double Entry System of Accounting • Rules for recording transactions • Preparing Financial Statements
II	**Basics of Tally Software** **(15 lectures)**	• Introduction to Tally and its Features • Installing and activating Tally Software • Setting up New Company, Alteration and Shutting own Company in Tally • Security Controls in Tally
III	**Voucher Entry in Tally Software** **(15 lectures)**	• Types of vouchers in Tally • Creating Vouchers • Entering Transactions in Tally
IV	**Generating Reports and Financial Analysis tools in Tally Software** **(15 lectures)**	• Financial Statements • Statement of Accounts • Cash flow Statement • Bank Reconciliation Statement • Budgeting and Controls • Ration Analysis • Variance Analysis

11) References:

- *Information Technology Training Programme.* Publication Department of ICAI. New Delhi. 2010

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: V & VI***

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SEMESTER – V

COURSE DETAILS

1) **Title of the Course: Financial Accounting - V**
2) **Course Code :** SF-AF-V-C-FA5
3) **Course Objective:**

The Course will help the learner –

- To understand the provisions relating to underwriting of shares and debentures
- To understand the process and provisions relating to Buyback of Shares
- To understand the provisions relating to Amalgamation, Mergers and External Reconstruction
- To understand provisions relating to Internal Reconstruction and Liquidation

4) **Course Outcome (CO) :**

CO1 – The learner will get aware of various term and provisions related to Underwriting of Securities

CO2 – The learner will understand the process and provisions related to Buyback of Shares

CO3 – The Learner will understand different concepts and provisions relating to Amalgamation, Merger, External / Internal Reconstruction and Liquidation of Companies

5) **Category of Course :** Core Course
6) **Semester :** V
7) **Total Hours:** 60 hours
8) **Total Credits:** 4 Credits
9) **Evaluation Pattern** :

a. **Total Marks:** 100 Marks (10 Point Grading System)

b. **Passing Criteria:** 40% Marks (04 Grade Points)

c. **Marking Scheme :** 60:40 Pattern

- 60 Marks – Written Semester End Exam (Passing: 24 Marks)
- 40 Marks – Internal Exam (Passing: 16 Marks)

d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	15 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	10 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Underwriting of shares & debentures**	• Introduction, Underwriting, Underwriting Commission • Provision of Companies Act with respect to Payment of underwriting commission • Underwriters, Sub-Underwriters, Brokers and Manager to issues • Types of underwriting, Abatement Clause • Marked, Unmarked and Firm-underwriting applications, • Liability of the underwriters in respect of underwriting contract • Practical problems
II	**Buy Back of Shares**	• Company Law / Legal provisions (including related restrictions, power, transfer to capital redemption reserve account and prohibitions). • Compliance of conditions including sources, maximum limits and debt equity ratio. Cancellation of Shares Bought back (Excluding Buy Back of minority shareholding) • Practical problems
III	**AS – 14 - Amalgamation, Absorption and External Reconstruction (excluding inter-company holdings)**	• Meaning and Computation of purchase consideration. • Problems based on purchase method only • Practical problems
IV	**Internal Reconstruction and Liquidation of Companies**	• **Internal Reconstruction** Need for reconstruction and company law provisions. Distinction between internal and external reconstruction. Methods including alteration of share capital, variation of shareholder rights, sub division, consolidation, surrender and reissue / cancellation, reduction of share capital with relevant legal provisions and accounting treatment for same. Practical problems • **Liquidation of Companies** Meaning of liquidation or winding up Preferential payments, Overriding preferential payments Preparation of statement of affairs, deficit / surplus account Liquidator's final statement of account Practical problems

11) References:

- T.S. Grewal, Introduction to Accountancy, S. Chand and Company (P) Ltd., New Delhi
- Shukla and Grewal, Advanced Accounts, S. Chand and Company (P) Ltd., New Delhi
- R.L Gupta and M. Radhaswamy, Advanced Accountancy, S. Chand and Company (P) Ltd., New Delhi
- Mukherjee and Hanif, Modern Accountancy, Tata Mc. Grow Hill and Co. Ltd., Mumbai
- Lesile Chandwichk, Financial Accounting, Pentice Hall of India Adin Bakley (P) Ltd., New Delhi
- Dr. Dinesh Harsalekar, Financial Accounting for Management, Multi-Tech. Publishing Co. Ltd., Mumbai
- P.C. Tulsian, Financial Accounting, Pearson Publications, New Delhi
- R.N. Anthony and J.S. Reece, Accounting Principles, Richard Irwin, Inc
- Monga, J.R. Ahuja, Girish Ahuja and Ashok Shehgal, Financial Accounting, Mayur Paper Back, Noida
- Compendium of Statement and Standard of Accounting, ICAI
- Indian Accounting Standards, Ashish Bhattacharya, Tata Mc. Grow Hill and Co. Ltd., Mumbai
- Williams, Financial Accounting, Tata Mc. Grow Hill and Co. Ltd., Mumbai
- Shrinivasan Anand, Company Accounting Standards, Taxman, New Delhi
- V. Rajasekaran, Financial Accounting, Pearson Publications, New Delhi
- Horngren, Introduction to Financial Accounting, Pearson Publications, New Delhi
- M. Mukherjee and M. Hanif, Financial Accounting, Tata McGraw Hill Education Pvt. Ltd., New Delhi
- Varadraj B. Bapat, Mehul Raithatha, Financial Accounting – a Managerial Perspective, Tata McGraw Hill Education Pvt. Ltd., New Delhi

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: V & VI***

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COURSE DETAILS

1) **Title of the Course: Financial Accounting - VI**
2) **Course Code :** SF-AF-V-C-FA6
3) **Course Objective:**

   The Course will help the learner –

   - To develop skills required in preparation of final accounts of Banking Companies, Insurance Companies and Limited Liability Partnership
   - To understand the concept of Non-performing Assets, Goodwill and Shares and
   - To make Valuation of Goodwill and Shares

4) **Course Outcome (CO) :**

   CO1 – The learner will be in a position to prepare Financial Statements of Banking & Insurance Companies and Limited Liability Partnership

   CO2 – The learner will be able to Value Goodwill and Shares which is an important aspect of Business valuation

5) **Category of Course :** Core Course
6) **Semester :** V
7) **Total Hours:** 60 hours
8) **Total Credits:** 4 Credits
9) **Evaluation Pattern** :

   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: V & VI***

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e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	15 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	10 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Final Accounts of Banking Company**	• Legal provision in Banking Regulation Act, 1949 relating to Accounts. • Statutory reserves including Cash Reserve and Statutory Liquidity Ratio. • Bill purchase and discounted, rebate of bill discounted. • Final Accounts in prescribed form • Non – performing assets and Income from non – performing assets. • Capital Adequacy • Classification of Advances, standard, sub – standard, doubtful and provisioning requirement.
II	**Final Accounts of Insurance Company (Excl. Life Insurance) and Non – Banking Financial Companies**	• **Final Accounts of Insurance Company :** General Insurance – Various types of insurance, like fire, marine, Miscellaneous, Special terms like premium, claims, commission, Management expenses, Reserve for unexpired risk, reinsurance Final Accounts in a prescribed form. Revenue Statement – Form B – RA, Profit / Loss Account – Form B – PL and Balance Sheet Form B – BS • **Non-Banking Financial Companies :** Introduction, Definition, Registration and Regulation, Classification, Income Recognition, Accounting of Investment, Applicability of Prudential Norms, Assets classification, Non- performing Assets, Capital Adequacy
III	**Valuation of Goodwill and Shares**	• **Valuation of Goodwill :** Maintainable Profit method, Super Profit Method Capitalization method, Annuity Method • **Valuation of Shares :** Intrinsic Value Method, Yield method and Fair Value Method
IV	**Accounting for Limited Liability Partnership**	• Statutory provisions • Conversion of partnership business into Limited Liability Partnership • Final accounts

11) References:

- T.S. Grewal, Introduction to Accountancy, S. Chand and Company (P) Ltd., New Delhi
- Shukla and Grewal, Advanced Accounts, S. Chand and Company (P) Ltd., New Delhi
- R.L Gupta and M. Radhaswamy, Advanced Accountancy, S. Chand and Company (P) Ltd., New Delhi
- Mukherjee and Hanif, Modern Accountancy, Tata Mc. Grow Hill and Co. Ltd., Mumbai
- Lesile Chandwichk, Financial Accounting, Pentice Hall of India Adin Bakley (P) Ltd., New Delhi
- Dr. Dinesh Harsalekar, Financial Accounting for Management, Multi-Tech. Publishing Co. Ltd., Mumbai
- P.C. Tulsian, Financial Accounting, Pearson Publications, New Delhi
- R.N. Anthony and J.S. Reece, Accounting Principles, Richard Irwin, Inc
- Monga, J.R. Ahuja, Girish Ahuja and Ashok Shehgal, Financial Accounting, Mayur Paper Back, Noida
- Compendium of Statement and Standard of Accounting, ICAI
- Indian Accounting Standards, Ashish Bhattacharya, Tata Mc. Grow Hill and Co. Ltd., Mumbai
- Williams, Financial Accounting, Tata Mc. Grow Hill and Co. Ltd., Mumbai
- Shrinivasan Anand, Company Accounting Standards, Taxman, New Delhi
- V. Rajasekaran, Financial Accounting, Pearson Publications, New Delhi
- Horngren, Introduction to Financial Accounting, Pearson Publications, New Delhi
- M. Mukherjee and M. Hanif, Financial Accounting, Tata McGraw Hill Education Pvt. Ltd., New Delhi
- Varadraj B. Bapat, Mehul Raithatha, Financial Accounting – a Managerial Perspective, Tata McGraw Hill Education Pvt. Ltd., New Delhi

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: V & VI***

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COURSE DETAILS

1) **Title of the Course: Indirect Tax - I**
2) **Course Code:** SF-AF-V-E-IDT
3) **Course Objective:**

   The Course will help the learner –

   - To acquire the ability and analyze and interpret the provisions of the goods and services tax and recommend solution to practical problems.

4) **Course Outcome (CO):**

   After studying this course, learner will be able to -

   CO1 – Understand Concept of GST and need of GST in India

   CO2 – Understand and analyze the taxable event under GST Supply

   CO3 – Describe the Intra State Supply, Inter State supply and provisions pertaining to levy and collection of GST.

   CO4 – Get an overview of the Goods and Services exempt from GST.

   CO5 – Know the provisions relating to determination of place of supply of Goods and Services, both in case of domestic as well as cross-border transactions and analyze the same to determine the place of supply of given situation.

   CO6 – Apply the concepts relating to time of supply of goods and/ or services in problem solving.

   CO7 – Compute the Value of supply in different scenarios

   CO8- Explain when a person becomes liable to get registered under GST, scenarios when registration is compulsory and identify the person not liable to get registered.

   CO9 – Identify the persons eligible to file various statements/ returns as also the forms prescribed therefore and explain the periodicity for filing such returns.

   CO10 – Explain the provisions relating to revised tax invoice, Bill of supply, receipt voucher, refund voucher, payment voucher, etc.

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PROGRAMME CODE: SFP-AF ***Course Details For Semester: V & VI***

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5) **Category of Course:** Elective Course
6) **Semester:** V
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern**:

a. **Total Marks:** 100 Marks (10 Point Grading System)

b. **Passing Criteria:** 40% Marks (04 Grade Points)

c. **Marking Scheme :** 60:40 Pattern

- 60 Marks – Written Semester End Exam (Passing: 24 Marks)
- 40 Marks – Internal Exam (Passing: 16 Marks)

d. **Mode of Evaluation of Answer-book :** Online/Offline

e. **Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification**

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	15 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	10 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Indirect Taxation and GST**	• Basics for Indirect Taxation. • Introduction to GST • Definitions • Levy and Collection of GST.
II	**Concept of Supply**	• Taxable Event Supply • Place of Supply • Time of Supply • Value of Supply
III	**Registration and Computation of GST**	• Registration under GST • Computation and Payment of GST
IV	**Documentation and Filing of Returns**	• Documentation • Returns

11) References:

- Indirect Taxes: Law and Practice by V.S. Datey, Taxmann
- Indirect Taxes by V.S. Balchandra, Sultan Chand and Sons, New Delhi
- GST Law & practice with Customs & FTP by V.S. Datey, Taxmann
- GST by V.S. Datey, Taxmann
- GST & customs Law by K.M. Bansal, University Edition
- GST Law & practice with Customs & FTP by Vineet Sodhani, Snow White Publications
- GST Law & practice with Customs & FTP by Sanjiv Agarwal, Snow White Publications
- Indirect taxes (Containing GST, Customs & FTP) by Mohd. Rafi, Bharat Publications

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: V & VI***

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COURSE DETAILS

1) **Title of the Course: Financial Management - II**
2) **Course Code:** SF-AF-V-E-FM
3) **Course Objective:**
   - To understand meaning, importance and scope of financial management in an entity.
   - To develop an understanding of various aspects of financial management
   - To acquire the ability to apply such knowledge in decision-making.
   - To acquire the ability to apply financial management and techniques in strategic decision making.

4) **Course Outcome (CO):**

   On successful completion of the course Learners will be able to:

   CO1 – Evaluate investment projects using various advanced capital budgeting techniques like Sensitivity Analysis, Simulation Model, Decision Tree Analysis and Break -Even Analysis.

   CO2 – Make Economic Analysis, Industry Analysis, Technical Analysis

   CO3 – Understand Basics of Mutual Funds and evaluate performance of Mutual Funds.

   CO4 - Understand Theories on Dividend policies and Practical considerations in Dividend Policies.

5) **Category of Course :** Elective Course
6) **Semester :** V
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	15 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	10 Marks
TOTAL	**40 Marks**

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: V & VI***

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10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Strategic Financial Management and Credit Management**	• Strategic Financial Management – Need and Importance • Corporate, Business and Functional Strategy • Financial Planning - Need and Importance • Profit and Wealth Maximization • Interface of Financial Policy and Strategic Management • Relationship of Finance to Economics and Accounting • Role of Financial Manager • Credit Management – Terms of Payment, Credit Policy Variables, Credit Evaluation, Credit Granting Decision, Control of Accounts Receivables ie Receivables Management, Ageing Schedule and Credit Management in India
II	**Capital Budgeting – Project Planning and Risk Analysis**	• Introduction - Capital Budgeting Process, Project Classification and Investment Criteria. • Techniques of Capital Budgeting - NPV, Benefit Cost Ratio, Internal Rate of Return, Modified Internal Rate of Return, Payback period, Discounted Payback Period and ARR. (Inclusive of Estimation of Project Cash Flows) • Capital Rationing – Meaning, Need and Dealing with Capital Rationing Problems • Risk Analysis in Capital Budgeting – Sources and Perspectives of Risk, Sensitivity Analysis, Scenario Analysis, Simulation Model, Decision Tree Analysis and Break -Even Analysis.
III	**Capital Structure and Dividend Decisions**	• Capital Structure Theories – Background, Assumptions, Definitions and Taxation and Capital Structure • Types – Net Operating Income, Net Operating Income Approach, Traditional • Position, Modigliani and Miller Approach, Trade off Theory and Signaling Theory. • Dividend Decisions- Need, Importance, Formulation, Legal and Procedural Aspects. • Dividend Decision Models - Walter, Gordon, Graham & Dodd Model and M-M Model
IV	**Mutual Funds and Bond Valuation**	• Introduction to Mutual Fund- History & Origin, Definition, Meaning, • Characteristics, Advantages, Disadvantages, Limitations of Mutual Funds, Ethics in Mutual Fund.

		Entities involved – Sponsor, Trust, Trustee, Asset Management • Company, Registrar and Transfer Agent (RTA) and Fund Houses in India. • Classification of Mutual Fund - Functional/Operational – Open ended, close ended, Interval, Portfolio – Income, Growth, Balanced, MMMF, Geographical/ Location – Domestic and Offshore, Tax Saving Funds, Exchange Traded Funds, Balance Funds, Fixed Term Plan Debt Funds and SIP. • Calculations of NAV, Entry Load and Exit Load. • Bond Valuation - Meaning, Measuring Bond Returns – Yield to Maturity, Yield to call and Bond Pricing. Bond Pricing Theorems, Bond Risks and Bond Duration. (Practical Problems on YTM and Bond Duration.)

11) References:

- Fundamentals of Financial Management by D. Chandra Bose, PHI Learning Pvt. Ltd., New Delhi
- Fundamentals of Financial Management by Bhabotosh Banerjee, PHI Learning Pvt. Ltd., New Delhi
- Fundamentals of Financial Management by Vyuptakesh Sharma, Pearson Education, New Delhi
- Fundamentals of Financial Management by J.C. Van Horne, Prentice Hall of India, New Delhi
- Financial Management: Text and Problems by M.Y. Khan and P.K. Jain, Tata McGraw Hill, New Delhi
- Financial Management: Theory and Practice by Prasanna Chandra, Tata McGraw Hill, New Delhi
- Financial Management by I.M. Pandey, Vikas Publishing House, New Delhi
- Financial Management by C. Paramasivan& T. Subramanian
- Financial Management by IM Pandey
- Financial Management by Ravi Kishor
- Financial Management by Khan & Jain

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: V & VI***

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COURSE DETAILS

1) **Title of the Course: Risk Management**
2) **Course Code :** SF-AF-V-E-RISK
3) **Course Objective:**

   The Course will help the learner –

   - To familiarize with the fundamental aspects of risk management and control
   - To give a comprehensive overview of risk governance and assurance with special reference to insurance sector
   - To introduce the basic concepts, functions, process, techniques of risk management

4) **Course Outcome (CO) :**

   CO1 –Learners will understand and assess various types of risk and identify methods to reduce or mitigate the risk.

   CO2 – Learners will apply comprehensive overview of risk governance and assurance with special reference to insurance sector

5) **Category of Course :** Elective Course
6) **Semester :** V
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits

9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: V & VI***

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e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	15 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	10 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction, Risk Measurement and Control**	• Definition, Risk Process, Risk Organization, Key Risks – Interest, Market, Credit, Currency, Liquidity, Legal, Operational • Risk Management V/s Risk Measurement – Managing Risk, Diversification,, Investment Strategies and Introduction to Quantitative Risk Measurement and its Limitations • Principals of Risk - Alpha, Beta, R squared, Standard Deviation, Risk Exposure, Analysis, Risk Immunization, Risk and Summary Measures –Simulation Method, Duration Analysis, Linear and other Statistical Techniques for Internal Control
II	**Risk Avoidance and ERM**	• **Risk Hedging Instruments and Mechanism:** Forwards, Futures, Options, Swaps and Arbitrage Techniques, Risk Return, Trade off, Markowitz Risk Return Model, Arbitrage Theory, System Audit Significance in Risk Mitigation • **Enterprise Risk Management:** Risk Management V/s Enterprise Risk Management, Integrated Enterprise Risk, Management, ERM Framework, ERM Process, ERM Matrix, SWOT Analysis, Sample Risk Register
III	**Risk Governance and Assurance**	• **Risk Governance:** Importance and Scope of Risk Governance, Risk and Three Lines of Defense, Risk Management and Corporate Governance • **Risk Assurance:** Purpose and Sources of Risk Assurance, Nature of Risk Assurance, Reports and Challenges of Risk • **Risk and Stakeholders Expectations:** Identifying the Range of Stakeholders and Responding to Stakeholders Expectations
IV	**Risk Management in Insurance**	• **Insurance Industry:** Global Perspective, Regulatory Framework in India, IRDA - Reforms, Powers, Functions and Duties. Role and Importance of Actuary • **Players of Insurance Business:** Life and Non- Life Insurance, Reinsurance, Bancassurance, Alternative Risk Trance, Insurance Securitization, Pricing of

		Insurance products, Expected Claim Costs, Risk Classification • **Claim Management:** General Guidelines, Life Insurance, Maturity, Death, Fire, Marine, Motor Insurance and Calculation of Discounted Expected Claim Cost and Fair Premium

11) References:

- Thomas S. Coleman, Quantitative Risk Management : A Practical Guide to Financial Risk
- Steve Peterson, Investment Theory and Risk Management
- Risk Management , M/s Macmillan India Limited
- Theory & Practice of Treasury Risk Management: M/s Taxman Publications Ltd.
- Sim Segal, Corporate Value of ERM
- Dr. G Kotreshwar, Risk Management : Insurance and Derivatives, Himalaya Publishing House

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: V & VI***

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COURSE DETAILS

1) **Title of the Course: Logic & Reasoning**
2) **Course Code:** SF-AF-V-AB-LAR
3) **Course Objective:**

The Course will help the learner –

- To identify the core skills associated with critical thinking.
- To construct a logically sound and well-reasoned argument.
- To avoid the various fallacies that can arise through the misuse of logic.

4) **Course Outcome (CO):**

After reading this course, learner would able to-

CO1 – Understand and explain the importance of critical thinking

CO2 - Demonstrate the difference between deductive and inductive reasoning

CO3 – Have a base of analytical thought process which would be a help in qualifying Competitive Exams.

5) **Category of Course:** Skill/Ability Enhancement Course
6) **Semester:** V
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

LEARNING OUTCOME BASED CURRICULUM FRAMEWORK [LOCF]

Sanskar Sarjan Education Society's

DTSS COLLEGE OF COMMERCE

[**AUTONOMOUS**]

PROGRAMME CODE: SFP−AF

Bachelor of Commerce
(Accounting & Finance)

[B.A.F]

w. e. f. 2021−22

Third Year- Bachelor of Commerce (Accounting and Finance) – TY.B.A.F

SEMESTER	Category of Course	No. of Courses	Credits Allotted	Total Credits
V	A. Core Courses	02	04	08
	B. Elective Courses	02 out of 03	03	06
	C. Skill/Ability Enhancement Courses	01	03	03
	D. Multi-disciplinary /Inter-disciplinary courses	01	02	02
	E. Additional - Practical /Projects	01	03	03
	Total :	**07 out of 08**		**22**
VI	A. Core Courses	02	04	08
	B. Elective Courses	02 out of 03	03	06
	C. Skill/Ability Enhancement Courses	01	03	03
	D. Multi-disciplinary / Inter-disciplinary courses	01	02	02
	E. Additional - Practical /Projects	01	03	03
	Total :	**07 out of 08**		**22**

COURSE TITLES: SEMESTER - VI

Course Category	Credits	Semester – VI
Core Courses	04	Financial Accounting - VII
	04	Security Analysis and PortfolioManagement
Elective Courses	03	Indirect Tax - II
	03	Financial Management - III
	03	Mutual Fund Management
Skill/Ability EnhancementCourses	03	Dynamic Public Speaking
Multi-disciplinary/ Inter-disciplinary courses	02	Indian Economy
Projects/AdditionalCourses	03	Project Work
TOTAL :	**22 Credits**	**07 out of 08 Courses**

Evaluation Pattern:

a. **Total Marks :** 46 Courses X 100 Marks = **4600 Marks (10 Point Grading)**

b. **Passing Criteria :** 40 % Marks = **1840 Marks (4 Grade Points)**

c. **Marking Scheme: 60:40 Pattern (Marks for Total Programme)**

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
1) Semester End Exam (S.E.E.) : Written Exam	60 Marks X 46 Courses = 2760 Marks	24 Marks X 46 Courses = 1104 Marks
2) Continuous Internal Assessment (C.I.A.) : Subject Oriented	40 Marks X 46 Courses = 1840 Marks	16 Marks X 46 Courses = 736 Marks
TOTAL :	**4600 Marks**	**1840 Marks**

d. **Mode of Evaluation of Answer-book :** Online/Offline

e. **Paper Pattern:**

ONLY FOR PRACTICAL SUBJECTS – Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	**A.**	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	**A.**	Practical Question (1 Question of 15 marks or may be divided into 2 sub questions of 07 and 08 marks)	-	**15 Marks**
	OR			
	B.	Practical Question (1 Question of 15 marks or may be divided into 2 sub questions of 07 and 08 marks)	-	
Q.3.	**A.**	Practical Question (1 Question of 15 marks or may be divided into 2 sub questions of 07 and 08 marks)	-	**15 Marks**
	OR			
	B.	Practical Question (1 Question of 15 marks or may be divided into 2 sub questions of 07 and 08 marks)	-	
Q.4.	**A**	Practical Question (1 Question of 15 marks or may be divided into 2 sub questions of 07and 08 marks)	-	**15 Marks**
	OR			
	B	Short Notes / Short practical questions - Any 3 out of 5 ***(5 marks each)***	-	

ONLY FOR THEORY SUBJECTS – Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	**A.**	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	**08 Marks**	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	**07 Marks**	
Q.2.	**A.**	Full Length Question	**08 Marks**	**15 Marks**
	B.	Full Length Question	**07 Marks**	
	OR			
	C.	Full Length Question	**08 Marks**	
	D.	Full Length Question	**07 Marks**	
Q.3.	**A.**	Full Length Question	**08 Marks**	**15 Marks**
	B.	Full Length Question	**07 Marks**	
	OR			
	C.	Full Length Question	**08 Marks**	
	D.	Full Length Question	**07 Marks**	
Q.4.	**-----**	Short Notes/Short Sums: (Any 3 out of 4)	**05 Marks Each**	**15 Marks**

f. Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	5 Marks
TOTAL	**40 Marks**

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: VI***

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SEMESTER – VI

COURSE DETAILS

1) **Title of the Course: Financial Accounting – VII**
2) **Course Code :** SF-AF-VI-C-FA7
3) **Course Objective:**

The Course will help the learner –

- To develop skills required in preparation of final accounts of Electricity Company and Co-operative Society
- To study accounting of Investments
- To understand the different types of Mutual Funds in the market
- To understand the need of IFRS and Indian Accounting Standards in accountancy

4) **Course Outcome (CO) :**

CO1 – The learner will be in a position to prepare Financial Statement of Electricity Company and Co-operative Society

CO2 – The learner will have an in depth understanding of Mutual Funds in his / her investment decision

CO3 – Learner will understand the concept of IFRS and Indian Accounting Standards which has huge scope in current accounting market

5) **Category of Course :** Core Course
6) **Semester:** VI
7) **Total Hours:** 60 hours
8) **Total Credits:** 4 Credits
9) **Evaluation Pattern:**

a. **Total Marks:** 100 Marks (10 Point Grading System)
b. **Passing Criteria:** 40% Marks (04 Grade Points)
c. **Marking Scheme :** 60:40 Pattern
    - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
    - 40 Marks – Internal Exam (Passing: 16 Marks)
d. **Mode of Evaluation of Answer-book :** Online/Offline

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: VI***

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10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Final Account forElectricity Company**	• Final Accounts as per Double Account system • Final Accounts as per Electricity Rules Receipt & Expenditure on Capital Account General Balance Sheet Contingency Reserve • Disposal of Surplus (As per Electricity Rules):Norms regarding Disposal of Surplus Replacement of Assets • Simple practical problems
II	**Final Accounts for Co-Operative Society (Co-Operative Housing Society and ConsumerCo-Operative Society)**	• Provisions of Maharashtra State Co-Operative SocietiesAct and rules. • Accounting provisions including appropriation to variousfunds • Format of Final Accounts – Form N • Simple practical problems on preparation of final accountsof a Co-Operative housing society & Consumer Co- Operative Society
III	**Investment Accounting (w.r.t.AccountingStandard- 13)**	• For shares (variable income bearing securities) • For debentures/Preference. shares (fixed income bearingsecurities) • Accounting for transactions of purchase and sale of investments with ex and cum interest prices and finding cost of investment sold and carrying cost as per weightedaverage method (Excl. brokerage). • Columnar format for investment account.
IV	**Mutual Fund and Introduction to IFRS**	• **Mutual Fund** Introduction, Types of Mutual Fund Schemes, FOF Scheme, Load or No-Load Scheme, Investment Valuation norms, Pricing of units, Evaluation of mutual funds, Disposal of Investments, Recognition of Income,Accounting policies and entries

		• **Introduction to IFRS** • Requirements of international accounting standards - International organizations engaged in accounting harmonization -IASB - FASB - Role of IASB in developing IFRS, Applicability, Interpretation, Scope and compliance of Accounting Standards • Indian Accounting standards (Ind AS) Introduction, Road map, First time adaptation of Indian Accounting Standard, Conceptual framework Comparison of Ind AS, IFRS and AS • IFRS : Introduction, scope Purpose & Objective of financial statement-its Frame work-its assumption, characteristics, element, recognition & measurement., first time adoption of IFRS Convergence of Ind-As and IFRS

11) References:

- T.S. Grewal, Introduction to Accountancy, S. Chand and Company (P) Ltd., New Delhi
- Shukla and Grewal, Advance Accounts, S. Chand and Company (P) Ltd., New Delhi
- R.L Gupta and M. Radhaswamy, Advanced Accountancy, S. Chand and Company (P) Ltd., New Delhi
- Mukherjee and Hanif, Modern Accountancy, Tata Mc. Grow Hill and Co. Ltd., Mumbai
- Lesile Chandwichk, Financial Accounting, Pentice Hall of India Adin Bakley (P) Ltd., New Delhi
- Dr. Dinesh Harsalekar, Financial Accounting for Management, Multi-Tech. Publishing Co. Ltd., Mumbai
- P.C. Tulsian, Financial Accounting, Pearson Publications, New Delhi
- R.N. Anthony and J.S. Reece, Accounting Principles, Richard Irwin, Inc
- Monga, J.R. Ahuja, Girish Ahuja and Ashok Shehgal, Financial Accounting, Mayur Paper Back, Noida
- Compendium of Statement and Standard of Accounting, ICAI
- Ashish Bhattacharya, Indian Accounting Standards, Tata Mc. Grow Hill and Co. Ltd., Mumbai
- Williams, Financial Accounting, Tata Mc. Grow Hill and Co. Ltd., Mumbai
- Shrinivasan Anand, Company Accounting Standards, Taxman, New Delhi
- V. Rajasekaran, Financial Accounting, Pearson Publications, New Delhi
- Horngren, Introduction to Financial Accounting, Pearson Publications, New Delhi
- M. Mukherjee and M. Hanif, Financial Accounting, Tata McGraw Hill Education Pvt. Ltd., New Delhi
- □ Financial Accounting a Managerial Perspective, Varadraj B. Bapat, Mehul Raithatha, Financial Accounting – A Managerial Perspective, Tata McGraw Hill Education Pvt. Ltd., New Delhi

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: VI***

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COURSE DETAILS

1) **Title of the Course: Security Analysis and Portfolio Management**
2) **Course Code:** SF-AF-VI-C-SAPM
3) **Course Objective:**

The Course will help the learner –

- To get knowledge about basic principles of security Analysis and Portfolio Management
- It will provide knowledge to the Learners about techniques of security analysis and Portfolio Management.
- To help learner examine the relationships between returns and risks.
- To help learning analysis and evaluate ordinary shares and fixed income securities.

4) **Course Outcome (CO):**

On successful completion of the course, Learners will be able to:

CO1- Examine the relationships between returns and risks.

CO2 -Demonstrate knowledge and skills in the core investment concepts, collecting financial information from electronic databases and employing analytical tools to value financial securities.

CO3 - Demonstrate critical thinking, analytical and problem solving skills in the context of investment theories and practices.

CO4 - Analyze and evaluate ordinary shares and fixed income securities.

5) **Category of Course :** Core Course
6) **Semester :** VI
7) **Total Hours:** 60 hours
8) **Total Credits:** 4 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: VI***

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10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Portfolio Management – An Introduction & Process**	• Investment - Meaning, Characteristics, Objectives, Investment V/s Speculation, • Investment V/s Gambling and Types of Investors • Portfolio Management – Meaning, Evolution, Phases, Role of Portfolio Managers, • Advantages of Portfolio Management. • Portfolio Analysis – Meaning and its Components, Calculation of Expected Return and Risk, Calculation of Covariance, Risk – Return Trade off. • Portfolio Selection – Meaning, Feasible Set of Portfolios, Efficient Set of Portfolios, • Selection of Optimal Portfolio, Markowitz Model, Limitations of Markowitz Model, • Measuring Security Return and Portfolio Return and Risk under Single Index Model -and Multi Index Model.
II	**Portfolio Management – Valuation**	• Portfolio Revision – Meaning, Need, Constraints and Strategies. • Portfolio Evaluation – Meaning, Need, Measuring Returns • (Sharpe, Treynor and Jensen Ratios) and Decomposition of Performance.
III	**Fundamental Analysis And Technical Analysis**	• Economy Analysis – Meaning, Framework, Economic Analysis, Forecasting, Barometric or Indicator Approach, Econometric Model Building and Opportunistic Model Building. • Industry Analysis – Concept of Analysis, Industry LifeCycle, Industry Characteristics • Company Analysis – Financial Statements, Analysis of Financial Statements, (Practical questions on Debt equity ratios, total debt ratio, proprietary ratios, interest coverage ratio, Profitability ratios related to sales, investment and equity shares Efficiency or Activity Ratios) and Assessment of risk (Leverages) • Dow Theory • Meaning and Principles of Technical Analysis, Price Chart, Line Chart, Bar Chart, Japanese Candlestick Chart, Trends and Trend Reversals, Chart Patterns, Support • and Resistance, Reversal Patterns, Continuation Patternsand Elliot Wave Theory • Fundamental Analysis V/s Technical Analysis

IV	**Efficient Market Theory & CAPM**	• Random Walk Theory • The Efficient Market Hypothesis • Forms of Market Efficiency • Competitive Market Hypothesis • CAPM – Fundamental Notions of Portfolio Theory, Assumption of CAPM, Efficient Frontier with Riskless Lending and Borrowing, Capital Market Line, Security Market Line and Pricing of Securities with CAPM. • Arbitrage Pricing Theory (APT) – The Return Generating Model, Factors Affecting Stock Return, Expected Return on Stock, APT V/s CAPM.

References:

- Blake, David 1992, Financial Market Analysis, McGraw Hill London
- Francis J.C Investments, Analysis and Management McGraw Hill New York.
- Pistolese Clifford Using Technical Analysis Vision Books
- Reilly Frank K and Keith Brown Investment Analysis and Portfolio Management

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: VI***

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COURSE DETAILS

1) **Title of the Course: Indirect Tax - II**
2) **Course Code:** SF-AF-VI-E-IDT
3) **Course Objective:**

The Course will help the learner –

- To acquire the ability and analyze and interpret the provisions of the goods and services tax and recommend solution to practical problems.
- To develop an understanding of the customs laws and acquire the ability to analyze and interpret the provisions of such laws.
- To develop an understanding of the basic concepts of foreign trade policy to the extent relevant to indirect tax laws, and acquire the ability to analyze such concepts.

4) **Course Outcome (CO):**

After studying this course, learner will be able to -

CO1 – Comprehend the types of ledger to be utilized for payment of tax/interest/penalty/other amounts.

CO2 – Understand and analyze the provisions relating to TDS and TCS.

CO3 – Identify the persons eligible to file various statements/ returns as also the forms prescribed therefore and explain the periodicity for filing such returns.

CO4 – Understand and explain the different types of assessment which a registered or unregistered person may be subjected to.

CO5 – Understand the broad provisions relating to custom law.

CO6 – Do Analysis of determining factors of levy customs duty.

CO7 – Analyze and apply the Customs Valuations Rules 2007.

CO8- Comprehend the conditions under which drawback is allowable on re-export of duty paid goods.

CO9 – Appreciate and explain the basic concepts relating to import and export of goods under FTP.

5) **Category of Course:** Elective Course
6) **Semester:** VI
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: VI***

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9) Evaluation Pattern:

a. Total Marks: 100 Marks (10 Point Grading System)

b. Passing Criteria: 40% Marks (04 Grade Points)

c. Marking Scheme : 60:40 Pattern

- 60 Marks – Written Semester End Exam (Passing: 24 Marks)
- 40 Marks – Internal Exam (Passing: 16 Marks)

d. Mode of Evaluation of Answer-book : Online/Offline

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Payment of Tax and Refunds and Returns**	• Payment of Tax, Interest and other Amounts, Interest on delayed Payment, TDS, TCS • Refund of tax, Refund in certain cases, Interest on delayed Refunds • Types of Returns and Provisions relating to filing of Returns.
II	**Accounts, Audit, Assessment and Records**	• Accounts and other records, Period of retention of accounts, • Electronic Way Bill • Self-Assessment, Provisional Assessment, Scrutiny of Returns, Assessment of non-filers of Returns, Assessment of Unregistered person, summary assessment in certain special cases. • Audit by tax authorities, Special Audit.
III	**Custom Act - I**	Introduction to customs law including Constitutional aspects Levy of and exemptions from customs duties – All provisions including application of customs law, taxable event, charge of customs duty, exceptions to levy of customs duty, exemption from custom duty Types of customs duties Classification and valuation of imported and export goods

11) References:

- Indirect Taxes: Law and Practice by V.S. Datey, Taxmann
- Indirect Taxes by V.S. Balchandra, Sultan Chand and Sons, New Delhi
- GST Law & practice with Customs & FTP by V.S. Datey, Taxmann
- GST by V.S. Datey, Taxmann
- GST & customs Law by K.M. Bansal, University Edition
- GST Law & practice with Customs & FTP by Vineet Sodhani, Snow White Publications
- GST Law & practice with Customs & FTP by Sanjiv Agarwal, Snow White Publications
- Indirect taxes(Containing GST, Customs & FTP) by MOhd. Rafi, Bharat Publications

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: VI***

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COURSE DETAILS

1) **Title of the Course**: **Financial Management - III**
2) **Course Code :** SF-AF-VI-E-FM
3) **Course Objective:**

   The Course will help the learner –

   - To study impact that financial innovation, advances in technology, and changes in regulations has had on the structure of the financial firms/industry
   - To Evaluate the economic environment and the impact of governmental economic policies on consumers and financial institutions

4) **Course Outcome (CO) :**

   Learner will be able to -

   CO1 – Describe the dimensions of performance and risk relevant to financial firms.

   CO2 - Describe contemporary managerial risk management oversight processes

   CO3 – Explain how the financial services component industries (insurance, banking, securities, real estate and financial planning) interact.

5) **Category of Course :** Elective Course
6) **Semester :** VI
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern :**
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: VI***

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10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Business Valuation**	• **Conceptual Framework of Valuation –** Book Value, Market Value, Economic Value, Liquidation Value, Replacement Value, Salvage Value, Value of Goodwill and Fair Value • **Approaches of Valuation –** Assets Based Approach to Valuation, Earnings Based Approach to Valuation , Earnings Measure on Cash Flow Basis, Market Value Added Approach and Economic Value Added.
II	**Mergers and Acquisitions**	• Introduction- Basic modes of acquiring another firm, Synergy effects, Difference between Merger and Takeover, Advantages of Mergers and Acquisitions, Benefits of Merger for Acquiring firm, Reasons of companies to offer themselves for sale, Reasons for failure of Mergers and Reverse Merger. • Commonly Used Bases for determining the Exchange Ratio – EPS, MPS, Book value and Combination of Measures and Evaluation of Mergers (Practical Problems)
III	**Corporate Restructuring and Takeovers**	• Introduction – Meaning, Need and Importance, Forms of Restructuring, Advantages and Disadvantages • Takeovers – Meaning, SEBI Guidelines, Anti-takeover defenses and Asset and Liability Restructuring. (Practical Problems)
IV	**Lease and Working Capital financing**	• Introduction – Meaning and Types of Leases, Rationale, Mechanics, Operating Leases, Leasing as Financing Decisions, Calculation of Cash flows of a finance lease. • Introduction – Key features and Characteristics of Trade Credit, Bank Credit, Commercial Papers, Certificate of Deposits and Factoring. • Practical Problems based on Factoring and calculations of yield of CP's and CD's

11) References:

- Fundamentals of Financial Management by D. Chandra Bose, PHI Learning Pvt. Ltd., New Delhi
- Fundamentals of Financial Management by Bhabotosh Banerjee, PHI Learning Pvt. Ltd., New Delhi
- Fundamentals of Financial Management by Vyuptakesh Sharma, Pearson Education, New Delhi
- Fundamentals of Financial Management by J.C. Van Horne, Prentice Hall of India, New Delhi
- Financial Management: Text and Problems by M.Y. Khan and P.K. Jain, Tata McGraw Hill, New Delhi
- Financial Management: Theory and Practice by Prasanna Chandra, Tata McGraw Hill, New Delhi
- Financial Management by I.M. Pandey, Vikas Publishing House, New Delhi
- Financial Management byC. Paramasivan& T. Subramanian
- Financial Management by IM Pandey
- Financial Management by Ravi Kishor
- Financial Management by Khan & Jain

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: VI***

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SEMESTER – VI

COURSE DETAILS

1) **Title of the Course: Mutual Fund Management**
2) **Course Code :**SF-AF-VI-E-MFM
3) **Course Objective:** The Course will help the learner –
   - To understand different types of mutual fund
   - To understand and analyze the performance of mutual funds
   - To understand mutual fund as an effective tool to study portfolio management

4) **Course Outcome (CO) :**

CO1 –: Learners will be able to develop investment policy statements for institutional and individual investors.

CO2-: Learners will be able to develop an appropriate portfolio for a given investor and market conditions.

5) **Category of Course :** Elective Course
6) **Semester :** VI
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 Credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: VI***

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10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Mutual Fund**	• History & Origin, Definition, Meaning, Characteristics, Advantages, Disadvantages, Limitations of Mutual Funds, Ethics in Mutual Fund. Entities involved – Sponsor, Trust, Trustee, Asset Management Company, Registrar and Transfer Agent (RTA) and Fund Houses in India. • Legal Framework - Role of regulatory agencies for Mutual funds – SEBI, RBI, AMFI, Ministry of Finance, SRO, Company Law Board, Department of Company's affairs, Registrar of Companies MF guidelines on advertisement , Accounting , Taxation and Valuation norms, Guidelines to purchase Mutual Funds, Investor protection and MF regulations, Grievance mechanism in MF in India.
II	**Classification of Mutual Fund**	• Types of Mutual Fund- (introduction and Characteristics) Functional/Operational – Open ended, close ended, Interval Portfolio–Income,Growth,Balanced, MMMF,Geographical/ Location – Domestic, Offshore, Miscellaneous - Tax Saving Funds, Exchange Traded Funds, Balance Funds, Fixed Term Plan, Debt Funds, Systematic Investment Planning & Systematic Transfer Plan • Portfolio Maturity, Calculations of NAV, Entry Load, Exit Load.
III	**Fund Selection Criteria**	• A) Fund Rating and Ranking – Its need and importance. Basis of Ratings, Interpretation of Funding Rating by CRISIL, CARE and ICRA, Selection Criteria – (Size, Stability, Credit Portfolio, Performance)Performance Measurement – Rolling Returns and Benchmarking • B) Yield To Maturity and Bond Valuation
IV	**Financial Planning in Mutual fund**	• Basics of Financial Planning – Financial Planning Steps, Life Cycle, Wealth Cycle, Risk Profiling, Asset Allocation, Contingency Funds. • Investors Guide Towards Financial Planning – Eligibility for investment in MF, KYC (Individuals, Micro SIPs, Institutional Investors ,Fund Category Guidance (Long Bond Funds, Short Bond Funds, Ultra Short Bond Funds) , Need for Financial Advisor, Difference between Advisor and Distributor, Colour Coding MF products, Bank FD's V/s Mutual Funds, Dividend V/s Growth Option • Developing Model Portfolio for Investors – Model Portfolios meaning, Step by Step Approach of Building Model Portfolio

11) References:

- Future scenario of Financial services : R. Gordan & Natarajan (Himalaya)
- Marketing of Financial services : V. K. Avadhani (Himalaya)
- MF, Data, Interpretation & analysis : K.G. Shahadevan & Thripairaju (Prentice hall of India)
- Mutual funds in India (Modern scenario): Dr. Manoj Dave & Mr. Lalitkumar Chauhan, (Paradise Publishers)
- Mutual Funds & Financial Management : Ramesh Garg (Yking books)
- Mutual Fund products & services : Indian institute for Banking & Finance (Taxmann)

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: VI***

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COURSE DETAILS

1) **Title of the Course: Dynamic Public Speaking**
2) **Course Code :** SF-AF-VI-AB-DPS
3) **Course Objective:** The Course will help the learner to substantially increase his/her confidence and presence as a dynamic speaker.
4) **Course Outcome (CO) :**

CO1- The learner will be able to prepare effective speeches for various purpose.

CO2- The learner will be able to develop delivery techniques for voice, movement, and gesture

CO3- The learner will be able to Master Speechwriting techniques for storytelling, argument, style, topic framing, and discussing evidence.

5) **Category of Course :** Additional Course
6) **Semester :** VI
7) **Total Hours:** 60 hours
8) **Total Credits:** 2 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline
10) **Modules / Units:**

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Public Speaking**	• Public Speaking • Importance of Public Speaking • Fundamentals of Public Speaking
II	**Essentials Skills for Dynamic Public Speaking**	• Type of Audience • Topic Selection and Content of Speech • Attention Grabbing opening • Presenters Style • Audience – Centric • Connecting with Audience • Visually Pleasing Presentations

		• Delivering Persuasive Message • Self-appraisal
III	**Different Types / Techniques of Public Speaking**	• Speaking to inform / Informative Technique • Speaking to persuade / Persuasive • Speaking to Inspire: Ceremonial and Motivational Speech / Ceremonial Technique • Speaking to action / Demonstrative Technique
IV	**Practical**	Practical Sessions on Public Speaking & Extempore

References:

- Gall, Carmine. *Talk Like TED.* St. Martin's Press.2014.
- Lucas Stephen E... *The Art of Public Speaking*. McGraw Hill Education.1983
- Dale Carnegie. *How to Develop Self-Confidence & Influence People by Public Speaking*.1956.
- Dan O'Hair, Hannah Rubenstein, and Rob Stewart. *A Pocket Guide to Public Speaking*.2003
- Reddy Ramakrishna. *Public Speaking Essentials: Six Steps to Sizzle on Stage*.2016.

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: VI***

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COURSE DETAILS

1) **Title of the Course: Indian Economy**
2) **Course Code :** SF-AF-VI-ID-INECO
3) **Course Objective:**

The Course will help the learner –

- To analyses the growth performance of GDP of Indian economy during pre and post WTO regime.
- To analyze the effect of WTO on the level of saving and capital formation of Indian economy
- To examine the status of Indian exports during pre and post WTO Regime.

4) **Course Outcome (CO) :**

CO1 – Learners will be exposed to economic reforms in India and problems of Indian economy. Understanding of India and Global economy will also be included. Learners will learn the use of econometrics with greater precision and establishing such relationships in the business/organisation they work for.

5) **Category of Course:** Multi-disciplinary/ Inter-disciplinary course
6) **Semester :** VI
7) **Total Hours:** 60 hours
8) **Total Credits:** 2 credits
9) **Evaluation Pattern** :
    a. **Total Marks:** 100 Marks (10 Point Grading System)
    b. **Passing Criteria:** 40% Marks (04 Grade Points)
    c. **Marking Scheme :** 60:40 Pattern
        - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
        - 40 Marks – Internal Exam (Passing: 16 Marks)
    d. **Mode of Evaluation of Answer-book :** Online/Offline

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: VI***

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10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Indian Agricultural Sector**	Introduction Demographic features- Poverty, Income inequality and Unemployment Urbanization and its effects Agricultural Sector Institutional Structure- Land reforms in India Technological changes in agriculture Agricultural pricing and agricultural finance Agricultural marketing National agricultural policy
II	**Industrial Sector**	Growth and pattern of industrialization Industrial Policy of 1991.Public sector enterprises and disinvestment policy Small scale sector- problems and prospects
III	**Service Sector and External Sector**	Service Sector and External Sector Service Sector Nature and scope of service industry Recent trends in Banking industry, Insurance Industry, Healthcare Industry and Tourism Industry External Sector Structure and directions of Foreign trade India's Balance of payments since 1991 FDI, foreign capital and transnational companies in India. Role and impact of SAARC, ASEAN and WTO
IV	**Money and Banking**	Money and Banking Money market and its features Monetary policy of RBI Progress of commercial banking in India Development of capital markets SEBI and its functions

11) References:

- Indian Economic Survey Reports (Annual), Ministry of Finance, Government of India
- Indian Economy by Misra and Puri, Himalaya Publishing House - Delhi
- Gaurav Dutt & Ashwini Mahajan, (2016) Indian Economy, S.Chand & company PVT LTD New Delhi
- A.N.Agarwal – Indian Economy problems of Development and Planning New Age International Publisher RuddarDatt K.P.M Sundharam – Indian Economy S. Chand E-co LTD. Delhi

BACHELOR OF COMMERCE (ACCOUNTING & FINANCE): B.A.F.

PROGRAMME CODE: SFP-AF ***Course Details For Semester: VI***

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COURSE DETAILS

1) **Title of the Course: Project Work**
2) **Course Code :** SF-AF-VI-P-PRO
3) **Course Objective:**

The Course will help the learner –

- To understand the concept of research and Internship.
- To study collection of data, processing of data, analysis of data and interpretation of data.

4) **Course Outcome (CO) :**

CO1 – The learner will prepare the project on research or Internship.

CO2 – The learner will acquire the knowledge about the research methodology.

CO3 – It will help the learner in analysis of data and interpret the findings and conclusion.

5) **Category of Course :** Projects/Additional Course
6) **Semester :** VI
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - **60 Marks – Project Book & External Viva (Passing: 24 Marks)**
      - **40 Marks - Project Book & Internal Viva (Passing: 16 Marks)**

10) **Modules / Units :**

MODULE NO.	TOPIC	CONTENTS COVERED
I	**General guidelines for preparation of project work based on Research Methodology**	• Chapter No. 1: Introduction In this chapter Selection and relevance of the problem, historical background of the problem, brief profile of the study area, definition/s of related aspects, characteristics, different concepts pertaining to the problem etc can be incorporated by the learner. • Chapter No. 2: Research Methodology

		This chapter will include Objectives, Hypothesis, Scope of the study, limitations of the study, significance of the study, Selection of the problem, Sample size, Data collection, Tabulation of data, Techniques and tools to be used, etc. can be incorporated by the learner. • Chapter No. 3: Literature Review This chapter will provide information about studies done on the respective issue. This would specify how the study undertaken is relevant and contribute for value addition in information/ knowledge/ application of study area which ultimately helps the learner to undertake further study on same issue. • Chapter No. 4: Data Analysis, Interpretation and Presentation This chapter is the core part of the study. The analysis pertaining to collected data will be done by the learner. The application of selected tools or techniques will be used to arrive at findings. In this, table of information's, presentation of graphs etc. can be provided with interpretation by the learner. • Chapter No. 5: Conclusions and Suggestions In this chapter of project work, findings of work will be covered and suggestion will be enlisted to validate the objectives and hypotheses.
II	**Guidelines for Internship based project work**	• Executive Summary: A bird's eye view of your entire presentation has to be precisely offered under this category. • Introduction on the Company: A Concise representation of company/ organization defining its scope, products/ services and its SWOT analysis. • Statement and Objectives: The mission and vision of the organization need to be stated enshrining its broad strategies. • Your Role in the Organisation during the internship: The key aspects handled, the department under which you were deployed and brief summary report duly acknowledged by the reporting head. • Challenges: The challenges confronted while churning out theoretical knowledge into practical world. • Conclusion: A brief overview of your experience and suggestions to bridge the gap between theory and practice.

BACHELOR OF COMMERCE (BANKING & INSURANCE): B.B.I.

PROGRAMME CODE: SFP-BI ***Course Details For Semester: III & IV***

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SEMESTER – III

COURSE DETAILS

1) **Title of the Course: Business Economics- II**
2) **Course Code :** SF-BI-III-C-BEC
3) **Course Objective:**

The Course will help the learner -

- To know about the determinants of macroeconomic conditions (national output, employment, and inflation), causes of business cycles, and interactions of monetary and financial markets with the real economy, familiarizing themselves in the process with major economic theories of relevance.

4) **Course Outcome (CO) :**

CO1 – The learner will be able to use the concepts of Macroeconomics and its interrelations with Microeconomics and can apply the principle of Macroeconomics in explaining the behaviour of Macroeconomic variables at national as well as global level.

5) **Category of Course :** Core Course
6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :

a. **Total Marks:** 100 Marks (10 Point Grading System)
b. **Passing Criteria:** 40% Marks (04 Grade Points)
c. **Marking Scheme :** 60:40 Pattern
    - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
    - 40 Marks – Internal Exam (Passing: 16 Marks)
d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**The Economics of Aggregates** **(15 lectures)**	• Macroeconomics: Meaning and Importance. • Difference between Micro & Macro Economics • Circular flow of aggregate income and expenditure: closed and open economy models • Relationship between National Income and Economic Welfare. • Short run economic fluctuations : Features and Phases of Trade Cycles • The Keynesian Principle of Effective Demand: Aggregate Demand and Aggregate Supply - Consumption Function - Investment function & Multiplier
II	**Money, Inflation and Monetary Policy** **(15 lectures)**	• Money, Inflation and Monetary Policy • Money Supply: Determinants of Money Supply - Factors influencing Velocity of Circulation of Money • Demand for Money: Why Money is preferred as a medium of Exchange- Keynes' liquidity preference theory • Inflation: Causes - Effects of Inflation- Measures to control inflation. • Monetary policy: Meaning, objectives and instruments.
III	**Public Finance** **(15 lectures)**	• Meaning of Public Finance- Difference between Public Income and public revenue- Sources of Public Revenue • Tax & Non tax Revenue - Canons of taxation • Public Expenditure – Causes of increasing Public Expenditure - Public Debt – Types (Internal & External) • Fiscal Policy – Objectives & Instruments • Budget & Types of Budget • FRBM Act, 2003.
IV	**International Trade** **(15 lectures)**	• International Trade - Meaning & Advantages • Ricardo's Theory of comparative cost advantage V/s Heckscher – Ohlin theory of factor endowments. • Terms of trade - Gains from trade - Free trade versus protection • Foreign Investment : Foreign Direct Investment & Importance - Role of Multinational corporations • FPI – Meaning ,Difference between FDI & FPI • Balance of Payments: Structure - Types of Disequilibrium - Measures to correct disequilibrium in BOP. • Foreign Exchange market: Meaning, Participants & Functions. Determination of Equilibrium Rate of Exchange.

11) References:

- Reference Books Business Economics –II
- Ackley.G (1976), Macro Economic Theory and Policy, Macmillan Publishing Co. New York
- Ahuja. H.L., Modern Economics — S.Chand Company Ltd. New Delhi.
- Bhatia H.L.: Public Finance. Vikas Publishing House Pvt. Ltd
- Dornbush , Fisher and Startz, Macroeconomics, Tata-Mac Graw Hill, New Delhi
- . Dwivedi, D.N. (2001), Macro Economics: Theory and Policy, Tata-Mac Graw Hill, New Delhi.
- Friedman Hilton (1953) Essays in Positive Economics, University of Chicago Press, London.
- Francis Cherunilam International Economics Tata McGraw – Hill Publishing Co. Ltd. New Delhi.
- Gregory .N. Mankiw, Macroeconomics, Fifth Edition (2002) New York:Worth Publishers
- Jhingan, M.L., Principles of Economics — Vrinda Publications (P) Ltd
- Jhingan M.L. – International Economics – Vrinda publication Pvt. Ltd - Delh
- Musgrave, R.A and P.B. Musgrave (1976) : Public Finance in Theory and Practice, Tata McGraw Hill, Kogakusha, Tokyo
- Shapiro, E (1996), Macro-Economic Analysis, Golgotha Publication, New Delhi.
- Singh.S.K. (2014): Public finance in Theory and Practice, S.Chand &co Pvt Ltd, New Delhi
- Salvatore Dominick – International Economics – John Wiley & sons, Inc Singapore
- Vaish .M.C. (2010) Macro Economic Theory 14th edition, Vikas Publishing House(P)Ltd

BACHELOR OF COMMERCE (BANKING & INSURANCE): B.B.I.

PROGRAMME CODE: SFP-BI ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Introduction to Audit**
2) **Course Code :** SF-BI-III-C-AUD
3) **Course Objective:**

The Course will help the learner –

- To get acquainted with the various concepts of auditing.
- To understand and practice the various techniques of auditing while managing their finances.
- To study verification and vouching technique of auditing.

4) **Course Outcome (CO) :**

CO1 – The learner will get the basic knowledge about auditing.

CO2 - The learner will understand the Techniques, procedure, planning about auditing

CO3 – The learner will learn different types of audit & their responsibility.

5) **Category of Course :** Core Course
6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :

a. **Total Marks:** 100 Marks (10 Point Grading System)
b. **Passing Criteria:** 40% Marks (04 Grade Points)
c. **Marking Scheme :** 60:40 Pattern
    - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
    - 40 Marks – Internal Exam (Passing: 16 Marks)
d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Q.1 A. Objectives : (Any 8 out of 10) MCQ/True or False /Match the Column-08 Marks OR Q.1 B. Objectives : (Any 7 out of 10) MCQ/True or False/Match the Column- 07 Marks
Q.2 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.2 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.3 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.3 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.4 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.4 B. Short Notes / Short practical questions - 15 Marks (Any 3 out of 5)

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Auditing** **(15 lectures)**	• Basics – Financial Statements, Users of Information, Definition of Auditing, Objectives of Auditing – Primary and Secondary, Expression of opinion, Detection of Frauds and Errors, Inherent limitations of Audit. Difference between Accounting and Auditing, Investigation and Auditing. • Errors & Frauds – Definitions, Reasons and Circumstances, Types of Error – Commission, Omission, Compensating error. Types of frauds, Risk of fraud and Error in Audit, Auditors Duties and Responsibilities in case of fraud • Principles of Audit – Integrity, Objectivity, Independence, Skills, Competence, Work performed by others, Documentation, Planning, Audi Evidence, Accounting System and Internal Control, Audit Conclusions and Reporting • Types of Audit – Meaning, Advantages, Disadvantages of Balance sheet Audit, Interim Audit, Continuous Audit, Concurrent Audit and Annual Audit
II	**Audit Planning, Procedures and Documentation** **(15 lectures)**	• Audit Planning – Meaning, Objectives, Factors to be considered, Sources of obtaining information, Discussion with Client, Overall Audit Approach. • Audit Program – Meaning, Factors, Advantages and Disadvantages, Overcoming Disadvantages, Methods of Work , Instruction before commencing Work, Overall Audit Approach • Audit Working Papers - Meaning, importance, Factors determining Form and Contents, Main Functions / Importance, Features, Contents of Permanent Audit File, Temporary Audit File, Ownership, Custody, Access of Other Parties to Audit Working Papers, Auditors Lien on Working Papers, Auditors Lien on Client's Books • Audit Notebook – Meaning, structure, Contents, General Information, Current Information, Importance
III	**Auditing Techniques and Internal Audit Introduction** **(15 lectures)**	• Test Check - Test Checking Vs Routing Checking, test Check meaning, features, factors to be considered, when Test Checks can be used, advantages disadvantages precautions. • Audit Sampling - Audit Sampling, meaning, purpose, factors in determining sample size -Sampling Risk, Tolerable Error and expected error, methods of selecting Sample Items Evaluation of Sample Results auditors Liability in conducting audit based on Sample • Internal Control - Meaning and purpose, review of internal control, advantages, auditors duties, review of internal

		control, Inherent Limitations of Internal control, internal control samples for sales and debtors, purchases and creditors, wages and salaries. Internal Checks Vs Internal Control, Internal Checks Vs Test Checks • Internal Audit - Meaning, basic principles of establishing Internal audit, objectives, evaluation of internal Audit by statutory auditor, usefulness of Internal Audit, Internal Audit Vs External Audit,, Internal Checks Vs Internal Audit
IV	**Auditing Techniques: Vouching &Verification** **(15 lectures)**	• Audit of Income - Cash Sales, Sales on Approval, Consignment Sales, Sales Returns Recovery of Bad Debts written off, Rental Receipts, Interest and Dividends Received Royalties Received • Audit of Expenditure - Purchases, Purchase Returns, Salaries and Wages, Rent, Insurance Premium, Telephone expense Postage and Courier, Petty Cash Expenses, Travelling Commission Advertisement, Interest Expense • Audit of Assets Book Debts / Debtors, Stocks -Auditors General Duties; Patterns, Dies and Loose Tools, Spare Parts, Empties and Containers Quoted Investments and Unquoted Investment Trade Marks / Copyrights Patents Know-How Plant and Machinery Land and Buildings Furniture and Fixtures • Audit of Liabilities - Outstanding Expenses, Bills Payable Secured loans Unsecured Loans, Contingent Liabilities

11) References:

- Bansal, Surbhi. *Advanced Auditing & Professional Ethics*. Delhi. Bestword Publication Pvt Ltd. 2014.
- Basu, Sanjib.*Auditing: Principles & Techniques*. India.Pearson India.2004.
- Dalal, Chetan. *Fraud Detection:A Practical Approach ForAuditors*. Mumbai. Finesse Graphics & Prints Pvt.Ltd.2006.
- Garg,Pankaj. *Auditing & Assurance*. New Delhi. Taxmann Publication (P)Ltd. 2014.
- Jha, Aruna. *Learners Workbook OnAuditing*. New Delhi.Taxman Allied Services (P.)Ltd. 2007.
- Jha, Aruna. *Auditing*. Taxmann Publications(p.) Ltd. 2013.
- Nadhani, Asok. K. *Auditing And Assurance*. India. Bpb Publications.2009.
- Rawat, D.S. *Learner's Guide To Auditing Standards*. New Delhi. Taxmann Publications(p.) Ltd.2014.
- Sharma, Dr. N. K. *Auditing Theory And Practice*.Jaipur. Shree Niwas Publications.2009.
- Tandaon, B.N. And Sudharsanam. *A Handbook Of Practical Auditing*.New Delhi. S.Chand & Company Ltd.2012.

COURSE DETAILS

1) **Title of the Course: Direct Tax**
2) **Course Code :** SF-BI-III-C-DT
3) **Course Objective:**

   The Course will help the learner –

   - To be aware of the various provisions of Income Tax Law in India
   - To develop the understanding of the various provisions of Income Tax Law
   - To acquire the ability to analyze and interpret the provisions of Income Tax Law
   - To develop the ability to apply the knowledge of Income Tax provisions in making basic Computation of Total Income
4) **Course Outcome (CO) :**

   CO1 - The learner will understand the Basic concepts of Income Tax Act

   CO2 - The learner will be able to determine Residential Status of a person in India on the basis of which He/she will be able determine the Scope of Total Income

   CO3 - The learner will understand five heads of income and will be able to classify all the incomes in the respective heads

   CO4 - The learner will understand the benefits of Deductions available under Chapter VI-A of Income Tax and will be able to make basic Computation of Total Income after taking available deductions

5) **Category of Course :** Core Course
6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 Credits
9) **Evaluation Pattern** :

   a. **Total Marks:** 100 Marks (10 Point Grading System)

   b. **Passing Criteria:** 40% Marks (04 Grade Points)

   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)

   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Q.1 A. Objectives : (Any 8 out of 10) MCQ/True or False /Match the Column-08 Marks OR Q.1 B. Objectives : (Any 7 out of 10) MCQ/True or False/Match the Column- 07 Marks
Q.2 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.2 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.3 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.3 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.4 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.4 B. Short Notes / Short practical questions - 15 Marks (Any 3 out of 5)

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Definitions, Basis of Charge and Exclusions from Total Income** **(15 lectures)**	• **Definitions u/s 2 :** Assessee, Assessment Year, Assessment, Annual value, Business, Capital asset, Income, Person, Previous Year, Transfer • **Basis of Charge :** Section 3 to 9 - Previous Year, Residential Status, Scope Of Total Income, Deemed Income • **Exclusions from Total Income:** Section 10 - restricted to, Agricultural Income, Sums Received from HUF by Member, Share of Profit from Firm, Casual & Non – Recurring Receipts, Scholarships, Income of Minor Child, Allowance to Members of Parliament and Legislative Assembly. **Note -Exemptions related to specific Heads of Income to be covered with Relevant Provisions.**
II	**Heads of Income** **(15 lectures)**	• **Income from Salary :** Section 15 – 17, Including Section 10 relating to House Rent Allowance, Travel Concession, Special Allowance, Gratuity, Pension, Leave Encashment, Compensation, Voluntary Retirement, Payment from Provident Fund • **Income From House Property :** Section 22 – 27, Including Section 2 – Annual Value • **Profits & Gains From Business & Profession :** Section 28-32, 36, 37, 40, 40A, 43B, 44AD, 44ADA & 44AE including : Section 2 – Business • **Capital Gains :** Section 45, 48, 49, 50, 54 and 55 • **Income from Other Sources:** Section 56 – 59
III	**Deductions under Chapter VI – A** **(15 lectures)**	• **80 A -** Restriction on claim in Chapter VI- A deductions • **80 C -** Payment of LIC/PF and other eligible investments • **80CCC** - Contribution to certain Pension Fund • **80D** - Medical Insurance Premium • **80 DD -** Maintenance and medical treatment of handicapped dependent • **80E** - Interest on Educational Loan • **80 TTA** - Interest on Saving Bank account • **80U** - Deduction in the case of totally blind or physically handicapped or mentally retarded resident person

IV	**Computation of Total Income** **(15 lectures)**	• Computation of Total Income of Individual and HUF with respect to above heads and deductions
Note : Relevant Law / Statute / Rules in force and relevant Standards in force on 1st April immediately preceding commencement of Academic Year is applicable for ensuring examination after relevant year. The syllabus is restricted to study of particular section/s, specifically mentioned rules and notification.		

11) References :

- V. K. Singhania, *Direct Taxes Law & Practice*, Taxmann
- Ahuja, Gupta, *Systematic Approach to Direct Tax*, Bharat Law House
- V. K. Singhania, *Income Tax Ready Recknoner*, Taxmann
- T. N. Manoharan, *Direct Tax Laws*, Snow White

BACHELOR OF COMMERCE (BANKING & INSURANCE): B.B.I.

PROGRAMME CODE: SFP-BI ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Organisational Behaviour - II**
2) **Course Code :** SF-BI-III-E-OB
3) **Course Objective:**

The Course will help the learner –

- To help the Learners to develop cognizance of the importance of human behavior.
- To enable Learners to describe how people behave under different conditions and understand why people behave as they do.
- To provide the Learners to analyze specific strategic human resources demands for future action.
- To enable Learners to synthesize related information and evaluate options for the most logical and optimal solution such that they would be able to predict and control human behavior and improve results.

4) **Course Outcome (CO) :**

CO1: To understand the applicability of the concept of organizational behavior to understand the behavior of people in the organization.

CO2: To understand the applicability of analyzing the complexities associated with management of individual behavior in the organization.

CO3: Analyze the complexities associated with management of the group behavior in the organization.

CO4: Demonstrate how the organizational behavior can integrate in understanding the motivation (why) behind behavior of people in the organization.

5) **Category of Course :** Elective Course
6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 Credits
9) **Evaluation Pattern** :

a. **Total Marks:** 100 Marks (10 Point Grading System)
b. **Passing Criteria:** 40% Marks (04 Grade Points)

c. Marking Scheme : 60:40 Pattern

- 60 Marks – Written Semester End Exam (Passing: 24 Marks)
- 40 Marks – Internal Exam (Passing: 16 Marks)

d. Mode of Evaluation of Answer-book : Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**The Individual Behaviour** **(15 lectures)**	• Learning: Meaning and Definition of Learning-The Learning Process, Principles of Learning, Theories of Learning-Classical conditioning, Operant Conditioning, Social Learning Theory, Learning through Reinforcement, Learning by Observing, Learning through Experience. • Perception-Meaning, Factors Influencing Perception, Attribution Theory, Empathy. • Workplace Emotions, Values and Ethics: Meaning of Emotions, Cognitive Dissonance, Emotional Dissonance, Managing Emotions at Work (Emotional Labor) - The Six Universal Emotions. Meaning and Types of Values, Sources of Value systems, Values across Cultures, Values and Ethical Behaviour. • Individual Decision Making: How are Decisions made in organization, Decision Making process, Decisional Styles
II	**The Group Dynamics** **(15 lectures)**	• Group Communication: Importance, Corporate Communication – Need, Importance and Techniques of Corporate Communication. • Transactional Analysis Model: Types of Transactions, Ego states, Life Positions, Elaboration of Transactional styles. • Virtual teams and Group Cohesiveness: Structure, Types, Stages in Management of Virtual teams, Features of Cohesive Groups, Effects/Consequences/Impact of Group Cohesion. • Group Decision-Making: Advantages, Disadvantages, Assumptions, Managing Group Decision-Making, Strength and Weakness of Group Decision-Making.
III	**The Organizational Dynamics** **(15 lectures)**	• Organization structure: Meaning, Meaning and key features of the concept of Centralization, Decentralization, Span of control and Departmentation, Simple structure, Bureaucratic & Matrix structure. • New design options: Team structure, Virtual organizations, Boundary less organizations • Organization structure differentiation: Strategy, Organization size, Technology & Environment, Organizational Designs and employee behaviour. • Organizational Climate: Impact of Communication, Impact of Rewards & Punishment, Quality work life with reference

		to Banking & Insurance, Job Frustration-Sources, Causes, Effects, Ways to Overcome Frustration, Impact of Frustration on Banking and Insurance companies.
IV	**Organization Behaviour In Banking and Insurance Sector** **(15 lectures)**	• Practices of OB in Banks and Insurance • Issue of organization behaviour in Banks Strategies to manage issues of organization behaviour in banks Case Studies – Transfer, Promotion, Separation

11) References:

- Organizational Behaviour- concept, controversies, applications, by Stephen Robbins, Prentice Hall.
- Management and Organizational Behavior , Ninth Edition, by Laurie J. Mullins, Pearson publisher
- Organizational Behavior, Text, Cases, Games, By K. Ashwathappa, Himalaya Publishing house
- Organizational Behavior by Margie Parikh and Rajen Gupta, Tata Mcgraw Hill Publication
- Essentials of Organisational Behaviour (Seventh edition)- Stephen P. Robbins (Prentice Hall India Pvt.Ltd.) Emerging Knowledge and Practices of the Real world (Fifth Edition)- Steven LMcShane, Mary Ann Von Glinow, Radha R. Sharma. (Tata McGraw Hill Education Private Limited)
- Organizational Behavior by Dr. S.S. Khanka, Sultanchand publication
- Organizational Behavior by Jeff Harris and Sandra J. Hartman, Jaico Publications
- Organizational Behavior by Hellriegel, Slocum, Woodman, Pearson Education

BACHELOR OF COMMERCE (BANKING & INSURANCE): B.B.I.

PROGRAMME CODE: SFP-BI ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Management Accounting**
2) **Course Code :** SF-BI-III-E-MA
3) **Course Objective:**

The Course will help the learner –

- To acquire with the basic management accounting fundamentals.
- To develop financial analysis skills
- To know the core concepts of Working Capital and its importance in managing a business
- To get aware of dividend policies and aspects associated with Dividend Decision

4) **Course Outcome (CO) :**

CO1 – The learner will be in a position to analyze the Financial Statement of a concern for future actions

CO2 - The learner will be able to apply the knowledge of Working Capital to manage and fulfill the requirements of business finance effectively

CO3 - Knowledge of Dividend Policy will help the learner to analyze the significant impact of it on the Business and on the shareholders of the company

5) **Category of Course :** Elective Course
6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 Credits
9) **Evaluation Pattern** :

a. **Total Marks:** 100 Marks (10 Point Grading System)
b. **Passing Criteria:** 40% Marks (04 Grade Points)
c. **Marking Scheme :** 60:40 Pattern
    - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
    - 40 Marks – Internal Exam (Passing: 16 Marks)
d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Q.1 A. Objectives : (Any 8 out of 10) MCQ/True or False /Match the Column-08 Marks OR Q.1 B. Objectives : (Any 7 out of 10) MCQ/True or False/Match the Column- 07 Marks
Q.2 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.2 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.3 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.3 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.4 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.4 B. Short Notes / Short practical questions - 15 Marks (Any 3 out of 5)

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Management Accounting (15 lectures)**	• Meaning and Definition , Scope, Functions , Objectives, Importance, Role of Management Accounting, Management Accounting Framework, Tools of Management Accounting
II	**Financial Statement Analysis (15 lectures)**	• **Introduction to Corporate Financial Statements :** Understanding the Balance sheet and Revenue statements with the headings and sub headings, Uses of financial statements, Users of Financial Statements. • **Financial Statement Analysis :** Introduction and Meaning of Financial Statement Analysis, Steps, Objective, Types of Analysis. • **Ratio Analysis**: Meaning, classification, Du Point Chart, advantages & limitations. a) Balance Sheet Ratios b) Revenue Statement Ratios c) Combined Ratios
III	**Working Capital Management (15 lectures)**	• Concept, Nature of Working Capital, Planning of Working Capital, Operating Cycle • Estimation / Projection of Working Capital Requirements in case of Trading and Manufacturing Organization
IV	**Management of Profits / Dividend Policy (15 lectures)**	• Meaning, Types, Factors influencing dividend policy, Forms of dividend. • Determinants of Dividends Policy: Factors; Dividend Policy in India; Bonus Shares (Stock dividend) and Stock (Share) Splits; Legal, Procedural; and Tax • Aspects associated with Dividend Decision

11) References:

- Ravi N Kishor , Cost and Management Accounting
- P. N. Reddy , Essential of Management Accounting, Himalaya publication.
- Robert S Kailer, Advanced Management Accounting
- S. R. Varshey, Financial of Management Accounting, Wisdom.
- Charbs T Horngram, Introduction of Management Accounting Learning, PHI
- I. M. Pandey, Management Accounting, Vikas Publications.
- D. K. Mattal, Cost and Management Accounting, Galgotia Publications.
- M. N. Arora, Cost Accounting Theory and Practice, Sultan Chand and sons
- Khan & Jain, Management Accounting, Tata Mc Graw

BACHELOR OF COMMERCE (BANKING & INSURANCE): B.B.I.

PROGRAMME CODE: SFP-BI ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Operation Research**
2) **Course Code :** SF-BI-III-E-OR
3) **Course Objective:**

   The Course will help the learner –

   - To understand operations research methodologies
   - To solve various problems practically
   - To proficient in case analysis and interpretation

4) **Course Outcome (CO) :**

   CO1- The learner will be able to Formulate and solve mathematical model (linear programming problem) for a physical situation like production, distribution of goods and economics.

   CO2- The learner will be able to Use appropriate techniques to represent and analyze projects with a view to managing resources, minimizing costs, and coping with uncertainty.

   CO3- The learner will be able to Solve numerical on Transportation Models and Assignment Models.

5) **Category of Course :** Elective Course
6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :

   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Operational Research and Linear Programming** **(15 lectures)**	a) **Introduction To Operations Research** • Operations Research - Definition, Characteristics of OR, OR Techniques, Areas of Application, Limitations of OR. b) **Linear Programming Problems: Introduction and Formulation** • Introduction to Linear Programming • Applications of LP • Components of LP • Requirements for Formulation of LP Problem • Assumptions Underlying Linear Programming • Steps in Solving LP Problems • LPP Formulation (Decision Variables, Objective Function, Constraints, Non • Negativity Constraints) c) **Linear Programming Problems: Graphical Method** • Maximization & Minimization Type Problems. (Max. Z & Min. Z) • Two Decision Variables and Maximum Three Constraints Problem • Constraints can be "less than or equal to", "greater than or equal to" or a combination of both the types i.e. mixed constraints. • Concepts: Feasible Region of Solution, Unbounded Solution, Redundant • Constraint, Infeasible Solution, Alternative Optima. d) **Linear Programming Problems: Simplex Method** • Only Maximization Type Problems. (Only Max. Z). No Minimization problems. • (No Min. Z) Numerical on Degeneracy in Maximization Simplex Problems. • Two or Three Decision Variables and Maximum Three Constraints Problem. (Upto Maximum Two Iterations) • All Constraints to be "less than or equal to" Constraints. ("Greater than or Equal to" Constraints not included.) • Concepts : Slack Variables, Surplus Variables, Artificial Variables, Duality, • Product Mix and Profit, Feasible and Infeasible Solution, Unique or Alternate

		• Optimal Solution, Degeneracy, Non Degenerate, Shadow Prices of Resources, Scarce and Abundant Resources, Utilized and Unutilized Capacity of Resources, • Percentage Utilization of Resources, Decision for Introduction of a New Product.
II	**Assignment and Transportation Models** **(15 lectures)**	a) **Assignment Problem – Hungarian Method** • Maximization & Minimization Type Problems. • Balanced and Unbalanced Problems. • Prohibited Assignment Problems, Unique or Multiple Optimal Solutions. • Simple Formulation of Assignment Problems. • Maximum 5 x 5 Matrix. Up to Maximum Two Iterations after Row and Column • Minimization. b) **Transportation Problems** • Maximization & Minimization Type Problems. • Balanced and Unbalanced problems. • Prohibited Transportation Problems, Unique or Multiple Optimal Solutions. • Simple Formulation of Transportation Problems. • Initial Feasible Solution (IFS) by: • a. North West Corner Rule (NWCR) • b. Least Cost Method (LCM) • c. Vogel's Approximation Method (VAM) • Maximum 5 x 5 Transportation Matrix. • Finding Optimal Solution by Modified Distribution (MODI) Method. (u, v and Δ) • Maximum Two Iterations (i.e. Maximum Two Loops) after IFS.
III	**Network Analysis** **(15 lectures)**	• Critical Path Method (CPM) • Concepts: Activity, Event, Network Diagram, Merge Event, Burst Event, • Concurrent and Burst Activity, • Construction of a Network Diagram. Node Relationship and Precedence • Relationship. • Principles of Constructing Network Diagram. • Use of Dummy Activity • Numerical Consisting of Maximum Ten (10) Activities. • Critical Path, Sub-critical Path, Critical and Non-critical Activities, Project

		• Completion Time. • Forward Pass and Backward Pass Methods. • Calculation of EST, EFT, LST, LFT, Head Event Slack, Tail Event Slack, Total Float, • Free Float, Independent Float and Interfering Float • b) Project Crashing • Meaning of Project Crashing. • Concepts: Normal Time, Normal Cost, Crash Time, Crash Cost of Activities. • Cost Slope of an Activity. • Costs involved in Project Crashing: Numericals with Direct, Indirect, Penalty,crash cost and Total Costs. • Time – Cost Trade off in Project Crashing. • Optimal (Minimum) Project Cost and Optimal Project Completion Time. • Process of Project Crashing. • Numerical Consisting of Maximum Ten (10) Activities. • Numerical based on Maximum Four (04) Iterations of Crashing c) Program Evaluation and Review Technique (PERT) • Three Time Estimates of PERT: Optimistic Time (a), Most Likely Time (m) and Pessimistic Time (b). • Expected Time (te) of an Activity Using Three Time Estimates. • Difference between CPM and PERT. • Numerical Consisting of Maximum Ten (10) Activities. • Construction of PERT Network using tevalues of all Activities. • Mean (Expected) Project Completion Time. • Standard Deviation and Variance of Activities. • Project Variance and Project Standard Deviation. • 'Prob. Z' Formula. • Standard Normal Probability Table. Calculation of Probability from the • Probability Table using 'Z' Value and Simple Questions related to PERT Technique. • Meaning, Objectives, Importance, Scope, RORO/LASH
IV	**Job Sequencing and Theory of Games** **(15 lectures)**	• Job Sequencing Problem • Processing Maximum 9 Jobs through Two Machines only. • Processing Maximum 6 Jobs through Three Machines only. • Calculations of Idle Time, Elapsed Time etc.

		b) Theory of Games • Introduction • Terminology of Game Theory: Players, Strategies, Play, Payoff, Payoff matrix, • Maximin, Maximax, Saddle Point. • Types of Games. • Numericals based on: • Two Person Zero Sum Games including strictly determinable and Fair Game • - Pure Strategy Games (Saddle Point available). Principles of Dominance method.

11) References:

- Dr. Mrs. Anjali Ghanekar, Essentials of Organisation Development, Everest Publishing House
- French,W.L. and Bell, C.H., Organisation Development, Prentice-Hall, New Delhi,1995.
- Harvey, D.F. and Brown, D.R., An Experimental Approach to Organization Development, Prentice-Hall, Englewood Cliffs,N.J.,1990
- Cummings, T. G. & Worley, C. G. (2009).Organization Development and Change (9th edition). Canada: South-Western Cengage Learning
- Thomas G. Cummings and Christopher G. Worley, Organization Development and Change, Thomson South-Western, 8th Edition 2004.
- Cummings, T. G., Theory of Organization Development and Change, South Western.
- Ramanarayan, S. and Rao, T.V., Organization Development: Accelerating Learning and Transformation, 2nd Edition, Sage India, 2011.
- Richard L, Organisation, Theory, Change and Design , India Edition(Cenage Learning)
- Garath R Jones, Mary Mathew , Organisation Theory, Design and Change: Sixth Edition, Pearson
- Wendell L French, Cecil H Bell, Jr, Veena Vohra ,Organisation Development , Sixth Edition, Pearson Education

BACHELOR OF COMMERCE (BANKING & INSURANCE): B.B.I.

PROGRAMME CODE: SFP-BI ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Information Technology- I**
2) **Course Code :** SF-BI-III-AB-IT
3) **Course Objective:**

The Course will help the learner –

- To understand how technology and business works together
- To understand the basics of payments done using technology.
- To learn to use computer practically.

4) **Course Outcome (CO) :**

CO1 – Learners would know about the use of commercial activity using electronic media.

CO2 - Learners will know about the basic working of different technology and new trends in commerce using electronic media

CO3 – Learners would learn to make documents, presentations and spreadsheets

5) **Category of Course :** Skill/Ability Enhancement Courses
6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :

a. **Total Marks:** 100 Marks (10 Point Grading System)
b. **Passing Criteria:** 40% Marks (04 Grade Points)
c. **Marking Scheme :** 60:40 Pattern
    - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
    - 40 Marks – Internal Exam (Passing: 16 Marks)
d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

BACHELOR OF COMMERCE (BANKING & INSURANCE): B.B.I.

PROGRAMME CODE: SFP-BI ***Course Details For Semester: III & IV***

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10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Electronic Commerce** **(15 lectures)**	• **E-Commerce Framework**, E-Commerce and media convergence, anatomy of E-Commerce Applications, E-Commerce Consumer and Organization Applications • **The network Infrastructure for Electronic Commerce -** Market forces influencing the I-way, Components of I-way, Network Access Equipment • **E-Commerce and World Wide Web-** Architectural framework of E- Commerce, WWW and its architecture, hypertext publishing, Technology behind the web, Security and the Web
II	**E-banking** **(15 lectures)**	• **Meaning**, definition, features, advantages and limitations-core banking, the evolution of e-banking in India, Legal framework for e-banking. • **Electronic Payment System:** Types of Electronic Payment Systems, Digital Token-based EPS, Smart Card EPS, Credit Card EPS, Risk in EPS, Designing a EPS
III	**MS-Office: Packages for Institutional Automation:** **(15 lectures)**	• **Ms-Word:** Usage of smart art tools, bookmark, cross-reference, hyperlink, mail merge utility and converting word as PDF files. • **Ms-Excel:** Manipulating data, Working with charts, Working with PIVOT table and what-if analysis; Advanced excel functions-Vlookup (),hlookup(),PV(), FV(),average(),goal seek(),AVERAGE(), MIN(), MAX(), COUNT(),COUNTA(), ROUND(), INT(), nested functions, name ,cells/ranges/constants, relative, absolute &mixed cell references, >,<,=operators, Logical functions using if, and, or =, not, date and time functions & annotating formulae. • **Application in Banking and Insurance Sector** – Calculation of Interest, Calculation of Installment, Calculation of Cash Flow, Calculation of Premium, Calculation of risk coverage in Insurance and Reporting.
IV	**Cyber Law & Cyber Security** **(15 lectures)**	• Need of Cyber Law, History of Cyber Law in India • **Cyber Crimes:**Various threats and attacks, Phishing, Key Loggers, Identity Theft, Call & SMS forging, e-mail related crimes, Denial of Service Attacks, Hacking, Online shopping frauds, Credit card frauds, Cyber Stalking • **Cyber Security:**Computer Security, E-Security, Password Security and Reporting internet fraud

11) References:

- E-Banking in India: Challenges and Opportunities-By RimpiJatana, R. K. Uppal
- Frontiers of E-Commerce- by Ravi Kalakota, Andrew B. Whinston- Pearson Education
- Frontiers of E-Commerce- by Ravi Kalakota, Andrew B. Whinston–Pearson Education
- Microsoft Office Professional2013-Step by step
- By Beth Melton, Mark Dodge, Echo Swinford, Andrew Couch
- An Overview of Cyber Crime & security-Volume 1st Edition by Akash Kamal Mishra
- Computers and Banking- by Sony and Agarwal
- E-Commerce by David Whitely

BACHELOR OF COMMERCE (BANKING & INSURANCE): B.B.I.

PROGRAMME CODE: SFP-BI ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Foundation Course – II (Overview of Banking)**
2) **Course Code :** SF-BI-III-ID-FC
3) **Course Objective:**

The Course will help the learner –

- To get knowledge regarding banking sector and recent development in banking sectors.
- To get knowledge about the emerging trends of banking sectors.
- To study the structure and functions of Reserve Bank of India.
- To study the provisions of Banking regulation Act, 1949
- To study the concept of Commercial Banks and Banking Ombudsman.
- To obtain detailed knowledge about Universal banking with its concept and payment and settlement system other relevant topics.
- To know and apply recent technologies used in banking sectors.
- To study need and code of conduct for microfinance institutions in India role of NABARD and SIDBI in microfinance.
- Study the concept of Financial Inclusion.

4) **Course Outcome (CO) :**

CO1 – It will help a Learner to understand the basic principles of Banking and types of banks in banking sectors.

CO2 - Learners can acquire knowledge about history of banking sector reforms and current development in banking sectors.

CO3 - It will help a Learner to understand the important concept of commercial banks.

CO4-Learners will get to know about banking ombudsman and its important functions.

CO5- It will help them to know the concept of E-banking.

CO6- Learners can be able to apply KYC norms in banking sectors.

CO7 – Learners will get to know about the relevant concept under microfinance and financial inclusion.

5) **Category of Course :** Multi-disciplinary/ Interdisciplinary course
6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 2 credits

9) Evaluation Pattern :

a. Total Marks: 100 Marks (10 Point Grading System)

b. Passing Criteria: 40% Marks (04 Grade Points)

c. Marking Scheme : 60:40 Pattern

- 60 Marks – Written Semester End Exam (Passing: 24 Marks)
- 40 Marks – Internal Exam (Passing: 16 Marks)

d. Mode of Evaluation of Answer-book : Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**An Overview of Banking Industry** **(10 lectures)**	• Definition of Banks, Types of Banks, Principles of Banking • Banking System in India, Overview of RBI, Public, Private, Co-operative, Payment Bank, Regional Rural Banks • Emerging trends of banking - Universal banking, electronic banking, globalization of banking. • Brief history of banking sector reforms from 1991-2000 and Current developments in banking sector • Regulatory Architecture – Overview of Banking Regulation Act 1949, • Banking Regulation Act(Amendment 2015), Payment and Settlement Act 2007, Negotiable Instrument Act 1881, BIS, Basel I, II and III. • Bank Crises in India • Critical Evaluation of Banking Industry in India
II	**Commercial Banking and Customer – Banker Relationship** **(10 lectures)**	• Definition and meaning of Commercial Bank, Evolution of Commercial Banking in India, Functions of Commercial Bank , Services offered by Commercial Bank. • Retail Banking – Meaning, Features, Significance of Retail Banking and Overview of its products • Corporate Banking -Meaning, Features, Significance of Corporate Banking and Overview of its products • Rural Banking - Meaning, Features, Significance of Rural Banking and Overview of its products

		• Banking Ombudsman – Meaning and Functions
III	**Universal Banking & Technology in Banking sector (10 lectures)**	**A) Universal Banking:** Concept of Universal Banking, Evolution of Universal banking, Services to Government, Payment & Settlement, Merchant Banking, Mutual Fund, Depository Services, Wealth Management, Portfolio Management, Bancassurance, and NRI Remittance. **B) Technology in Banking :** Features, norms and Limitations of E- banking, Mobile Banking, Internet Banking, RTGS, POS Terminal, NEFT, IMPS, Brown Label ATM's, White Label ATM's, NUUP, AEPS, APBS, CBS, CTS, Digital Signature , M-Wallets , Online opening of bank accounts – savings & current, and application for credit cards, loan. Applicability of KYC norms in Banking Sector.
IV	**Microfinance & Financial Inclusion (15 lectures)**	**A) Microfinance** • Introduction, Need and Code of Conduct for Microfinance Institutions in India, • Advantages, Purpose, Limitations and Models of SHG – Bank Linkage Program. • Role of NABARD and SIDBI, • Portfolio Securitization, • SHG-2, NRLM and SRLM , • Priority Sector and its Classification **B) Financial Inclusion** • Need & Extent • RBI Committee Report of Medium Term Path on Financial Inclusion 2015, World Findex Report 2015, NISM Report 2015, (Only Brief Extracts relating to bank account holdings and credit taken and contrast between developing and developed nations.) • Features & Procedures of Pradhan Mantri Jan Dhan Yojana, and PM Mudra Yojana. • Features, procedures and significance of Stand up India Scheme for Green Field

11) References:

- Banking Law and Practice – M.L Tannan
- Microfinance Perspective and Operations – IIBF, 2016.
- Rural Banking Operations – IIBF, 2017 Edition
- Financial Inclusion and Growth Governance- Deepali Pant Joshi Gyan Publishing House
- Bank Financial Management Paperback – 2010 -IIBF
- Money Banking And Finance Paperback – 2009 -N K Sinha
- Principles and Practices of Banking Paperback – 2015 - IIBF
- Principles and Practices of Banking 11 edition Paperback – 2015 - N S Toor, Arun Toor
- Principles Of Banking (With Case Studies) Hardcover – 2009 - Rakesh Kumar
- Modern Banking In India , Gupta

BACHELOR OF COMMERCE (BANKING & INSURANCE): B.B.I.

PROGRAMME CODE: SFP-BI ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Advanced Excel**
2) **Course Code:** SF-BI-III-AD-AEX
3) **Course Objective:**

   The course will help the learner to -

   - Enter and edit data.
   - Format data and cells.
   - Construct formulas, including the use of built-in functions, and relative and absolute references.
   - Create Pivot tables and charts.
   - Convert text and validate and consolidate data.
   - Import and Export Data

4) **Course Outcome (CO):**

   CO1- The learner will be able to master Microsoft Excel from Beginner to Advanced

   CO2- The learner will be able to build a solid understanding on the Basics of Microsoft Excel

   CO3- The learner will be able to learn the most common Excel functions used in the Office

   CO4- The learner will be able to maintain large sets of Excel data in a list or table

   CO5- The learner will be able to create dynamic reports by mastering one of the most popular tools, PivotTables

5) **Category of Course :** Additional Course
6) **Semester:** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 2 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Excel and Logical Functions (15 lectures)**	Using Basic Functions • Formatting and Proofing • Mathematical functions • Protecting files • Date and time functions • Printing workbook • What if analysis • If analysis • Nested Ifs • Complex if functions
II	**Data Validations and Look Up functions (15 lectures)**	• Manage primary and secondary axis. • Dynamic Dropdown • V Lookup and H Look functions • Index and match • Nested V Lookup • Worksheet linking
III	**Pivot Tables (15 lectures)**	• Creating pivot tables • Advance value field setting • Grouping based on numbers and dates • Array functions • Using array formulas • Array with if and lookup functions
IV	**Chart and Slicers (15 lectures)**	• Bar Chart, Pie Chart, Line chart, etc • Filter data using slicers • Manage primary and secondary axis • Excel Dashboard • Planning a dash board • Adding tables and charts to dashboard • Adding dynamic content to dashboard

11) References:

- Microsoft Excel 2016 Bible: The Comprehensive Tutorial Resource.
- Excel 2016 ALL-IN-ONE for Dummies.
- Excel: QuickStart Guide from Beginner to Expert.
- Excel 2016: Pivot Table Data Crunching. ...
- Power Pivot and Power BI: The Excel User's Guide to DAX, Power Query, Power BI, and Power Pivot.
- Microsoft Excel Dashboards and Reports

SEMESTER – IV

COURSE DETAILS

1) **Title of the Course: Corporate & Securities Law**
2) **Course Code :** SF-BI-IV-C-CSL
3) **Course Objective:**

The Course will help the learner –

- To have an overview of Company Law.
- To study regulatory framework governing The Stock Exchange as per Securities Contract Regulations Act 1956.
- To obtain knowledge about Securities Exchange Board of India (SEBI).
- To study the relevant provisions under Depository Act, 1966.

4) **Course Outcome (CO) :**

CO1 – The Learners will have a simplified approach in understanding corporate laws and other related laws.

CO2 - It will provide to the learner an insight of various beneficial social legislative measures for building the corporate industry.

CO3 –Learner will get experience from practical case study and legal interpretation of laws required in the field.

CO4- Learners acquire in-depth knowledge about the functions of SEBI and will understand the benefits and models of Depository under Depository Act, 1966.

5) **Category of Course :** Core Course
6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :

a. **Total Marks:** 100 Marks (10 Point Grading System)
b. **Passing Criteria:** 40% Marks (04 Grade Points)

c. Marking Scheme : 60:40 Pattern

- 60 Marks – Written Semester End Exam (Passing: 24 Marks)
- 40 Marks – Internal Exam (Passing: 16 Marks)

d. Mode of Evaluation of Answer-book : Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Company Law – An Overview** **(15 lectures)**	• A) Development of Company Law in India • B) Doctrines Governing Corporates – Lifting the Corporate Veil, Doctrine of Ultra Vires, Constructive Notice, Indoor Management, Alter Ego. The Principle of Non Interference (Rule in Foss V/s Harbottle) – Meaning , Advantages , Disadvantages & Exceptions, Majority and Minority Rights under Companies Act • C) Application of Company Law to Banking and Insurance Sector, Application of Companies Act to Banking and Insurance sector governed by Special Acts. S.1(4) of Companies Act 2013, Exceptions provided (S.67(3), S.73(1), S.129(1), 179(3), S.180(1)(c), S.186, S.189
II	**Regulatory Framework governing Stock Exchanges as per Securities Contracts Regulation Act 1956** **(15 lectures)**	• Definition of Securities, Spot Delivery Contract, Ready Delivery Contract, Stock Exchange. • Corporatisation and demutualisation of Stock Exchange –Meaning, Procedure & Withdrawal • Power of Recognised Stock Exchange to make rules restricting voting rights etc • Power of Central Government to Direct Rules or Make rules • Power of SEBI to make or amend bye laws of recognised stock exchange • Books and Accounts to be maintained by recognized stock exchange • Grounds on which stock exchange can delist the securities of a company. • Section 3 to Section 20
III	**Security Exchange Board Of India** **(15 lectures)**	• A) SEBI: Objectives-terms-establishment-powers-functions-accounts and audit- penalties –registration. • B) Issues of Disclosure Investors Protection Guidelines: Pre & Post obligations-conditions for issue-Debt Security-IPO-E-IPO-Employee option-right-bonus-preferential allotment intermediary-operational-promoter lock in period requirements-offer document.

IV	**The Depositories Act, 1996** **(15 lectures)**	• Depository – Meaning , Benefits , Models, Functions Participants • The Depository Act 1996 – Objectives, Eligibility condition for depository services, Fungibility, Bye laws of depository , Governance of Depository and Internal audit of depository Participants • BSDA and single registration for depository participants.

11) References:

- Mamta Bhargava – Compliances and Procedures under SEBI Law
- V.L Iyer – SEBI Practice Manual - Taxmann
- D.K Jain – Company Law Ready Reckoner
- Bare Act – Corporate Laws Taxmann Microsoft Office Professional2013-Step by step
- By Beth Melton,Mark Dodge, Echo Swinford, Andrew Couch

COURSE DETAILS

1) **Title of the Course: Audit – II (Company and Bank)**
2) **Course Code :** SF-BI-IV-C-AUD
3) **Course Objective:**

The Course will help the learner –

- To get acquainted with the various concepts of Auditing.
- To understand recent development in types of audit
- To study professional ethics and misconduct

4) **Course Outcome (CO) :**

CO1 – The learner will acquire knowledge about company audit and bank audit.

CO2 - The learner will understand the liabilities of auditors.

CO3 – The learner will learn audit of banking companies.

5) **Category of Course :** Core Course
6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :

a. **Total Marks:** 100 Marks (10 Point Grading System)
b. **Passing Criteria:** 40% Marks (04 Grade Points)
c. **Marking Scheme :** 60:40 Pattern
    - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
    - 40 Marks – Internal Exam (Passing: 16 Marks)
d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Q.1 A. Objectives : (Any 8 out of 10) MCQ/True or False /Match the Column-08 Marks OR Q.1 B. Objectives : (Any 7 out of 10) MCQ/True or False/Match the Column- 07 Marks
Q.2 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.2 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.3 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.3 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.4 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.4 B. Short Notes / Short practical questions - 15 Marks (Any 3 out of 5)

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Audit of Limited Companies** **(15 lectures)**	Qualifications, Disqualifications, Appointment, Removal, Remuneration of Auditors, Audit Ceiling, Status, Power, Duties and Liabilities of Auditors, Branch Audit, Joint Audit, Special Audit. Maintenance of Books of Account –Related Party Disclosures, Segment Reporting, Divisible Profit, Dividend and Depreciation (Companies Act, Standards on Accounting, Legal Decisions and Auditor's Responsibility), Representations by Management, Contents of Annual Report. Definition, Distinction between Report and Certificate, Types of Reports/Opinion.
II	**Audit of Banking Companies** **(15 lectures)**	Introduction of Banking Companies, Form and Content of Financial Statements, Qualifications of Auditor, Appointment of Auditor, Remuneration of Auditor, Power of Auditor, Auditor's Report, Format of Audit Report, Long Form Audit Report, Conducting an Audit, Initial Consideration by Statutory Audit, Internal Control System, Verifications of Assets and Balances.
III	**Audit of Insurance Companies** **(15 lectures)**	• Audit of Companies carrying Life Insurance Business, Audit of companies carrying Life Insurance Business, Applicability of Accounting Standards (AS 3, 4, 9 , 13 and 17) • Books and Register to be maintained ,Submission of reports and Returns • Audit of Accounts, Preparation of Audit and Internal Controls.
IV	**New Areas of Auditing and Professional Ethics and Misconduct** **(15 lectures)**	Introduction to • Cost Audit, • Human Resource Audit, • Management Audit, • Operational Audit, • Forecast Audit, • Social Audit, • Tax Audit, • Forensic Audit and • Environmental (Green) Audit. • Audit in an EDP Environment, • Introduction, General Approach to EDP Based Audit and Special Techniques for Auditing in an EDP Environment. • Introduction, Meaning of Professional Ethics Meaning of Professional Misconduct. • Schedules to the Chartered Accountants Act, 1949 Relating to Professional Misconduct, Enquiry into Charges of Misconduct of Chartered Accountants.

11) References:

- Bansal, Surbhi. *Advanced Auditing & Professional Ethics*. Delhi. Bestword Publication Pvt Ltd. 2014.
- Basu, Sanjib.*Auditing: Principles & Techniques*. India.Pearson India.2004.
- Dalal, Chetan. *Fraud Detection:A Practical Approach ForAuditors*. Mumbai. Finesse Graphics & Prints Pvt.Ltd.2006.
- Garg,Pankaj. *Auditing & Assurance*. New Delhi. Taxmann Publication (P)Ltd. 2014.
- Jha, Aruna. *Learners Workbook OnAuditing*. New Delhi.Taxman Allied Services (P.)Ltd. 2007.
- Jha, Aruna. *Auditing*. Taxmann Publications(p.) Ltd. 2013.
- Nadhani, Asok. K. *Auditing And Assurance*. India. Bpb Publications.2009.
- Rawat, D.S. *Learner's Guide To Auditing Standards*. New Delhi. Taxmann Publications(p.) Ltd.2014.
- Sharma, Dr. N. K. *Auditing Theory And Practice*.Jaipur. Shree Niwas Publications.2009.
- Tandaon, B.N. And Sudharsanam. *A Handbook Of Practical Auditing*.New Delhi. S.Chand & Company Ltd.2012.

BACHELOR OF COMMERCE (BANKING & INSURANCE): B.B.I.

PROGRAMME CODE: SFP-BI ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Customer Relationship Management**
2) **Course Code :** SF-BI-IV-C-CRM
3) **Course Objective:**

The Course will help the learner –

- To understand concept of Customer Relationship Management (CRM) and implementation of Customer Relationship Management.
- To get an insight into CRM marketing initiatives, customer service and designing CRM strategy.
- To understand new trends in CRM, challenges and opportunities for organizations.

4) **Course Outcome (CO) :**

CO1 – The learner will understand importance and role of CRM in organisation.

CO2 – Learner would acquire knowledge of different computer software in CRM.

CO3 – The learner will learn new trends, challenges and opportunities under CRM

5) **Category of Course :** Core Course
6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :

a. **Total Marks:** 100 Marks (10 Point Grading System)
b. **Passing Criteria:** 40% Marks (04 Grade Points)
c. **Marking Scheme :** 60:40 Pattern
    - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
    - 40 Marks – Internal Exam (Passing: 16 Marks)
d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Customer Relationship Management** **(15 lectures)**	• Concept, Evolution of Customer Relationships: Customers as strangers, acquaintances, friends and partners • Objectives, Benefits of CRM to Customers and Organisations, Customer Profitability Segments, Components of CRM: Information, Process, Technology and People, Barriers to CRM • Relationship Marketing and CRM: Relationship Development Strategies: Organizational Pervasive Approach, Managing Customer Emotions, Brand Building through Relationship Marketing, Service Level Agreements, Relationship Challenges
II	**CRM Marketing Initiatives, Customer Service and Data Management** **(15 lectures)**	• CRM Marketing Initiatives: Cross-Selling and Up-Selling, Customer Retention, Behaviour Prediction, Customer Profitability and Value Modeling, Channel Optimization, Personalization and Event-Based Marketing • CRM and Customer Service: Call Center and Customer Care: Call Routing, Contact Center Sales-Support, Web Based Self Service, Customer Satisfaction Measurement, Call-Scripting, Cyber Agents and Workforce Management • CRM and Data Management: Types of Data: Reference Data, Transactional Data, Warehouse Data and Business View Data, Identifying Data Quality Issues, Planning and Getting Information Quality, Using Tools to Manage Data, Types of Data Analysis: Online Analytical Processing (OLAP), Clickstream Analysis, Personalisation and Collaborative Filtering, Data Reporting
III	**CRM Strategy, Planning, Implementation and Evaluation** **(15 lectures)**	• Understanding Customers: Customer Value, Customer Care, Company Profit Chain: Satisfaction, Loyalty, Retention and Profits • Objectives of CRM Strategy, The CRM Strategy Cycle: Acquisition, Retention and Win Back, Complexities of CRM Strategy • Planning and Implementation of CRM: Business to Business CRM, Sales and CRM, Sales Force Automation, Sales Process/ Activity Management, Sales Territory Management, Contact Management, Lead Management, Configuration Support, Knowledge Management CRM Implementation: Steps- Business Planning, Architecture and

		Design, Technology Selection, Development, Delivery and Measurement • CRM Evaluation: Basic Measures: Service Quality, Customer Satisfaction and Loyalty, Company 3E Measures: Efficiency, Effectiveness and Employee Change
IV	**CRM New Horizons** **(15 lectures)**	• e-CRM: Concept, Different Levels of E- CRM, Privacy in E-CRM: • Software App for Customer Service: Activity Management, Agent Management, Case Assignment, Contract Management, Customer Self Service, Email Response Management, Escalation, Inbound Communication Management, Invoicing, Outbound Communication Management, Queuing and Routing, Scheduling • Social Networking and CRM • Mobile-CRM • CRM Trends, Challenges and Opportunities • Ethical Issues in CRM

11) References:

• Baran ,Roger J. & Robert J, Galka. 2014. *Customer Relationship Management: The Foundation of Contemporary Marketing Strategy*. Routledge Taylor & Francis Group.

• Anderson, Kristin and Carol, Kerr. 2002. *Customer Relationship Management*. Tata McGraw-Hill.

• Ed, Peele. *Customer Relationship Management*. Pearson Education.

• Bhasin Jaspreet, Kaur. 2012. *Customer Relationship Management*. Dreamtech Press.

• Judith W, Kincaid. 2006. *Customer Relationship Management Getting it Right*. Pearson Education.

• Jill, Dyche.2007. *The CTM Handbook: A Business Guide to Customer Relationship Management*. Pearson Education.

• Valarie A ,Zeithmal.et.all. 2010. *Services Marketing Integrating Customer Focus Across the Firm*. Tata McGraw Hill.

• Urvashi, Makkar and Harinder Kumar, Makkar. 2013. *Customer Relationship Management*. McGraw Hill Education.

BACHELOR OF COMMERCE (BANKING & INSURANCE): B.B.I.

PROGRAMME CODE: SFP-BI ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Cost Accounting**
2) **Course Code :** SF-BI-IV-E-CA
3) **Course Objective:**

The Course will help the learner –

- To get exposed to basic concepts and the tools used in Cost Accounting
- To be aware of various techniques of analysis in Cost Accounting
- To develop skills of analysis and evaluation in cost accounting

4) **Course Outcome (CO) :**

CO1 – The learner will understand the importance of Cost Accounting in business

CO2 – The learner will be able to reconcile the differences between Books with Financial Book

CO3 – The learner will be in a position to apply Cost Accounting techniques of reconciliation, Marginal Costing and Standard Costing in decision making in the business

5) **Category of Course :** Elective Course
6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 Credits
9) **Evaluation Pattern** :

a. **Total Marks:** 100 Marks (10 Point Grading System)
b. **Passing Criteria:** 40% Marks (04 Grade Points)
c. **Marking Scheme :** 60:40 Pattern
    - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
    - 40 Marks – Internal Exam (Passing: 16 Marks)
d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Q.1 A. Objectives : (Any 8 out of 10) MCQ/True or False /Match the Column-08 Marks OR Q.1 B. Objectives : (Any 7 out of 10) MCQ/True or False/Match the Column- 07 Marks
Q.2 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.2 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.3 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.3 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.4 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.4 B. Short Notes / Short practical questions - 15 Marks (Any 3 out of 5)

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Cost Accounting** **(15 lectures)**	• Objectives and scope of Cost Accounting • Cost Centers, Cost units, profit center and investment center • Cost classification for stock valuation, Profit measurement, Decision making and control • Coding systems • Elements of Cost
II	**Cost Sheet and Reconciliation of cost and financial accounts** **(15 lectures)**	• Cost Sheet and Reconciliation of cost and financial accounts
III	**Standard Costing** **(15 lectures)**	• Various types of standards, setting of standards, Basic concepts of Material, Labour and Overhead (Fixed and Variable) variance analysis
IV	**Introduction to Marginal** **Costing** **(15 lectures)**	• Marginal costing meaning, application, advantages, limitations, Contribution, Breakeven analysis and profit volume . • Practical problems based on Marginal Costing

11) References:

- Swaminathan, Lectures on Costing, S. Chand and Company (P) Ltd., New Delhi
- C.S. Rayudu, Cost Accounting, Tata Mc. Grow Hill and Co. Ltd., Mumbai
- Jawahar Lal and Seema Srivastava, Cost Accounting, Tata Mc. Grow Hill and Co. Ltd., Mumbai
- Ravi M. Kishore Cost Accounting, Taxmann Ltd., New Delhi
- N. K. PrasadPrinciples and Practices of Cost Accounting, Book Syndicate Pvt. Ltd., Calcutta
- B. K. Bhar, Cost Accounting Theory and Practice, Tata Mc. Grow Hill and Co. Ltd., Mumbai
- M. N. Arora, Cost Accounting Principles and Practice, Vikas Publishing House Pvt. Ltd., New Delhi
- V. K. Saxena, C. D. Vashist, Advanced Cost and Management Accounting: Problems and Solutions, S. Chand and Company (P) Ltd., New Delhi
- S.P. Jain and K.L. Narang, Cost Accounting, Kalyani Publishers, Ludhiana
- M. Hanif, Modern Cost and Management Accounting, Tata McGraw Hill Education Pvt. Ltd., New Delhi

BACHELOR OF COMMERCE (BANKING & INSURANCE): B.B.I.

PROGRAMME CODE: SFP-BI ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Marketing in Banking & Insurance**
2) **Course Code :** SF-BI-IV-E-MBI
3) **Course Objective:**

The Course will help the learner –

- To be aware about the various new marketing strategies and consumer behaviour towards the same.
- To be aware about the different technique of marketing in banking and insurance.

4) **Course Outcome (CO) :**

CO1 – It would enhance Learners' knowledge about new marketing strategies, logistics management and service marketing.

CO2 – It will enhance the Learners' marketing skills and they can implement it in the banking & insurance sector for better results.

5) **Category of Course :** Elective Course
6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :

a. **Total Marks:** 100 Marks (10 Point Grading System)
b. **Passing Criteria:** 40% Marks (04 Grade Points)
c. **Marking Scheme :** 60:40 Pattern
    - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
    - 40 Marks – Internal Exam (Passing: 16 Marks)
d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Marketing and Introduction to Service Marketing** **(15 lectures)**	• Meaning, Definition, Importance, Marketing Mix, Market Segmentation, • Marketing Strategy, Channels of Marketing, Marketing of Banking and • Insurance Products, Marketing Research, Introduction, Process and Types. • Meaning, Concept, Evolution and Characteristics of Service Marketing. Need and • Importance of Service Marketing, 7 P's of Services Marketing Mix, Service • Marketing Mix Strategies for Banking and Insurance and Marketing Logistics.
II	**Consumer Behaviour** **(15 lectures)**	• Introduction to Consumer Behaviour, Consumer Expectations, Consumer Buying • Behavior, Role of Consumer in Service Delivery, Consumer Responses, Consumer • Delight – Concept and Importance. • Consumer Behaviour and Marketing Communications: Introduction, Marketing • Communication Flow, Communication Process, Interpersonal Communication, • Persuasive Communication, Source, Message, Message Appeals, Communication • Feedback.
III	**Rural Marketing** **(15 lectures)**	• Rural Marketing -Concept and Scope ,Nature of Rural Markets , Attractiveness of • Rural Markets ,Rural Vs Urban Marketing ,Characteristics of Rural Consumers • Buying Decision Process ,Rural Marketing Information System ,Potential And Size of Rural Markets. • Pricing Strategy, Pricing Policies, Innovative Pricing Methods for Rural Markets, • Promotion Strategy, Appropriate Media, Designing Right Promotion Mix, Promotional Campaigns. • Distribution-Logistics Management, Problems Encountered, Selection of Appropriate Channels, New Approaches to Reach Out Rural Markets – Electronic Choupal Applications.

IV	**E- Marketing** **(15 lectures)**	• E-marketing: Scope, Benefits and Problems, E-marketing Techniques, Internet • Marketing, Digital Marketing and E-marketing • E-Marketing Mix Strategy , Introduction, Objectives, the 4Ps in E-Marketing, • Additional 3Ps in E-Marketing of Services, the 2P+2C+3S Formula in E-Marketing

11) References:

- Marketing Management -Philip Kotler, Prentice Hall of India New Delhi.
- Service Marketing- S.M.Jha, Himalaya Publishing House, Mumbai.
- Essence of Service Marketing- Adrian Payne, Prentice Hall of India New Delhi.
- Service Marketing- Hellen Woodruffle, Macmillan Publishers, India, Delhi.
- E- Marketing - Judy Strauss, Raymond Frost, Pearson Prentice Hall, 2009, 5th Edition
- Marketing Management – An Asian Perspective Philip Kotler, Gary Armstrong, Prafulla Y. Agnihotri, Ehsan U.Haque – Pearson Education 2010.
- Rural Marketing – Text and Cases , C.S Krishnamacharayu and Lathiha Ramkrishnan, Pearson Education.
- Service Marketing – Christopher Loveloca, Pearson Education

BACHELOR OF COMMERCE (BANKING & INSURANCE): B.B.I.

PROGRAMME CODE: SFP-BI ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Equity & Debt Market**
2) **Course Code :** SF-BI-IV-E-EDM
3) **Course Objective:**

   The Course will help the learner –

   - To understand the evaluation of various aspects of financial markets.
   - To study financial policies and development of financial instruments.
   - To examine process and evolving the strategies during crisis.

4) **Course Outcome (CO) :**

   CO1 – The learner will help them develop good understanding of primary market and secondary market in equity market.

   CO2 – The learner will understand the role and functioning of the market.

   CO3 – The learner will be aware of the legislative, executive and judicial functions of such regulatory authorities.

5) **Category of Course :** Elective Course
6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Financial Market** **(15 lectures)**	• Equity market – meaning & definitions of equity share; Growth of Corporate sector & simultaneous growth of equity shareholders; divorce between ownership and management in companies; development of Equity culture in India & current position. • Debt market – Evolution of Debt markets in India; Money market & Debt markets in India; Regulatory framework in the Indian Debt market.
II	**Dynamics of Equity Market** **(15 lectures)**	• Primary: 1)IPO – methods followed (simple numerical) 2) Book building 3)Role of merchant bankers in fixing the price 4)Red herring prospectus – unique features 5)Numerical on sweat equity, ESOP & Rights issue of shares • Secondary: 1) Definition & functions of stock exchanges 2) Evolution & growth of stock exchanges 3)Stock exchanges in India 4)NSE, BSE OTCEI & overseas stock exchanges 5)Recent developments in stock exchanges 6)Stock market Indices
III	**Players in debt markets** **(15 lectures)**	• Players in debt markets: 1)Govt. securities 2)Public sector bonds & corporate bonds 3)open market operations 4)Security trading corp. of India 5)Primary dealers in Govt. securities • Bonds: 1)Features of bonds 2)Types of bonds
IV	**Valuation of Equity & Bonds** **(15 lectures)**	• Valuation of equity: 1. Balance sheet valuation 2. Dividend discount model (zero growth, constant growth & multiple growth) 3. Price earning model • Valuation of bonds 1. Determinants of the value of bonds 2. Yield to Maturity 3. Interest rate risk 4. Determinants of Interest Rate Risk

11) References:

- Allen, Larry.1750-2000. *The Global Financial System*.
- Ian H, Giddy. 1994. *Global Financial Markets*. Houghton Mifflin.
- Saunders, Anthony. and Cornett, Marica Millon. *Financial markets & institutions: A modern perspective: TMIT.*
- L,M Bhole. *Financial institutions & markets: Structure, growth & innovations*. 5th ed. T MH.
- Chandra, P. 2011.*Corporate Valuation and Value Creation.*1st ed. TMH.

BACHELOR OF COMMERCE (BANKING & INSURANCE): B.B.I.

PROGRAMME CODE: SFP-BI ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Information Technology- II**
2) **Course Code :** SF-BI-IV-AB-IT
3) **Course Objective:**

The Course will help the learner –

- To understand how technology and business work together.
- To understand the basics of payments done using technology.
- To learn to use computer practically.
- To understand the security to be taken care when technology is in hand

4) **Course Outcome (CO) :**

CO1 – Learners would know about the use of commercial activity using electronic media.

CO2 - Learners know about the basic working of different technology and new trends in commerce using electronic media.

CO3 – Through different software a learner will know how to make documents, presentations and spreadsheets.

CO4 - Learners becomes aware of the different laws related to electronic media

5) **Category of Course :** : Skill/Ability Enhancement Courses
6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :

a. **Total Marks:** 100 Marks (10 Point Grading System)
b. **Passing Criteria:** 40% Marks (04 Grade Points)
c. **Marking Scheme :** 60:40 Pattern
    - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
    - 40 Marks – Internal Exam (Passing: 16 Marks)
d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**E-banking Business Models (15 lectures)**	• Various models- home banking, office banking, online banking, internet banking, mobile banking, SMS banking,- models of electronic payments, other business models
II	**Induction of Techno Management (15 lectures)**	• **Development Life Cycle,** Project Management, Building Data Centers, Role of DBMS in Banking, Data Warehousing and Data Mining, RDBMS Tools • **Technological Changes in Indian Banking Industry**, Trends in Banking and Information Technology, Technology in Banking, Lead Role of Reserve Bank of India, New Horizons for Banking based IT, Automated Clearing House Operations, Electronic Wholesale Banking Credit Transfer, Credit Information Bureau (I) Ltd., Credit Information Company Regulation Bill- 2004, Automation in Indian Banks, Cheque clearing using MICR technology, Innovations, Products and Services, Core-Banking Solutions(CBS), Human Resource Development(HRD)-The Road Ahead, • **Technology in Banking Industry,** Teleconferencing, Internet Banking, Digital Signature in Banking, MICR- Facility for 'paper-based' clearing, Cheque Truncation • **Dealing with Fraudulent transactions under CTS,** Efficient customer service, smart quill computer pen, Institute for Development & Research in Banking & Technology (IDRBT). • **E-Checks-Protocols and Standards,** Problems on mechanization, e-Banking-RBI Regulations & Supervision, Technology Diffusion.
III	**IT Applications and Banking (15 lectures)**	• Objectives, Electronic Commerce and Banking, Banking Software, Electronic Clearing and Settlement Systems, Plastic Money
IV	**MS-Office: Packages for Institutional Automation (15 lectures)**	• **MS-PowerPoint presentation**: Internal links between slides, hyperlinks, embedding multimedia content onto the slides (video/audio/stylish text), slide animation, timer, creating new presentation by existing theme, import online themes, creating a template of presentation, save and run the slide show(.ppx)

		• **Applications of Internet:** Introduction to e-mail, writing professional e-mails, creating digitally signed documents, use of outlook express: configuring outlook express, creating and managing profile in outlook, sending and receiving e-mails via outlook express, Emailing the merged Documents, boomerang facility of email, Google drive: usage of Google drive in storing the Google documents, excel sheets, presentations and PDF files.

11) References:

- Sanjay Soni and Vinayak Aggarwal, Computers and Banking, M/s Sultan Chand & Sons, New Delhi, 1993.
- Uppal, R.K. "E-Banking in India (Challenges & Opportunities)", New Century Publications, New Delhi, 2007.
- General Bank Management from Indian Institute of Banking and Finance by MACMILAN

  2. Modern Banking Technology-by Firdos Tempuras Shroff -published by-Northern Book Center, New Delhi
- General Bank Management from Indian Institute of Banking and Finance by MACMILAN
- Microsoft Office Professional2013-Step by step
- By Beth Melton, Mark Dodge, Echo Swinford, Andrew Couch

BACHELOR OF COMMERCE (BANKING & INSURANCE): B.B.I.

PROGRAMME CODE: SFP-BI ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Foundation Course – III (Overview of Insurance)**
2) **Course Code :** SF-BI-IV-ID-FC
3) **Course Objective:**

The Course will help the learner –

- To get knowledge regarding insurance sectors.
- To describe the features of life insurance.
- To elaborate the difference between Life Insurance and General Insurance.
- To obtain in-depth knowledge about Traditional life insurance and Non- traditional life insurance.
- To study important regulations under IRDA.
- To get in-depth knowledge about health insurance, general insurance Home Insurance and Motor insurance.
- To learn the roles of insurance in Logistics.
- To study important forms and procedures under fire insurance.

4) **Course Outcome (CO) :**

CO1 – Learners will be able to understand various principles, provisions that govern the Life Insurance contract and general insurance contract.

CO2 – The course will make them understand how to choose life insurance policies based on their needs.

CO3 – Learners will get to know various policies under Health, Home and Motor insurance.

CO4 – Learners will get to know about the concept of fire insurance.

CO5 – Understand the importance of insurance in Logistics.

5) **Category of Course :** Multi-disciplinary/ Interdisciplinary course
6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 2 credits

9) Evaluation Pattern :

a. Total Marks: 100 Marks (10 Point Grading System)

b. Passing Criteria: 40% Marks (04 Grade Points)

c. Marking Scheme : 60:40 Pattern

- 60 Marks – Written Semester End Exam (Passing: 24 Marks)
- 40 Marks – Internal Exam (Passing: 16 Marks)

d. Mode of Evaluation of Answer-book : Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**An Introduction to Life Insurance** **(15 lectures)**	A) Life Insurance Business – Components, Human Life Value Approach, Mutuality, Principle of Risk Pooling, Life Insurance Contract, Determinants of Risk Premium B) Products of LIC – Introduction of life insurance plans - Traditional Life Insurance Plans – Term Plans, Whole Life Insurance, Endowment Assurance, Dividend Method of Profit Participation Purpose of plans , Riders in plan - Introduction, Forms and procedures C) Non Traditional Life Insurance Products (Those of SBI and ICICI – Introduction, Forms and procedures)
II	**An Introduction to Health Insurance** **(10 lectures)**	A) Health Insurance – Meaning, IRDA Regulations, determinants of Health Insurance, Health Insurance Market in India and determinants of Risk Premium. B) SBI and ICICI Health Insurance Plans - Introduction and Forms and Procedures of Hospitalization, Indemnity Products, top up covers, cashless insurance, Senior citizen plans, critical illness plans and Micro Insurance.
III	**An Introduction to Home and Motor Insurance** **(10 lectures)**	A) Home Insurance - SBI and ICICI Plans – Introduction, Forms and Procedures, Inclusions and Exclusions in policies, Determinants of Risk Premium and Impact of Catastrophes on Home Insurance.

		B) Vehicle Insurance- SBI and ICICI Plans-Introduction, Forms and Procedures, Determinants of Risk Premium, Inclusions and Exclusions.
IV	**Role of Insurance in Logistic** **(10 lectures)**	A) Role of Insurance in Logistic - Meaning &Importance, Hazards, Protection, Social Security – Type of Risks and Accidents. B) Fire Insurance – SBI and ICICI Plans – Introduction, Forms and Procedures, Standard Fire and Special Perils Policy, Tariff system and special policies.

11) References:

- Insurance Principles and Practice – M N Mishra & S B Mishra – S. Chand 22 ndP Edition
- Insurance Claims Solutions – DR L.P Gupta Revised Edition
- Introduction to Risk Management & Insurance – Mark S Dorfman & David A. Cather - Tenth Edition
- Risk Management Insurance – S. Arunajatesan & T.R Vishwanathan

BACHELOR OF COMMERCE (BANKING & INSURANCE): B.B.I.

PROGRAMME CODE: SFP-BI ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Investment Analysis**
2) **Course Code:** SF-BI-IV-AD-INA
3) **Course Objective:**

The Course will help the learner –

- To get knowledge about basic principles of Investment Analysis
- To get knowledge about techniques of Investment analysis and Portfolio Management.
- To examine the relationships between returns and risks.
- To learn analysis and evaluate ordinary shares and fixed income securities.

4) **Course Outcome (CO):**

On successful completion of the course Learners will be able to:

CO1- Examine the relationships between returns and risks.

CO2 -Demonstrate knowledge and skills in the core investment concepts, collecting financial information from electronic databases and employing analytical tools to value financial securities.

CO3 - Demonstrate critical thinking, analytical and problem-solving skills in the context of investment theories and practices.

CO4 - Analyze and evaluate ordinary shares and fixed income securities.

5) **Category of Course :** Additional Course
6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 2 credits
9) **Evaluation Pattern** :

a. **Total Marks:** 100 Marks (10 Point Grading System)
b. **Passing Criteria:** 40% Marks (04 Grade Points)
c. **Marking Scheme :** 60:40 Pattern
    - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
    - 40 Marks – Internal Exam (Passing: 16 Marks)
d. **Mode of Evaluation of Answer-book:** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Q.1 A. Objectives : (Any 8 out of 10) MCQ/True or False /Match the Column-08 Marks OR Q.1 B. Objectives : (Any 7 out of 10) MCQ/True or False/Match the Column- 07 Marks
Q.2 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.2 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.3 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.3 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.4 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.4 B. Short Notes / Short practical questions - 15 Marks (Any 3 out of 5)

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Investment Environment** **(15 lectures)**	**Introduction to Investment Environment** Introduction, Investment Process, Criteria for Investment, Types of Investors, Investment V/s Speculation V/s Gambling, Investment Avenues, Factors, Influencing Selection of Investment Alternatives **Capital Market in India** Introduction, Concepts of Investment Banks its Role and Functions, Stock, Market Index, The NASDAQ, SDL, NSDL, Benefits of Depository Settlement, Online Share Trading and its Advantages, Concepts of Small cap, Large cap, Midcap and Penny stocks
II	**Risk and Return Relationship** **(15 lectures)**	• Meaning, Types of Risk- Systematic and Unsystematic risk, • Measurement of Beta, Standard Deviation, Variance, Reduction of Risk through Diversification. • Practical Problems on Calculation of Standard Deviation, Variance and Beta.
III	**Portfolio Management and Security Analysis** **(15 lectures)**	**a) Portfolio Management:** Meaning and Concept, Portfolio Management Process, Objectives, Basic Principles, Factors affecting Investment Decisions in Portfolio Management, Portfolio Strategy Mix. **b) Security Analysis:** Fundamental Analysis, Economic Analysis, Industry Analysis, Company Analysis, Technical Analysis - Basic Principles of Technical Analysis. Uses of Charts: Line Chart, Bar Chart, Candlestick Chart, Mathematical Indicators: Moving Averages, Oscillators.
IV	**Theories, Capital Asset Pricing Model and Portfolio Performance Measurement** **(15 lectures)**	**a) Theories:** Dow Jones Theory, Elliot Wave Theory, Efficient Market Theory **b) Capital Asset Pricing Model:** Assumptions of CAPM, CAPM Equation, Capital Market Line, Security Market Line **c) Portfolio Performance Measurement:** Meaning of Portfolio Evaluation, Sharpe's Ratio (Basic Problems), Treynor's Ratio (Basic Problems), Jensen's Differential Returns (Basic Problems)

11) References:

- Kevin. S, Security Analysis and Portfolio Management
- Donald Fischer & Ronald Jordon, Security Analysis & Portfolio Management
- Prasanna Chandra, Security Analysis & Portfolio Management
- Sudhindhra Bhatt, Security Analysis and Portfolio Management.

BACHELOR OF COMMERCE (BANKING & INSURANCE): B.B.I.

PROGRAMME CODE: SFP-BI ***Course Details For Semester: V & VI***

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SEMESTER – V

COURSE DETAILS

1) **Title of the Course: International Banking and Finance**
2) **Course Code :** SF-BI-V-C-IBF
3) **Course Objective:**

The Course will help the learner –

- To study banking, economic, and financial issues in countries and across the global economy and financial markets.
- To understand the framework for the exchange of scholarly research and ideas among its Members.
- To have economic and policy analyses for academic or business development and to improve policy making by government.

4) **Course Outcome (CO) :**

CO1 - To enable learners to know basics of International Banking and Finance.

CO2 - To make them aware about basic terminology in Banking and Finance.

CO3 - To make them understand about various foreign exchange across the globe.

CO4 - To identify the risk faced by the Industry and Banks in International Market.

5) **Category of Course :** Core Course
6) **Semester :** V
7) **Total Hours:** 60 hours
8) **Total Credits:** 4 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	15 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	10 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Fundamentals of International Finance**	Meaning and Scope of International Finance, Balance of Payment, Components, Deficit in Balance of Payment, Concept of Currency Convertibility. International Monetary System, Gold Standard, Features, Bretton Wood System, Background and Features, Reasons for its Failure, Smithsonian Agreement, SDRs, European Monetary System. Current Exchange Rate Systems - Fixed and Flexible Exchange Rate, Merits Demerits, Types of Fixed Exchange Rate, Hard Pegs and Soft Pegs, Types of Flexible Exchange Rate, Managed and Free Float.
II	**International Capital Markets**	Types of Capital Flows, FDI, FPI, FII Euro Currency Markets, Origin and Reasons of growth, a Brief Understanding of Eurocurrency Deposit, Loans Bonds and Notes Market, Concept of Offshore Banking. International Equity Markets, Concept of Depository Receipts, GDR, Characteristics, Mechanism of Issue, Participants Involved, ADR, Types and Characteristics, Concept of IDR. International Bond Market, Concepts of Domestic Bond, Concept and Types of Foreign Bonds, Concept and Types of Euro Currency Bonds, Concepts of Foreign Currency Convertible and Foreign Currency Exchangeable Bonds, Participatory Notes.
III	**Foreign Exchange Markets & Risk Management**	Foreign Exchange Markets Introduction, Market and Market Participants, Foreign Exchange Management in India, Retail and Whole Sale Component of Indian Foreign Exchange Market, Role of FEDAI, FEMA and Regulatory Framework, Dealing Room Operations. Foreign Exchange Arithmetic, Exchange Rate Quotations, Direct, Indirect and Cross rate, Percentage Spread, Arbitrage, Geographical, Triangular and Interest Rate (formula method only), Calculation of Forward Rates using Schedule of Swap Points, AFM, Determinants of

		Exchange Rate – Purchasing Power and Interest Rate Parity& Risk Management and Derivatives, Transaction, Translation and Economic Risk Faced by Corporates, Transaction, Position, Settlement, Pre-settlement, Gap/Mismatch Risk faced by Banks, Internal and External Hedging, Foreign Currency Derivative Instruments for Risk Management, Forward, Futures, Swaps and Options, Country Risk Management.
IV	**International Banking Operations**	Introduction, Definition, Features of International Banking, Reasons for Growth of International Banking, Recent Trends in International Banking, Emergence of Crypto currency - Overview, Brief Overview of Bitcoin and other Crypto Currencies, Note on Mining and Crypto Currency Exchanges, Advantages, Disadvantages of Crypto Currency. Functions of International Banking, Correspondent Banking, International Payment Systems, NRI accounts, Export Finance, Import Finance, International Merchant Banking, Financing Project Exports, Derivative Offering, Remittances, Compliance related- Interbank Functions, Internal Functions, Letter of Credit and Bank Guarantees. International Lending Operation, Loan Syndication, Parties Involved, Phases/Stages in Loan Syndication, Types of Syndication, Role of LIBOR, Risk in International Lending, Role of International Credit Rating Agencies.

11) References:

- Apte P.G. International Finance – A Business Perspective, New Delhi, TATA McGraw Hill , McGraw Hill Education; 2 edition, July 2017.
- Bhalla .V.K. international Financial Management- S.Chand Publishing,
- International Banking Operations- IIBF- MacMillan Publishers, 2007
- International Banking Legal and Regulatory Aspects- IIBF- MacMillan Publishers, 2007

BACHELOR OF COMMERCE (BANKING & INSURANCE): B.B.I.

PROGRAMME CODE: SFP-BI ***Course Details For Semester: V & VI***

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COURSE DETAILS

1) **Title of the Course: Financial Management - I**
2) **Course Code :** SF-BI-V-C-FM
3) **Course Objective:**

   The Course will help the learner –

   - To understand the basic concepts of Capital budgeting & rationing.
   - To familiarize with cost of capital, capital structure, etc. are related to each other and to the overall financial wellbeing of company.

4) **Course Outcome (CO) :**

   CO1 – Learners learn theoretical and practical knowledge of financial management in banking and insurance.

   CO2 - Learners learn importance of risk in context to financial decision making

   CO3 – Learners will gain knowledge of different types of budget.

5) **Category of Course :** Core Course
6) **Semester :** V
7) **Total Hours:** 60 hours
8) **Total Credits:** 4 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	15 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	10 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Finance and Financial Management**	• **Introduction to Finance** Meaning and definition of finance, Importance of finance Types of Finance: Public and Private Sources of finance 1. Long Term Sources : Term Loans, Debentures, Bonds, Zero Coupon bonds, Convertible Bonds, Equity shares, Preference shares, CD, CP, Public Deposits 2. Short Term Sources: Bank Finance, Trade Credit ,Other Short Term Sources 3. Venture Capital and Hybrid Financing • **Financial Management** Meaning and Importance of Financial Management, Scope of Financial Management, Functions and Objectives of Financial Management, Primary Objective of Corporate Management, Agency Problem, Organization of Finance Function , Emerging role of Finance Managers in India. • **Objectives of the Firm** Profit Maximization and Shareholders Wealth Maximization, Profit V/s Value Maximization
II	**Financial Goal Setting & Time value of Money**	• Financial Goal Setting: Introduction, Financial Forecasting – Meaning, Techniques, Benefits, Approaches to Financial Planning • Economic Value Added (EVA): Measurement & Components, Free Cash Flow (FCF) • Time Value of Money : Concept, Present Value, Annuity, Techniques of Discounting , Techniques of Compounding
III	**Investment Decisions: Capital Budgeting**	Nature of Capital Budgeting, Purpose of Capital Budgeting, Capital Budgeting Process, Types of Capital Investment, Basic Principle of Measuring Project Cash Flows, Increment Principle, Long Term Funds Principle, Exclusion of Financial Cost Principle, Post Tax Principle Probability technique for measurement of cash flow Capital Budgeting Techniques: Net Present Value Profitability Index and Discounted Pay Back Method. A Comparison; Project Selection Under Capital Rationing

IV	**Financial Decisions**	**A) Cost of Capital :** Introduction and Definition of Cost of Capital Measurement of Cost of Capital Measurement of WACC using book value and market value method. Measuring Marginal Cost of Capital **B) Capital Structure Decisions:** Meaning and Choice of Capital Structure, Importance of Optimal Capital Structure, EBIT -EPS Analysis, Capital Structure Theories, Dividend Policies (Walter & Gordon)

11) References:

- Financial Management: I M Pandey, Vikas Publishing House.
- Financial Management: M.Y. Khan, P.K. Jain, Tata McGraw Hill.
- Financial Management : Ravi M Kishore, Taxman
- Financial Management : James C Van Horne, Prentice Hall
- Financial Management: Prassana Chandra, Prentice Hall.
- Financial Management: Chandra Haribariran Iyer: IBHL Publication.

BACHELOR OF COMMERCE (BANKING & INSURANCE): B.B.I.

PROGRAMME CODE: SFP-BI ***Course Details For Semester: V & VI***

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COURSE DETAILS

1) **Title of the Course : Financial Service Management**
2) **Course Code :** SF-BI-V-E-FSM
3) **Course Objective:**

   The Course will help the learner –

   - To acquire the skills necessary to participate in managing a financial services company
   - To describe and apply financial concepts, theories and tools.
   - To understand different financial instruments and financial concepts

4) **Course Outcome (CO) :**

   CO1 –The learners will be able to apply necessary skills in managing a financial service company.

   CO2-They will be able to apply financial concepts, theories and tools and will be in a position to evaluate the legal, ethical and economic environment related to financial services.

5) **Category of Course :** Elective Course
6) **Semester :** V
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	15 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	10 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Financial Services**	• Financial Services Meaning, Classification, Scope, Fund Based Activities, Non Fund Based Activities, Modern Activities, Sources of Revenue, Need for Financial Innovation, New Financial Products & Services, Innovative Financial Instruments, Challenges Facing the Financial Sector. • Merchant Banking Definition, Origin, Merchant Banking in India, Merchant Banks and Commercial Banks, Services of Merchant Banks, Qualities of Merchant Bankers in Market Making Process, Progress of Merchant Banking in India, Problems, Scope of Merchant Banking in India.
II	**Mutual Funds, Factoring and Forfeiting**	• Mutual Funds Introduction to Mutual Funds, Structure of Mutual Fund in India, Classification of Mutual Funds, AMFI Objectives, Advantages of Mutual Funds, Disadvantages of Mutual Funds, NAV Calculation and Pricing of Mutual Funds, Mutual Funds Abroad, Mutual Funds in India, Reasons for Slow growth, Future of Mutual Funds Industry. • Factoring and Forfeiting Factoring, Meaning, Modus Operandi, Terms and Conditions, Functions, Types of Factoring, Factoring vs. Discounting, Cost of factoring, Benefits, Factoring in India, International Factoring, Definition, Types of Export Factoring, Factoring in Other Countries, EDI Factoring, Forfeiting- Definition, Factoring vs. Forfeiting, Working of Forfeiting, Cost of Forfeiting, Benefits of Forfeiting, Drawbacks of Forfeiting.
III	**Securitization of Debts, Derivatives and Depositories & Pledge**	• Securitization of Debt Meaning & Definition of Securitization, Securitization vs. Factoring, Modus Operandi, Role of Merchant Banker, Role of Other Parties, Securitization Structure Securitisable assets, Benefits of Securitization, Conditions for Successful Securitization, Securitization Abroad, Securitization in India, Reasons for non-popularity of Securitization, Future Prospects of Securitization. • Derivatives Meaning, Types of Financial Derivatives, Options, Futures, Forwards, Swaps, Futures & Options Trading System, Clearing Entities &Their Role.

		• Overview of Depository, Key features of Depositories Systems in India, Depository- Bank Analogy, Legal Framework, Eligibility Criteria for A Depository, Agreement between Depository & Issuers, Rights & Obligation of Depositories, Records Maintained by Depository, Services of Depository & Functions of Depository, Organization & Functions of NSDL, Pledge & Hypothecation, Procedure for Pledge/Hypothecation, Procedure of Confirmation of Creation of Pledge/Hypothecations by Pledgee, Closure of A Pledge/Hypothecation by Pledger, Invocation of Pledge by Pledgee.
IV	**Housing Finance and Consumer Finance**	• Housing Finance Introduction, Housing Finance Industry, Housing Finance Policy Aspect, Sources of Funds, Market of Housing Finance in India, Major Issues of Housing Finance in India, Growth Factors, Housing Finance Institutions in India, National Housing Bank(NHB), Guidelines for ALM System in Housing Finance Companies, Fair Trade Practice, Code for HFC's, Housing Finance Agencies. Consumer Finance Introduction, Sources, Types of Products, Consumer Finance Practice in India, Mechanics of Consumer Finance, Terms, Pricing, Marketing & Insurance of Consumer Finance, Consumer Credit Scoring.

11) References:

- Financial Services, Dr.S Gurusamy, The Mgraw Hill companies, 2 edition (26 June 2009).
- Financial Markets and Financial services, Vasant Desai, Himalaya Publishing House, First Edition edition (2010).
- Financial Services, M.Y.Khan, Tata Mc-Graw Hill Publishing Company Ltd, Ninth edition(2017).
- Financial Markets and Services –E.Gordon and K.Natanrajan,Himalaya Publishing House, Tenth Edition edition (2016)

BACHELOR OF COMMERCE (BANKING & INSURANCE): B.B.I.

PROGRAMME CODE: SFP-BI ***Course Details For Semester: V & VI***

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COURSE DETAILS

1) **Title of the Course: Ethics and Corporate Governance**
2) **Course Code :** SF-BI-V-E-ETH
3) **Course Objective:**

   The Course will help the learner –

   - To understand the significance of ethics and ethical practices in business which are indispensable for the progress of a country
   - To learn the applicability of ethics in functional areas
   - To identify ethical dilemmas and understand their implication s
   - To understand the scope of Corporate Governance

4) **Course Outcome (CO) :**

   The learner will be able to -

   CO1- Apply theoretical and practical approaches of business ethics, CSR and CG relevant to contemporary environment.

   CO2- Promote ethical standards at work place and provide a consistent example of desired ethical conduct.

   CO3- Demonstrate a critical appreciation of importance of corporate responsibility and how it relates to corporate strategy.

5) **Category of Course :** Elective Course
6) **Semester :** V
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	15 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	10 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Business Ethics**	• Definition, Meaning, Nature of Ethics, Meaning of Moral & Ethics. • Types of Ethics, Importance of Ethics, Business Ethics - Meaning and Nature. • Importance of Ethics in Business, Areas of Business Ethics, Meaning of Functional • Ethics, Types of Ethics According to Functions of Business- Marketing Ethics, • Foreign Trade Ethics and Ethics Relating to Copyright. • Ethics relating to Free and Perfect Competitive Market.
II	**Application of Ethical Theories in Business**	• Ethical Decision Making: Decision Making (Normal Dilemmas And Problems): • (I) Utilitarianism (J. Bentham and J.S. Mill), (Ii) Deontology (I. Kant) Virtue Ethics (Aristotle). Gandhian Approach in Management and Trusteeship, Importance and Relevance of Trusteeship Principle in Modern Business. Ethical Issues in • Functional Areas of Business. • Ethics in Advertising (Truth in Advertising). Ethical Issues
III	**Introduction to Corporate Governance**	• Definition & Conceptual Framework of Corporate Governance, Business Ethics - • an important dimension to Corporate Governance, Fair and Unfair Business • Practices. Theoretical Basis of Corporate Governance, Mechanism- Corporate • Governance Systems, Indian Model of Governance, Good Corporate Governance, • Obligations towards Society and Stake holders. Theories underlying Corporate • Governance (Stake holder's theory and Stewardship theory, Agency theory, • Separation of Ownership and Control, Corporate Governance Mechanism: • Process, Indian Model, OECD, and Emphasis on Corporate Governance, • (Transparency Accountability and Empowerment).

IV	**Genesis and Implementation of corporate Governance in India:**	• Introduction principles – Arthashastra and Good Governance in ancient India, • Protection of Interest of Customer and Investors, Historical perspective of Corporate Governance and Issues in Corporate Governance. • Values: Meaning, Types Teaching from Scriptures like Gita, Quran, Bible Value Systems in Business. • Implementation of Corporate Governance • Role of Board of Directors and Board Structure, Role of the Non- executive Director, Role of Auditors, SEBI Growth of Corporate Governance. Role of Government, Corporate Governance in India. Accounting Standards and Accounting disclosures. Finance Reporting and Corporate Governance, Non Accounting Regulations in Corporate Governance, Corporate Governance &CSR, • Family Owned Business - Background, Family Businesses in India, Need for Professionalization and Transparency in Family Business.
V	**Global Scenario**	• Business Ethics in Global Economy. • Ethics in the Context of Global Economy, Relationship between Business Ethics & Business Development, Role of Business Ethics in Building a Civilized Society. • Corporate Governance and Issues Related to Scams • Corruption: Meaning, Causes, Effects. • Frauds and Scams in Banks, Insurance Companies, Financial Institutions, Measures to Overcome Fraud and Corruption, Zero Tolerance of Corruption.

11) References:

- Laura P. Hartman, Joe DesJardins, Business Ethics, Mcgraw Hill, 2nd Edition
- C. Fernando, Business Ethics – An Indian Perspective, Pearson, 2010
- Joseph DesJardins, An Introduction to Business Ethics, Tata McGraw Hill, 2nd Edition
- Richard T DeGeorge, Business Ethics, Pearson, 7th Edition
- Dr.A.K. Gavai, Business Ethics, Himalaya Publishing House, 2008
- S.K. Mandal, Ethics is Business and Corporate Governance, McGraw Hill, 2010
- Laura Pincus Hartman, Perspectives in Business Ethics, McGraw Hill International Editions, 199

BACHELOR OF COMMERCE (BANKING & INSURANCE): B.B.I.

PROGRAMME CODE: SFP-BI ***Course Details For Semester: V & VI***

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COURSE DETAILS

1) **Title of the Course: Risk Management**
2) **Course Code :** SF-BI-V-E-RISK
3) **Course Objective:**

   The Course will help the learner –

   - To familiarize with the fundamental aspects of risk management and control
   - To give a comprehensive overview of risk governance and assurance with special reference to insurance sector
   - To introduce the basic concepts, functions, process, techniques of risk management

4) **Course Outcome (CO) :**

   CO1 –Learners will understand and assess various types of risk and identify methods to reduce or mitigate the risk.

   CO2 – Learners will apply comprehensive overview of risk governance and assurance with special reference to insurance sector

5) **Category of Course :** Elective Course
6) **Semester :** V
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits

9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	15 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	10 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction, Risk Measurement and Control**	• Definition, Risk Process, Risk Organization, Key Risks – Interest, Market, Credit, Currency, Liquidity, Legal, Operational • Risk Management V/s Risk Measurement – Managing Risk, Diversification,, Investment Strategies and Introduction to Quantitative Risk Measurement and its Limitations • Principals of Risk - Alpha, Beta, R squared, Standard Deviation, Risk Exposure, Analysis, Risk Immunization, Risk and Summary Measures –Simulation Method, Duration Analysis, Linear and other Statistical Techniques for Internal Control
II	**Risk Avoidance and ERM**	• **Risk Hedging Instruments and Mechanism:** Forwards, Futures, Options, Swaps and Arbitrage Techniques, Risk Return, Trade off, Markowitz Risk Return Model, Arbitrage Theory, System Audit Significance in Risk Mitigation • **Enterprise Risk Management:** Risk Management V/s Enterprise Risk Management, Integrated Enterprise Risk, Management, ERM Framework, ERM Process, ERM Matrix, SWOT Analysis, Sample Risk Register
III	**Risk Governance and Assurance**	• **Risk Governance:** Importance and Scope of Risk Governance, Risk and Three Lines of Defense, Risk Management and Corporate Governance • **Risk Assurance:** Purpose and Sources of Risk Assurance, Nature of Risk Assurance, Reports and Challenges of Risk • **Risk and Stakeholders Expectations:** Identifying the Range of Stakeholders and Responding to Stakeholders Expectations
IV	**Risk Management in Insurance**	• **Insurance Industry:** Global Perspective, Regulatory Framework in India, IRDA - Reforms, Powers, Functions and Duties. Role and Importance of Actuary • **Players of Insurance Business:** Life and Non- Life Insurance, Reinsurance, Bancassurance, Alternative Risk Trance, Insurance Securitization, Pricing of

		Insurance products, Expected Claim Costs, Risk Classification • **Claim Management:** General Guidelines, Life Insurance, Maturity, Death, Fire, Marine, Motor Insurance and Calculation of Discounted Expected Claim Cost and Fair Premium

11) References:

- Thomas S. Coleman, Quantitative Risk Management : A Practical Guide to Financial Risk
- Steve Peterson, Investment Theory and Risk Management
- Risk Management , M/s Macmillan India Limited
- Theory & Practice of Treasury Risk Management: M/s Taxman Publications Ltd.
- Sim Segal, Corporate Value of ERM
- Dr. G Kotreshwar, Risk Management : Insurance and Derivatives, Himalaya Publishing House

LEARNING OUTCOME BASED CURRICULUM FRAMEWORK

[LOCF]

Sanskar Sarjan Education Society's

DTSS COLLEGE OF COMMERCE

[**AUTONOMOUS**]

PROGRAMME CODE: SFP-BI

Bachelor of Commerce (Banking & Insurance)

[**B.B.I**]

w. e. f. 2021-22

PROGRAMME STRUCTURE

1) **Title of the Programme :** Bachelor of Commerce (Banking and Insurance) – B.B.I.

2) **Programme Code :** SFP - BI

3) **Introduction of the Programme :**

Bachelor of Commerce (Banking and Insurance) commonly known as B.B.I, is a Three Year Undergraduate Programme highlighting the activities and functions of Banking, Insurance, Finance and Accounting.

4) **Programme Objectives :**

Bachelor of Commerce (Banking and Insurance) offers an in-depth knowledge in the field of Banking, Insurance, Accounts, Finance, Auditing and Taxation along with Business Economics, Business Law and Business Communication. The Programme also offers courses that will help for the practical implication in Banking, Insurance and Investment Sector.

5) **System :** Choice Based Credit System [CBCS]

6) **Duration of the Programme :** 03 Years

7) **Total Number of Semesters :** 06 Semesters

8) **Eligibility Criteria for Admission:**

The learner must have passed the Higher Secondary School Certificate (Std. XII-Commerce) examination conducted by the Maharashtra/ other Indian State Boards or equivalent examination.

9) **Intake capacity :** 60 Learners

10) **Total Credits :** 132 Credits

11) **Teacher's Qualification:** Post Graduation in Commerce & Management, NET /SET Qualified.

12) **Types of Courses :**

Course Type	Total (Sem I to VI)
a. Core Courses	16
b. Elective Courses	12 out of 18
c. Skill/Ability Enhancement Courses	06
d. Multi-disciplinary / Inter-disciplinary courses	06
e. Practical /Projects	06
Total :	**46 Courses**

Third Year - Bachelor of Commerce (Banking and Insurance) – TY.B.B.I.

SEMESTER	Category of Course	No. of Courses	Credits Allotted	Total Credits
V	A. Core Courses	02	04	08
	B. Elective Courses	02 out of 03	03	06
	C. Skill/Ability Enhancement Courses	01	03	03
	D. Multi-disciplinary /Inter-disciplinary courses	01	02	02
	E. Additional - Practical /Projects	01	03	03
	Total :	**07 out of 08**		**22**
VI	A. Core Courses	02	04	08
	B. Elective Courses	02 out of 03	03	06
	C. Skill/Ability Enhancement Courses	01	03	03
	D. Multi-disciplinary / Inter-disciplinary courses	01	02	02
	E. Additional - Practical /Projects	01	03	03
	Total :	**07 out of 08**		**22**

Course Titles:

Course Category	Credits	Semester – VI
Core Courses	04	Central Banking
	04	Financial Management - II
Elective Courses	03	Financial Reporting Analysis
	03	Human Resource Management
	03	Mutual Fund Management
Skill/Ability EnhancementCourses	03	Dynamic Public Speaking
Multi-disciplinary/ Inter-disciplinary courses	02	International Business
Projects/AdditionalCourses	03	Project Work
TOTAL :	**22 Credits**	**07 out of 08 Courses**

Evaluation Pattern:

a. **Total Marks :** 46 Courses X 100 Marks = **4600 Marks (10 Point Grading)**

b. **Passing Criteria :** 40 % Marks = **1840 Marks (4 Grade Points)**

c. **Marking Scheme: 60:40 Pattern (Marks for Total Programme)**

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
1) Semester End Exam (S.E.E.) : Written Exam	60 Marks X 46 Courses = 2760 Marks	24 Marks X 46 Courses = 1104 Marks
2) Continuous Internal Assessment (C.I.A.) : Subject Oriented	40 Marks X 46 Courses = 1840 Marks	16 Marks X 46 Courses = 736 Marks
TOTAL :	**4600 Marks**	**1840 Marks**

d. **Mode of Evaluation of Answer-book :** Online/Offline

e. **Paper Pattern:**

ONLY FOR PRACTICAL SUBJECTS – Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	**A.**	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	**A.**	Practical Question (1 Question of 15 marks or may be divided into 2 sub questions of 07 and 08 marks)	-	**15 Marks**
	OR			
	B.	Practical Question (1 Question of 15 marks or may be divided into 2 sub questions of 07 and 08 marks)	-	
Q.3.	**A.**	Practical Question (1 Question of 15 marks or may be divided into 2 sub questions of 07 and 08 marks)	-	**15 Marks**
	OR			
	B.	Practical Question (1 Question of 15 marks or may be divided into 2 sub questions of 07 and 08 marks)	-	
Q.4.	**A**	Practical Question (1 Question of 15 marks or may be divided into 2 sub questions of 07and 08 marks)	-	**15 Marks**
	OR			
	B	Short Notes / Short practical questions - Any 3 out of 5 ***(5 marks each)***	-	

<u>ONLY FOR THEORY SUBJECTS</u> – Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	**A.**	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	**08 Marks**	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	**07 Marks**	
Q.2.	**A.**	Full Length Question	**08 Marks**	**15 Marks**
	B.	Full Length Question	**07 Marks**	
	OR			
	C.	Full Length Question	**08 Marks**	
	D.	Full Length Question	**07 Marks**	
Q.3.	**A.**	Full Length Question	**08 Marks**	**15 Marks**
	B.	Full Length Question	**07 Marks**	
	OR			
	C.	Full Length Question	**08 Marks**	
	D.	Full Length Question	**07 Marks**	
Q.4.	**-----**	Short Notes/Short Sums: (Any 3 out of 4)	**05 Marks Each**	**15 Marks**

f. Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
<u>Subject Oriented Activities –</u> • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	5 Marks
TOTAL	**40 Marks**

BACHELOR OF COMMERCE (BANKING & INSURANCE): B.B.I.

PROGRAMME CODE: SFP-BI ***Course Details For Semester: VI***

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COURSE DETAILS

1) **Title of the Course: Financial Management - II**
2) **Course Code :** SF-BI-VI-C-FM
3) **Course Objective:**

   The Course will help the learner –

   - To develop understanding of working capital management and its components.
   - To develop understanding of Financial Planning.
   - To develop understanding of Financial Policy and corporate Strategy.

4) **Course Outcome (CO) :**

   CO- Learners will be able to do Financial Planning , manage working capital, Financial Policy and Corporate Strategy.

5) **Category of Course :** Core Course
6) **Semester :** VI
7) **Total Hours:** 60 hours
8) **Total Credits:** 4 credits
9) **Evaluation Pattern :**

a. **Total Marks:** 100 Marks (10 Point Grading System)

b. **Passing Criteria:** 40% Marks (04 Grade Points)

c. **Marking Scheme :** 60:40 Pattern

   - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
   - 40 Marks – Internal Exam (Passing: 16 Marks)

d. **Mode of Evaluation of Answer-book :** Online/Offline

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Working Capital Management**	• Management of Working Capital in India • Estimating working capital needs • Operating or working capital cycle • Working Capital Financing: Trade Credit; Bank Credit; Commercial Papers; Certificate of Deposits (CDs); Financing.
II	**Management of Components of Working Capital**	• **Management of Cash and Marketable Securities:** Motives for Holding Cash; Objectives of Cash Management; Factors Determining Cash Needs; Basic Strategies of Cash Management; Cash Management Techniques / Processes; Marketable Securities; and Cash Management Practices in India. • **Receivables Management:** Objectives; Credit Policies; Credit Terms; and Collection Policies. • **Inventory Management**: Objectives; and Techniques.
III	**Financial Planning**	• Introduction: Meaning and Essentials of Budget, Types of Budget Advantages of Budgeting, and Zero Based Budgeting, Master Budget. • Sales Budget, Production Budget, Material Budget, Cash Budget and Flexible Budget.
IV	**Financial Policy and Corporate Strategy**	• Meaning of Strategic Financial Management • Strategic financial decision making framework • Functions of Strategic financial management • Business Risk and Financial Risk • Introduction to Debt v/s Equity Financing • Types of Leverage • Investment Objective/Criteria for Individuals/Non-Business Purpose.

11) References:

- Financial Management: I M Pandey, Vikas Publishing House.
- Financial Management: M.Y. Khan, P.K. Jain, Tata McGraw Hill.
- Financial Management : Ravi M Kishore, Taxman
- Financial Management : James C Van Horne, Prentice Hall
- Financial Management: Prassana Chandra, Prentice Hall.
- Financial Management: Chandra Haribariran Iyer: IBHL Publication

BACHELOR OF COMMERCE (BANKING & INSURANCE): B.B.I.

PROGRAMME CODE: SFP-BI ***Course Details For Semester: VI***

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COURSE DETAILS

1) **Title of the Course: Financial Reporting Analysis**
2) **Course Code :** SF-BI-VI-E-FRA
3) **Course Objective:**

   The Course will help the learner –

   - To develop skills required in preparation and analysis of final accounts of Banking Companies, Insurance Companies and Limited Liability Partnership
   - To understand the concept of Non-performing Assets
   - To develop financial analysis skills
   - To be aware of need ethics in Accountancy

4) **Course Outcome (CO) :**

   CO1 – The learner will be in a position to prepare and analyze the Financial Statements

   CO2 - The learner will be able to prepare and analyze the Cash Flow Statements

   CO3 – The learner will learn and understand the importance of ethical behavior in Accountancy

5) **Category of Course :** Elective Course
6) **Semester :** VI
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 Credits
9) **Evaluation Pattern :**
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Final Accounts of Banking Company**	• Legal Provisions in Banking Regulation Act, 1949 relating to Accounts. • Statutory Reserves including Cash Reserve and Statutory Liquidity Ratio. • Bills Purchase and Discounted, Rebate on Bill Discounted. • Final Accounts in Prescribed Form. • Non – performing Assets and Income from Non – performing Assets. • Classification of Advances: Standard, Sub – Standard, Doubtful and Provisioning Requirement.
II	**Final Accounts of Insurance Company**	• Preparation and Presentation of Corporate Final Accounts for Insurance Companies. • Final Accounts in accordance with Insurance Legislation • Study of Accounting Policies from Annual Reports of Listed Insurance Companies
III	**Preparation of Final Accounts of Companies**	• Relevant Provisions of Companies Act related to Preparation of Final Account (excluding cash flow statement) • Preparation of Financial Statements as per Companies Act. (excluding cash flow statement) • AS 1 in Relation to Final Accounts of Companies (Disclosure of Accounting Policies) • Final account adjustments
IV	**Cash Flow Analysis & Ethical Behaviour and Implications for Accountants**	• **Cash Flow Analysis as per AS 3 (Indirect Method Only)** • **Ethical Behaviour and Implications for Accountants** Introduction, Meaning of Ethical Behaviour Importance and Relevance of Ethical Behavior in Accounting Profession. Implications of Ethical Values for the Principles Versus Rule Based Approaches to Accounting Standards

		• The Accounting Standard Setting Process and Ethics • The IFAC Code of Ethics for Professional Accountants • Contents of Research Report in Ethical Practices • Implications of Unethical Behavior on Financial Reports • Company Codes of Ethics • The increasing role of Whistle – Blowing • Need to learn ethics.

11) References:

- Ashish K. Bhattacharyya, Financial Accounting for Business Managers, Prentice Hall of India Pvt. Ltd.
- Shashi K. Gupta, Contemporary Issues in Accounting, Kalyani Publishers.
- R. Narayanaswamy, Financial Accounting, Prentice Hall of India, New Delhi
- Ashok Sehgal, Fundamentals of Financial Accounting, Taxmann's Publishers

BACHELOR OF COMMERCE (BANKING & INSURANCE): B.B.I.

PROGRAMME CODE: SFP-BI ***Course Details For Semester: VI***

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SEMESTER – VI

COURSE DETAILS

1) **Title of the Course: Central Banking**
2) **Course Code :** SF-BI-VI-C-CB
3) **Course Objective:** The Course will help the learner –

- For studying Central banking and functions performed by a central bank for ensuring financial stability.

4) **Course Outcome (CO) :**

CO1 – The learner will be able to understand the purpose and the functions of central bank, monetary policies and how they have evolved over time.

CO2- Learners are introduced to the tools of monetary policy and to the rules that central banks follow, with special attention to inflation targets.

CO3- At the end of the course Learners know the effects of the main policy tools and understand how central banks affect the financial system and the economy more generally and the role they have played in the recent financial crisis.

5) **Category of Course :** Core Course
6) **Semester :** VI
7) **Total Hours:** 60 hours
8) **Total Credits:** 4 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**An Overview of Central Banking**	Overview: Concept of Central Banking, Institutional Growth of Central Banking, The Changing Face of Central Banking. Role of Central Banks: Determination of Goals, Inflation Targeting, Exchange Rate Targeting, Money Supply Targeting, Money Growth Targeting, Viable Alternatives to Central Bank, Central Banking in India. Contemporary Issues, Autonomy and Independence, Credibility, Accountability and Transparency of a Central Bank
II	**RBI as the Central Bank of India**	Policy Framework for RBI: Organizational Framework, Operational Framework – Role as a Central Banker, Promotional Role of RBI, Regulatory Role of RBI. RBI and Monetary Policy Macroeconomic Policies: Meaning & Objectives. Monetary Policy- Meaning & Objectives Monetary Policy in India - Goals, Targets and Instruments A Brief Overview of Fiscal Policy, Striking Balance between Inflation and Growth through Monetary and Fiscal Policies
III	**Supervisory Role of RBI**	Regulation and Supervision: Need for Regulation and Supervision, Banking Regulation Act, 1949, Banking Regulation and Supervision, Functions of the Department of Supervisory, Regulations Review Authority, and Unified Regulator v/s Multiple Regulators. RBI – On-site Inspection and Off-site Monitoring and Surveillance: The Core Principles for Effective Supervision – On-site Examination – Off-site Surveillance – On-site Inspection and Off-site Monitoring in India – Off-site Monitoring in Different Countries – Computerized Off-site Monitoring and Surveillance (OSMOS). RBI and Financial System, Introduction, Functions, Characteristics of Financial System, Role of RBI in Regulating Financial System and Financial Sector Reforms.
IV	**Central Banking in Other Countries & Central Banking in the Cyber World**	Federal Reserve System – Bank of England – The European Central Banking, Bank of Japan, Peoples Bank of China Interconnectivity of Central Banks with Other International Financial Institutions, ADB, IMF, World Bank, and BIS, (Objectives, Role and Functions) & Central Banking in Cyber World: E -Banking, E- money, IT induced Changes and Monetary Policy, E- payments, Risks in the New IT Era, Impact of IT, Globalization and Central Banks.

11) References:

- Central Banking- IIBF- MacMillan Publishers, 2011
- Central Banking – ICFAI Press,2008
- Theory and Practice of Central Banking in India- V.A.Avdhani, Second Edition, Published by Somaiya Publications Pvt. Ltd.
- Central Banking- M H deck, Publisher Staples Press.

BACHELOR OF COMMERCE (BANKING & INSURANCE): B.B.I.

PROGRAMME CODE: SFP-BI ***Course Details For Semester: VI***

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COURSE DETAILS

1) **Title of the Course: Human Resource Management**
2) **Course Code : SF-BI-VI-E-HRM**
3) **Course Objective:**

The Course will help the learner –

- To get acquainted to various human resource management skills and procedures.
- To study the process of job design, evaluation and analysis
- To know about the process of recruitment, selection, training and development.

4) **Course Outcome (CO) :**

CO1 – It would enable Learners to have better knowledge about the framework of human resource management and would help them in proper job analysis in future

CO2 - Learners understand the need and objectives for human resource management with respect to the banking sector

CO3 – Learners gain knowledge of various aspects of Human Resource management and make them acquainted with practical aspect of the subject.

5) **Category of Course :** Elective Course
6) **Semester :** VI
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

BACHELOR OF COMMERCE (BANKING & INSURANCE): B.B.I.

PROGRAMME CODE: SFP-BI ***Course Details For Semester: VI***

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10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Framework of Human Resource Management**	Introduction to HRM, Nature of HRM, Scope of HRM, Functions and Objectives of HRM, HRM Policies and Practices, Role and Functions of HR Manager (in Banking and Insurance Sector) HRM and Strategies, Strategic function of HRM, Understanding and Implementing Global Competitiveness and HR, strategic HR, Linkages of Organizational and HR Strategies.
II	**HR Procurement**	Job Analysis and Design- Job Analysis, Introduction, Importance, Purpose , Benefits, Job Evaluation, Competency Based Job Analysis Job Design- Introduction, Characteristics, Factor Affecting Job Design, Job Satisfaction.
III	**HR Planning and Recruitment**	Definition, Objectives, Need and Importance of HR Planning, Preparing Manpower Inventory. Promotions and Transfers. Recruitment- Strategic Approach to Recruitment, Recruitment Source; Internal and External, Selection Procedure.
IV	**Training and Development / Compensation**	• Employee Training and Development - Nature and Process of Training, Training methods, On the job, Off the job. Management Development Program, Performance Appraisal -Definition, Methods. Advantages and Limitations of Appraisal. • Meaning, Need and Importance, Current Trends in Compensation, Team Based Incentives, Pension Schemes with Reference to Banking and Insurance, Fringe Benefits, Perquisites, Allowances and other Non – Monetary Benefits Voluntary Retirement Scheme - Concept, Types, Needs, Effects with reference to Banking and Insurance • Participative Management Meaning, Levels, Types, Employee Welfare, Comparative Study of Working Conditions in Banks, Financial Institutions, Insurance Companies.

11) References:

- Human Resources Management, Gary Dessler
- Personnel Management – C.B Mamoria
- Managing Human Resources , R.S. Dwiwedi
- Human Resources Management,V.P.Michael
- Human Resources Management – Dr.P.C.Pardeshi
- Human Resources Management – Mirza&Zaiyadin
- Human Resources Management – L.M.Prasad
- Human Resources Management , Ashwathappa

BACHELOR OF COMMERCE (BANKING & INSURANCE): B.B.I.

PROGRAMME CODE: SFP-BI ***Course Details For Semester: VI***

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COURSE DETAILS

1) **Title of the Course: Mutual Fund Management**
2) **Course Code :**SF-BI-VI-E-MFM
3) **Course Objective:**

The Course will help the learner –

- To understand different types of mutual fund
- To understand and analyze the performance of mutual funds
- To understand mutual fund as an effective tool to study portfolio management

4) **Course Outcome (CO) :**

CO1 –: Learners will be able to develop investment policy statements for institutional and individual investors.
CO2-: Learners will be able to develop an appropriate portfolio for a given investor and market conditions.

5) **Category of Course :** Elective Course
6) **Semester :** VI
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 Credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline
10) **Modules / Units :**

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Mutual Fund**	• History & Origin, Definition, Meaning, Characteristics, Advantages, Disadvantages, Limitations of Mutual Funds, Ethics in Mutual Fund. Entities involved – Sponsor, Trust, Trustee, Asset Management Company, Registrar and Transfer Agent (RTA) and Fund Houses in India. • Legal Framework - Role of regulatory agencies for Mutual funds – SEBI, RBI, AMFI, Ministry of Finance, SRO, Company Law Board, Department of Company's affairs, Registrar of Companies MF guidelines on advertisement ,

		Accounting , Taxation and Valuation norms, Guidelines to purchase Mutual Funds, Investor protection and MF regulations, Grievance mechanism in MF in India.
II	**Classification of Mutual Fund**	• Types of Mutual Fund- (introduction and Characteristics) Functional/Operational – Open ended, close ended, Interval Portfolio–Income,Growth,Balanced, MMMF,Geographical/ Location – Domestic, Offshore, Miscellaneous - Tax Saving Funds, Exchange Traded Funds, Balance Funds, Fixed Term Plan, Debt Funds, Systematic Investment Planning & Systematic Transfer Plan • Portfolio Maturity, Calculations of NAV, Entry Load, Exit Load.
III	**Fund Selection Criteria**	• A) Fund Rating and Ranking – Its need and importance. Basis of Ratings, Interpretation of Funding Rating by CRISIL, CARE and ICRA, Selection Criteria – (Size, Stability, Credit Portfolio, Performance)Performance Measurement – Rolling Returns and Benchmarking • B) Yield To Maturity and Bond Valuation
IV	**Financial Planning in Mutual fund**	• Basics of Financial Planning – Financial Planning Steps, Life Cycle, Wealth Cycle, Risk Profiling, Asset Allocation, Contingency Funds. • Investors Guide Towards Financial Planning – Eligibility for investment in MF, KYC (Individuals, Micro SIPs, Institutional Investors ,Fund Category Guidance (Long Bond Funds, Short Bond Funds, Ultra Short Bond Funds) , Need for Financial Advisor, Difference between Advisor and Distributor, Colour Coding MF products, Bank FD's V/s Mutual Funds, Dividend V/s Growth Option • Developing Model Portfolio for Investors – Model Portfolios meaning, Step by Step Approach of Building Model Portfolio

11) References:

- Future scenario of Financial services : R. Gordan & Natarajan (Himalaya)
- Marketing of Financial services : V. K. Avadhani (Himalaya)
- MF, Data, Interpretation & analysis : K.G. Shahadevan & Thripairaju (Prentice hall of India)
- Mutual funds in India (Modern scenario): Dr. Manoj Dave & Mr. Lalitkumar Chauhan, (Paradise Publishers)
- Mutual Funds & Financial Management : Ramesh Garg (Yking books)
- Mutual Fund products & services : Indian institute for Banking & Finance (Taxmann)

BACHELOR OF COMMERCE (BANKING & INSURANCE): B.B.I.

PROGRAMME CODE: SFP-BI ***Course Details For Semester: VI***

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COURSE DETAILS

1) **Title of the Course: Dynamic Public Speaking**
2) **Course Code :** SF-BI-VI-AB-DPS
3) **Course Objective:** The Course will help the learner to substantially increase his/her confidence and presence as a dynamic speaker.
4) **Course Outcome (CO) :**

CO1- The learner will be able to prepare effective speeches for various purpose.

CO2- The learner will be able to develop delivery techniques for voice, movement, and gesture

CO3- The learner will be able to Master Speechwriting techniques for storytelling, argument, style, topic framing, and discussing evidence.

5) **Category of Course :** Additional Course
6) **Semester :** VI
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern :**
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline
10) **Modules / Units :**

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Public Speaking**	• Public Speaking • Importance of Public Speaking • Fundamentals of Public Speaking
II	**Essentials Skills for Dynamic Public Speaking**	• Type of Audience • Topic Selection and Content of Speech • Attention Grabbing opening • Presenters Style • Audience – Centric • Connecting with Audience • Visually Pleasing Presentations

		• Delivering Persuasive Message • Self-appraisal
III	**Different Types / Techniques of Public Speaking**	• Speaking to inform / Informative Technique • Speaking to persuade / Persuasive • Speaking to Inspire: Ceremonial and Motivational Speech / Ceremonial Technique • Speaking to action / Demonstrative Technique
IV	**Practical**	Practical Sessions on Public Speaking & Extempore

11) References:

- Gall, Carmine. *Talk Like TED.* St. Martin's Press.2014.
- Lucas Stephen E... *The Art of Public Speaking*. McGraw Hill Education.1983
- Dale Carnegie. *How to Develop Self-Confidence & Influence People by Public Speaking*.1956.
- Dan O'Hair, Hannah Rubenstein, and Rob Stewart. *A Pocket Guide to Public Speaking*.2003
- Reddy Ramakrishna. *Public Speaking Essentials: Six Steps to Sizzle on Stage*.2016.

BACHELOR OF COMMERCE (BANKING & INSURANCE): B.B.I.

PROGRAMME CODE: SFP-BI ***Course Details For Semester: VI***

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COURSE DETAILS

1) **Title of the Course: International Business**
2) **Course Code :** SF-BI-VI-ID-INB
3) **Course Objective:**

The Course will help the learner with –

- Basic and broad knowledge in International business, its environment, strategies and management.
- Ability to apply concepts, principles and theories to simple business situations.

4) **Course Outcome (CO) :**

CO1 – Learners will possess knowledge of International Business.

CO2 – Learners will possess the knowledge of International Marketing.

CO3 – Learners will understand the concept of Export & Import its procedures and Documentation.

5) **Category of Course :** Multi-disciplinary/ Inter-disciplinary course
6) **Semester :** VI
7) **Total Hours:** 60 hours
8) **Total Credits:** 2 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

10) **Modules / Units :**

BACHELOR OF COMMERCE (BANKING & INSURANCE): B.B.I.

PROGRAMME CODE: SFP-BI ***Course Details For Semester: VI***

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MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to International Business**	Introduction to International Business- Importance, Nature and Scope of International Business, Drivers of International Business, Evolution of International Business, Strategies of Going International, Globalization, Multi-National Corporations- Nature, Goals of MNCs, India's Presence- Advantages and Disadvantages of MNCs International Business Environment: Economic, Political, Cultural and Legal Environments in International Business
II	**International Economic Institutions and Regional Groupings**	Institutional Support to International Business, Role of World Bank, IMF, ILO, UNCTAD, UNIDO and ADB in International Business, Implications for India Integration between Countries: Levels of Integration, Growth of Trading Blocs, Impact of Integration, Major Regional Trading Groups, The European Union, NAFTA, ASEAN, BRICS, SAARC, OPEC
III	**International Marketing & Introduction to Exports & Imports.**	International Marketing, Domestic and International Marketing, International Product Strategies, Pricing Issues and Decisions, Dumping, Promotion Issues and Policies, Export, Methods of Exporting, Registration Formalities for Exports, Export Licensing, Selection of Export Product, Identification of Market for Exports – Export Pricing Quotations, FOB & CIF. Imports, Negative list of Imports, Categories of Importers and Special Schemes for Importers, Import Documentation.
IV	**Preliminaries for Export Import and Documentation & Export Import Procedures and Foreign Trade Policy**	Aligned Documentation System – Commercial Invoice , Shipping Bill , Certificate of Origin, Consular Invoice, Mate's Receipt, Bill of Lading, GR Form, Transport Documents, Steps in Export Procedure, Export Contract, Export Finance, Legal Dimensions of Import Procedure, Customs Formalities for Imports, Warehousing of Imported Goods, Foreign Trade Policy Highlights (latest), Duty Drawback, Deemed Exports, Star Export Houses and EPCG Scheme.

11) References:

- Economic Survey, Govt. of India. Various issues
- Export-import Policy and Other Documents, Govt. of India
- Czinkota, Michael R, 8th Edition, Publisher Wiley, 2010
- Hill, Charles W. L., International Business, McGraw Hill, 2011, New York.
- Aswathappa K ,International Business, Tata McGraw Hill Education

BACHELOR OF COMMERCE (BANKING & INSURANCE): B.B.I.

PROGRAMME CODE: SFP-BI ***Course Details For Semester: VI***

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COURSE DETAILS

1) **Title of the Course: Project Work**
2) **Course Code :** SF-BI-VI-P-PRO
3) **Course Objective:**

The Course will help the learner –

- To understand the concept of research and Internship.
- To study collection of data, processing of data, analysis of data and interpretation of data.

4) **Course Outcome (CO) :**

CO1 – The learner will prepare the project on research or Internship.

CO2 – The learner will acquire the knowledge about the research methodology.

CO3 – It will help the learner in analysis of data and interpret the findings and conclusion.

5) **Category of Course :** Projects/Additional Course
6) **Semester :** VI
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - **60 Marks – Project Book & External Viva (Passing: 24 Marks)**
      - **40 Marks - Project Book & Internal Viva (Passing: 16 Marks)**

10) **Modules / Units :**

MODULE NO.	TOPIC	CONTENTS COVERED
I	**General guidelines for preparation of project work based on Research Methodology**	• Chapter No. 1: Introduction In this chapter Selection and relevance of the problem, historical background of the problem, brief profile of the study area, definition/s of related aspects, characteristics, different concepts pertaining to the problem etc. can be incorporated by the learner. • Chapter No. 2: Research Methodology

		This chapter will include Objectives, Hypothesis, Scope of the study, limitations of the study, significance of the study, Selection of the problem, Sample size, Data collection, Tabulation of data, Techniques and tools to be used, etc. can be incorporated by the learner. • Chapter No. 3: Literature Review This chapter will provide information about studies done on the respective issue. This would specify how the study undertaken is relevant and contribute for value addition in information/ knowledge/ application of study area which ultimately helps the learner to undertake further study on same issue. • Chapter No. 4: Data Analysis, Interpretation and Presentation This chapter is the core part of the study. The analysis pertaining to collected data will be done by the learner. The application of selected tools or techniques will be used to arrive at findings. In this, table of information's, presentation of graphs etc. can be provided with interpretation by the learner. • Chapter No. 5: Conclusions and Suggestions In this chapter of project work, findings of work will be covered and suggestion will be enlisted to validate the objectives and hypotheses.
II	**Guidelines for Internship based project work**	• Executive Summary: A bird's eye view of your entire presentation has to be precisely offered under this category. • Introduction on the Company: A Concise representation of company/ organization defining its scope, products/ services and its SWOT analysis. • Statement and Objectives: The mission and vision of the organization need to be stated enshrining its broad strategies. • Your Role in the Organisation during the internship: The key aspects handled, the department under which you were deployed and brief summary report duly acknowledged by the reporting head. • Challenges: The challenges confronted while churning out theoretical knowledge into practical world. • Conclusion: A brief overview of your experience and suggestions to bridge the gap between theory and practice.

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Principles of Management**
2) **Course Code :** SF-MS-1 -MJ-POM
3) **Course Objective:** The course will help the learner -
   - To provide insights on management principles to facilitate efficient decision making.
   - To apply rational decision for efficiency within a business organization.
   - To study the functions and principles of management.
   - To apply effective resource decision in a proper situation.
   - To enable the Learner to study the evolution of management.
4) **Course Outcome (CO) :**

   CO1- The learner will be able to understand the concepts related to business and he/she will be able to demonstrate and play a significant role in management.

   CO2- The learner will analyze and effectively apply the knowledge of this Course to diagnose and solve organizational problems along with developing optimal managerial decisions.

   CO3- The Course will guide the learner to understand the complexities associated with management of human resources in the organizations and integrate the learning in handling these complexities.
5) **Category of Course** : **Major- Mandatory**
6) **Semester :** I
7) **Total Hours:** 45 Hours
8) **Total Credits:** 03 Credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules/Units :

MODULE NO.	MODULE TOPIC	CONTENTS COVERED
I	**Introduction to Management**	• Management: Concept, Significance, Role & Skills, Levels of Management, POSDCORB, Managerial Grid. • Evolution of Management thoughts, Contribution of F.W Taylor, Henri Fayol and Contingency Approach. • Recent Trends: Green Management & CSR
II	**Planning , Decision Making and Organizing**	• Planning: Meaning, Importance, Process, Limitations • Decision Making: Meaning, Importance, Process, Techniques of Decision Making • Organizing • Organizing: Concept, Structure (Formal & Informal, Line & Staff and Matrix), Advantages and Limitations
III	**Departmentation, Control & Delegation**	• Departmentation • Controlling: Meaning, Process and Techniques • Span of Control: Meaning, Graicunas Theory, Factors affecting span of Control Centralization vs Decentralization • Delegation
IV	**Directing, Leadership and Co-ordination**	• Directing: Meaning and Process • Leadership: Meaning, Styles and Qualities of Good Leader • Co-ordination as an Essence of Management

11) References:

- Tripathi, P.C. *Principles of Management*. New Delhi. Tata McGraw Hill Publication. 2006.
- Prasad, Lallan.*Management Principles and Practices*. New Delhi.S.Chand & Company (P).Ltd.1998.
- Ban, John. *The Essence of Total Quality Management*. New Delhi. Prentice Hall of India (P) .Ltd.1995.
- Le Boeuf, Michael. *The Greatest Management Principle in the world*. Bombay. Jaico Publishing. 1987.
- Koontz, Harold. *Essentials of Management*. New Delhi. Tata McGraw Hill Education. 2013.
- Prasad, L.M. *Principles and Practices of Management*. New Delhi. Sultan Chand & Sons.2006.

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Managerial Economics - I**
2) **Course Code :** SF-MS-1-MJ-ECO
3) **Course Objective:** The Course will help the learner –

- To analyze the working of demand and supply curves, while being able to see the impact of it on the economy.
- To analyze the supply patterns and understand the scales of economies and the level of diseconomies in an industry.
- To identifying different variables influencing the pricing of a product in a firm; and being able to calculate the price in different working scenarios.

4) **Course Outcome (CO) :**

CO1 - The learner will be able to analyze different types of economies and the working of demand and supply curves, while being able to see the impact of it on the economy.

CO2 - The learner will be able to identify different variables which influences the pricing of a product in a firm; and being able to calculate the price in different working scenarios.

CO3 - The learner will be able to analyze the supply patterns and understand the scales of economies and the level of diseconomies in an industry.

5) **Category of Course : Major Mandatory**
6) **Semester :** I
7) **Total Hours:** 45 hours
8) **Total Credits:** 03 Credits
9) **Evaluation Pattern** :

a. **Total Marks:** 100 Marks (10 Point Grading System)
b. **Passing Criteria:** 40% Marks (04 Grade Points)
c. **Marking Scheme :** 60:40 Pattern
   - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
   - 40 Marks – Internal Exam (Passing: 16 Marks)
d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Business Economics and Demand Analysis**	**Introduction:** Introduction & meaning**:** Nature of business economics, scope of business economics. The basics of market demand market supply and equilibrium price, meaning and type of elasticity of demand, their significance.
II	**Supply and Production decisions**	**Supply and production decisions:** Production function, isoquants, properties of isoquant, Iso cost line least cost factor combination and expansion path. Short run analysis with law of variable proportions, long run production function and laws of returns to scale, economies and diseconomies of scale.
III	**Cost Analysis**	**Cost of production:** Various concepts of cost: accounting cost and economic cost, explicit and implicit cost, Private Cost and social cost, sunk cost and incremental cost, fixed cost and variable cost, short run total cost and per unit cost function, long run average cost curve (LAC) & learning curve.
IV	**Concept of Revenue & Break even Analysis**	**Concept of revenue and break even analysis:** Concept of revenue. Total revenue, average revenue. Marginal revenue. **Break even analysis**

11) References:

- M.L.Jhingan, *Micro Economic Theory,* Vrinda Publications Private Limited, Delhi, 2011
- W.Bruce Allen, Neil Doherty, Keith Weigelt, Edwin Mansfield, *Managerial Economics ,Applications, And Causes,* W.W Norton & Company, New York, London, 2005
- Sampat Mukherjee, *Modern Economic Theory*, New Age (P) Limited, New Delhi, 2008
- Rahul.A.Shastri, *Microeconomic Theory,* Universities Press (India) Limited, Hyderabad, 2000.
- S.K.Misra, V .K. Puri, *Modern Microeconomics (Theory and Applications)* Himalaya Publishing House, Delhi, 1996.
- Dr. D.D. Chathurvedi, Dr. S.L. Gupta, *Business Economics (Theory & amp; Applications)* International Book House Pvt. Ltd .New Delhi, 2013.

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Business Environment**
2) **Course Code :** SF-MS-1 -OE - BE
3) **Course Objective:** The Course will help the learner –
   - To get knowledge on the concept of Business, it's Types, Business Environment and factors influencing Business activities.
   - To know concepts of Corporate Social Responsibility and its importance in business and society.
   - To understand the framework of Business in International Market as well as the concept and regulations under Liberalization, Privatization and Globalization.
4) **Course Outcome (CO) :**

   CO1 – The learner will get an overall view of business structure if in future he wishes to be an entrepreneur.

   CO2 – The learner will understand the concept of Corporate Social Responsibility and its importance in the business as well as social environment.

   CO3 – The learner will understand the framework of businesses and various policies related to Liberalization, Privatization and Globalization which will make him able to conduct the business activities effectively.
5) **Category of Course : Open Elective**
6) **Semester :** I
7) **Total Hours:** 60 Hours
8) **Total Credits:** 04 Credits

12) **Evaluation Pattern** :

   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***NEP Course Details For Semester: I & II***

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1) Modules/Units :

MODULE NO.	MODULE TOPIC	CONTENTS COVERED
I	**Introduction to Business Environment**	• **Business:** Meaning, Definition, Nature & Scope, Types of Business Organizations • **Business Environment:** Meaning, Characteristics, Scope and Significance, Components of Business Environment • **Micro and Macro Environment:** Definition, Differentiation, Analysis of Business Environment, SWOT Analysis. • **Introduction to Micro-Environment:** Internal Environment: Value system, Mission, Objectives, Organizational Structure, Organizational Resources, Company Image, Brand Equity External Environment: Firm, customers, suppliers, distributors, Competitors, Society • **Introduction to Macro Components:** Demographic, Natural, Political, Social, Cultural, Economic, Technological, International and Legal)
II	**Political and Legal environment**	• **Political Institutions:** Legislature, Executive, Judiciary, Role of government in Business, Legal framework in India. • **Economic environment:** economic system and economic policies. Concept of Capitalism, Socialism and Mixed Economy • Impact of business on Private sector, Public sector and Joint sector • Sun-rise sectors of India Economy. Challenges of Indian economy.
III	**Social and Cultural Environment, Technological environment and Competitive Environment**	• **Social and Cultural Environment:** Nature, Impact of foreign culture on Business, Traditional Values and its Impact, Social Audit - Meaning and Importance of Corporate Governance and Social Responsibility of Business • **Technological environment:** Features, impact of technology on Business • **Competitive Environment:** Meaning, Michael Porter's Five Forces Analysis, Competitive Strategies
IV	**International Environment**	• **International Environment –** GATT/ WTO: Objective and Evolution of GATT, Uruguay round, GATT v/s WTO, Functions of WTO, Pros and Cons of WTO. Globalization: Meaning, Nature and stages of Globalization, features of Globalization, Foreign Market entry strategies, LPG model. MNCs: Definition, meaning, merits, demerits, MNCs in India FDI: Meaning, FDI concepts and functions, Need for FDI in developing countries, Factors influencing FDI, FDI operations in India,

		• Challenges faced by International Business and Investment Opportunities for Indian Industry.

11) References:

- Morrison J, The International Business Environment, Palgrave
- Francis Cherunilam, Business Environment-Himalaya Publishing House, New Delhi
- K. Aswathappa, Essentials of Business Environment, Himalaya Publishing House, New Delhi
- MISHRA AND PURI, Indian Economy, Himalaya Publishing House, New Delhi
- Business Environment Raj Aggarwal Excel Books, Delhi
- Strategic Planning for Corporate Ramaswamy V McMillan, New Delhi
- Business and society - Lokanathan and Lakshmi Rajan, Emerald Publishers.
- Economic Environment of Business - M. Adhikary, Sultan Chand & Sons.
- Principles of Management , Ramasamy , Himalya Publication , Mumbai
- Principles of Management , Tripathi Reddy , Tata Mc Grew Hill
- Management Text & Cases , VSP Rao , Excel Books, Delhi
- Management Concepts and OB , P S Rao & N V Shah , AjabPustakalaya
- Essentials of Management , Koontz II & W , Mc. Grew Hill , New York
- Principles of Management-Text and Cases –Dr..M.SakthivelMurugan, New Age Publications

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Business Maths & Stats – 1**
2) **Course Code :** SF-MS-1 -OE-MTS
3) **Course Objective:** The Course will help the learner –
    - To familiarize the Learner with various concepts and tools that can be used for effective decision making.
    - To develop the Learner ability to deal with numerical and quantitative issues in business.
    - To enables the use of statistical, geographical and algebraic techniques wherever relevant.
    - To have a proper understanding of statistical applications in economics and Management.
4) **Course Outcome (CO) :**

    CO1 – It will help the learner to understand the different mathematical and statistical methods and the learner will be able to use these methods in business and management decisions.

    CO2 - It also helps the learner to understand the different statistical variables of a business from the view point of a manager.
5) **Category of Course : Open Elective**
6) **Semester :** I
7) **Total Hours:** 60 hours
8) **Total Credits:** 4 credits
9) **Evaluation Pattern** :

a. Total Marks: 100 Marks (10 Point Grading System)

b. Passing Criteria: 40% Marks (04 Grade Points)

c. Marking Scheme: 60:40 Pattern

- 60 Marks – Written Semester End Exam (Passing: 24 Marks)
- 40 Marks – Internal Exam (Passing: 16 Marks)

d. Mode of Evaluation of Answer-book: Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Statistics**	• **Introduction:** Functions/Scope, Importance, Limitations • Data: Relevance of Data(Current Scenario), Type of data(Primary & Secondary), Primary(Census vs Samples, Method of Collection (In Brief), Secondary(Merits, Limitations, Sources) (In Brief) • **Presentation Of Data:** Classification Frequency Distribution – Discrete & Continuous, Tabulation, Graph(Frequency, Bar Diagram, Pie Chart, Histogram, Ogives) • **Measures Of Central Tendency:** Mean(A.M, Weighted, Combined), Median(Calculation and graphical using Ogives), Mode(Calculation and Graphical using Histogram), Comparative analysis of all measures of Central Tendency
III	**Measures**	• Measures Of Dispersion: Range with C.R(Co-Efficient Of Range), Quartiles & Quartile deviation with CQ (Co-Efficient Of Quartile), Mean Deviation from mean with CMD (Co-Efficient Of Mean Deviation), Standard deviation with CV(Co-Efficient Of Variance), Skewness & Kurtosis (Only concept) • Co-Relation: Karl Pearson, Rank Co-Relation • Linear Regression: Least Square Method
III	**Time Series and Index Number**	• **Time Series:** Least Square Method, Moving Average Method, Determination of Season • **Index Number:** Simple(unweighted) Aggregate Method, Weighted Aggregate Method, Simple Average of Price Relatives, Weighted Average of Price Relatives, Chain Base Index Numbers, Base Shifting, Splicing and Deflating, Cost of Living Index Number
IV	**Probability and Decision Theory**	• **Probability:** Concept of Sample space, Concept of Event, Definition of Probability, Addition & Multiplication laws of Probability, Conditional Probability, Bayes' Theorem(Concept only), Expectation & Variance, Concept of Probability Distribution(Only Concept) • **Decision Theory:** Acts, State of Nature Events, Pay offs, Opportunity loss, Decision Making under Certainty, Decision Making under Uncertainty, • **Non-Probability:** Maximax, Maximin, Minimax, Regret, Laplace & Hurwicz)

		• **Probabilitistics** (Decision Making under risk):EMV, EOL, EVPI • **Decision Tree**

11) References:

- Biswas. D, *Probability and Statistics,* Kolkata, New Central Book Agency Private Ltd, 2006.
- Dr. J.K. Thukral, *Business Statistics*, New Delhi, Taxman's Publication, 2011.
- G.L.Thirkettle , *Weldon's Business Statistical Method*, Mc Donald and Evans Ltd, 1981.
- Gupta S.P, *Statistical Methods*, New Delhi, Sultan Chand and Sons, Educational Publisher, 2017.
- Gupta S.P, Gupta M.P, *Business Statistics*, New Delhi, Sultan Chand and Sons, Educational Publisher, 2017.
- Gupta S.P, Gupta P.K, Mohan Man, *Quantitative Technique I,* New Delhi, Sultan Chand and Sons, Educational Publisher, 2003.
- Hoga, Mckeau, Craig, *Introduction to Mathematical Statistics*, New Delhi, Pearson Education, 2005.
- Kamothi, N.O, *Business Statistics*, Jaipur, Shree Niwas Publication, 2010.

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Introduction to Information Technology - 1**
2) **Course Code :** SF-MS-1-VSC-IT
3) **Course Objective:** The Course will help the learner –
   - To be familiar with the essential contrivances for steering business transactions through the various resources of information technology.
   - To have basic knowledge about computers, networks and information technology.
4) **Course Outcome (CO) :**

   CO1 – To provide the learners with fundamental knowledge of the use of computers in business.
   CO2 - To provide exposure to the Learner about information technology, networks and MS Office.
   CO3 – The learner will be able to understand the various terms and concepts of information technology.
5) **Category of Course :** VSC (Vocational & Skill Enhancement Course)
6) **Semester :** I
7) **Total Hours:** 30 hours
8) **Total Credits:** 2 credits
9) **Evaluation Pattern** :

   a. **Total Marks:** 50 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60: 40 Pattern
      - 30 Marks – Written Semester End Exam (Passing: 12 Marks)
      - 20 Marks – Internal Exam (Passing: 08 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline
   e. **Paper Pattern of Semester End Exam (S.E.E.): 30 Marks Classification**

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	**10 Marks**
	B.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	
Q.2.		Attempt any two questions : Module 1	5 Marks each	**10 Marks**
Q.3.		Attempt any two questions : Module 2	5 Marks each	**10 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 20 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam (Objectives + Short Notes)	10 Marks
Subject Oriented Activities / PRACTICAL EXAM • PPT Presentations • Assignments • Case Studies • Field Research	07 Marks
Class Participation & Attendance	03 Marks
TOTAL	**20 marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Computers & MS- Word** **(15 hours - including Practicals)**	**Introduction to Computers :** History of Computers, Parts of Computers, Hardware: Specifications and Data Storage Management, Soft wares: Concept of System Software and Applications, Networking: Introduction and Types of Network Topologies **MS- Word**: Creating/Saving of Document, Editing and Formatting Features, Designing a title page, Preparing Index, Use of Smart Art, Cross Reference, Bookmark and Hyperlink.
II	**Spreadsheet /MS-Excel and Functioning of an E-Mail.** **(15 hours – including Practicals)**	**Spreadsheet /MS-Excel:** Creating/Saving and editing spreadsheets, Drawing charts. Using Basic Functions: text, math & trig, statistical, date & time, database, financial, logical, Data analysis - sorting data, filtering data, data validation, what-if analysis (using data tables/scenarios), creating sub-totals and grand totals, pivot table/chart. **Functioning of an E-Mail:** Understanding the E-Mail contents, Creating an account and its features, Writing email, Creating digitally signed documents.

11) References:

- Fundamentals of Computers – Rajaram V – Prentice Hall
- Computer today (3rd edition) – Sanders, Donald H – McGraw Hill
- Computers and Common sense – Hunt, Roger and Shelly John – Prentice Hall
- Computers – Subramaniam N – Wheeler
- Introduction to Computers – Xavier C. – New Age
- Computer in Business – Sanders D – McGraw Hill
- Computers and Information Management – S C Bhatnagar & V Ramant – Prentice Hall
- Internet for Business – Brummer, Lavrej – Cambridge
- E-mail for Everyone – Leon Alexis & leon – Methews

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Business Communication - I**
2) **Course Code :** SF-MS-1-SEC-BC
3) **Course Objective:**
   - This course will give a comprehensive view of communication, Language and Writing Skills which are pre-requisites in the outside market.
   - This course will highlight the role and importance of communication in the business world.

4) **Course Outcome (CO) :**

   CO1 – The learner will be able to develop interpersonal communication skills which can be effectively applied in the outside market.

   CO2 - The learner will be able to write effective Business / Personal letters.

   CO3- The leaner will be able to develop and deliver effective presentations

   CO4- The course will make the learner competent enough in business correspondence

5) **Category of Course : SEC (Skill Enhancement Course)**
6) **Semester :** I
7) **Total Hours:** 30 Hours
8) **Total Credits:** 02 Credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 50 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60: 40 Pattern
      - 30 Marks – Written Semester End Exam (Passing: 12 Marks)
      - 20 Marks – Internal Exam (Passing: 08 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 30 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	**10 Marks**
	B.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	
Q.2.		Attempt any two questions : Module 1	5 Marks each	**10 Marks**
Q.3.		Attempt any two questions : Module 2	5 Marks each	**10 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 20 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam (Objectives + Short Notes)	10 Marks
Subject Oriented Activities / PRACTICAL EXAM • PPT Presentations • Assignments • Case Studies • Field Research	07 Marks
Class Participation & Attendance	03 Marks
TOTAL	**20 marks**

10) Modules/Units :

MODULE NO.	MODULE TOPIC	CONTENTS COVERED
I	**Theory of Communication and Obstacles to Communication in Business World** **(12 hours)**	**Theory of Communication:** Meaning, Definition, Process, Need, Feedback, Channels and Objectives of Communication, Channels: Formal and Informal- Vertical, Horizontal, Diagonal, Grapevine Objectives of Communication, Methods of Communication: Verbal and Nonverbal Communication. **Obstacles to Communication in Business World**: Problems in Communication /Barriers to Communication: Physical/ Semantic/Language / Socio-Cultural / Psychological / Barriers, Ways to Overcome the Barriers.

		Listening, Importance of Cultivating good Listening Skills.
II	**Business and Personnel Correspondence (18 hours)**	**Business Correspondence**- Theory of Business Letter Writing: Parts, Structure, Layouts- Full Block, Modified Block, Semi - Block ; Principles of Effective Letter Writing; Principles of effective Email Writing. **Personnel Correspondence**- Job Application Letter and Resume, Letter of Acceptance of Job Offer, Letter of Resignation (to be tested); Statement of Purpose (not to be tested)

11) References:

- Ashley,A(1992) A Handbook Of Commercial Correspondence, Oxford University Press.
- Aswalthapa, K (1991) Organisational Behaviour, Himalayan Publication, Mumbai.
- Banerjee, Bani P (2005) Foundation of Ethics in Mangement Excel Books 10.Businessworld Special Collector's Issue: Ethics and the Manager
- Barkar, Alan(1993) Making Meetings Work, Sterling Publications Pvt. Ltd., New Delhi.
- Darrow, Richard, Forrstal, Dan and Coolman, Aubrey (1967) Public Relations Handbook, The Dartwell Co., Chicago.
- Dayal, Ishwar (9810) Managing Large Organizations: A Comparative Study.
- Ecouse Barry, (1999), Competitive Communication: A Rhetoric for Modern Business, OUP.
- Fisher Dalmar, (1999), Communication in Organisation, Jaico Pub House, Mumbai, Delhi.
- Frailley, L.E. (1982) Handbook of Business Letters, Revised Edn. Prentice Hall Inc.
- French, Astrid (1993) Interpersonal Skills. Sterling Publishers, New delhi
- Gupta, Anand Das (2010) Ethics, Business and Society: Managing Responsibly Response Books 32.Gupta, Dipankar (2006) Ethics Incorporated: Top Priority and Bottom Line Response Books
- Krevolin, Nathan (1983) Communication Systems and Procedures for Modern Office, Prentice Hall, New Jersey.
- Lesikar, Raymond V and Petit, John D.(1994) Business Communication: Theory and Application , Richard D. Irwin Inc. Ilinois.
- Parry, John (1968) The Psychology of Human Communication.
- Parson, C.J. and Hughes (1970) Written Communication for Business Learner, Great Britain.

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***NEP Course Details For Semester: I & II***

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COURSE DETAILS (APPROVED)

1) **Title of the Course: Modern English Language- I**
2) **Course Code :** SF-MS-1-AEC-MEL
3) **Course Objective:**
   - To develop LSRW (Listening, Speaking, Reading and Writing) skills in the learner.
   - To improve creativity and skills of expression in the learner.
   - To improve reading speed and comprehension.
   - To develop the ability to read and write analytically.
   - To nurture an appreciation for literary texts.
4) **Course Outcome (CO) :** After completing this course, the learner will be able:

   CO1: To improve their reading and comprehension skills.
   CO2: To improve their speaking skills for social and professional purposes
   CO3: To listen in an active and comprehensive manner.
   CO4: To write more expressively and efficiently.
   CO5: To develop an appreciation for literary texts and how these interpret the world around us.

5) **Category of Course : AEC (Ability Enhancement Course)**
6) **Semester :** I
7) **Total Hours:** 30 Hours
8) **Total Credits:** 02 Credits
9) **Modules/Units :**

MODULE NO.	MODULE TOPIC	CONTENTS COVERED
I	**Receptive Skills - Reading and Listening Skills**	• Skimming and Scanning – Comprehension passages (e.g. News Articles) reading and understanding • Interpretation skills: Bar graphs, Pie charts, Flow charts, Active and Passive listening
II	**Productive Skills – Speaking and Writing Skills**	• Introducing oneself, giving information, giving directions • Rearranging words in a sentence, rearranging sentences in a paragraph, Paragraph writing
III	**Literary Appreciation Skills:**	**Poems:** • The Heart of the Tree – Henry Cuyler Bunner • Caged Bird – Maya Angelou

		Prose: • My Teacher – Helen Keller Towards a Competitive Nation – A.P.J. Abdul Kalam

10) REFERENCES:

TBA

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Indian Ethos**
2) **Course Code :** SF-MS-1-IKS-ETHOS
3) **Course Objective:**
   - To understand the concept of Ancient Indian Ethos and its evolution.
   - To understand the traditional learning system and modern learning system
4) **Course Outcome (CO) :**
   - The learner will be able to understand the importance of Ethos in Commerce
   - The learner will be able to link the traditional learning system with modern learning system and learn various lessons from it related to Commerce and management.
5) **Category of Course : IKS (Indian Knowledge System)**
6) **Semester :** I
7) **Total Hours:** 30 Hours
8) **Total Credits:** 02 Credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 50 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 30 Marks – Written Semester End Exam (Passing: 12 Marks)
      - 20 Marks – Internal Exam (Passing: 08 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline
   e. **Paper Pattern of Semester End Exam (S.E.E.): 30 Marks Classification**

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	**10 Marks**
	B.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	
Q.2.		Attempt any two questions : Module 1	5 Marks each	**10 Marks**
Q.3.		Attempt any two questions : Module 2	5 Marks each	**10 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 20 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam (Objectives + Short Notes)	10 Marks
Subject Oriented Activities / PRACTICAL EXAM • PPT Presentations • Assignments • Case Studies • Field Research	07 Marks
Class Participation & Attendance	03 Marks
TOTAL	**20 marks**

10) Modules/Units :

MODULE NO.	MODULE TOPIC	CONTENTS COVERED
I	**Ethos – An Overview** **(15 hours)**	• **Indian Ethos**: Meaning, Features, Need, History, Relevance, Principles Practised by Indian Companies, Requisites, Elements, Role of Indian Ethos in Managerial Practices • **Work Ethos:** Meaning, Levels, Dimensions, Steps, Factors Responsible for Poor Work Ethos • **Personality Development:** Meaning, Determinants, Indian Ethos and Personality Development • **Karma:** • Meaning, Importance of Karma to Managers, Nish Kama Karma, Laws of Karma: The Great Law, Law of Creation, Law of Humility, Law of Growth, Law of Responsibility, Law of Connection, Corporate Karma: Meaning, Methodology, Guidelines for good Corporate Karma.
II	**Ancient Indian Learning System & Management Lessons from Scriptures** **(15 hours)**	• Gurukul System of Learning: Meaning, Features, Advantages, and Disadvantages • Modern System of Learning: Meanings, Features, Advantages, Disadvantages • Self-Management: Personal growth and Lessons from Ancient Indian Education System • Management Lessons from Vedas, Management Lessons from Mahabharata, Management Lessons from Bible, Management Lessons from Quran, and Management Lessons from Kautilya's Arthashastra Indian Heritage in Business, Management, Production and Consumption. Ethics v/s Ethos Indian Management v/s Western Management.

11) References:

- R Nandagopal, Ajith Sankar RN: Indian Ethics and Values in Management, Tata Mc Graw Hill
- Bhatta, S.K., Business Ethics & Managerial Values.
- Dave, Nalini V: Vedanta and Mana
- Chakraborty, S.K.: Foundation of Managerial Work-Contributions from Indian Thought, Himalaya Publication House, Delhi 1998
- Chakraborty, S.K.: Managerial Effectiveness and Quality of Work life – Indian Insights, Tata McGraw Hill Publishing Company, New Delhi – 1987
- Chakraborty, S.K.: Management by Values, Oxford University Press 1991.
- Nandagopal, Ajith Shankar, Indian Ethos and Values in Management, Tata Mc Graw Hill, 2010
- Khandelwal Indian Ethos and Values for Managers, Himalaya Publishing House, 2009
- Biswanath Ghosh, Ethics In Management and Indian Ethos, Vikas Publishing House, 2009
- Joseph Des Jardins, An Introduction to Business Ethics , Tata Mc Graw Hill, 2009

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Organisational Behaviour**
2) **Course Code** : SF-MS-1-VEC-OB
3) **Course Objective:** The Course will help the learner –
   - To develop the importance of human behavior and their values to run an organization.
   - To describe how people behave under different conditions and understand why people behave as they do. It will provide the Learner to analyze specific strategic human resources demands for future action.
   - To synthesize related information and evaluate options for the most logical and optimal solution such that they would be able to predict and control human behavior and improve results.
4) **Course Outcome (CO)** :

   CO1- The learner will be able to apply the concept of organizational behavior and values to understand the behavior of people in the organization.

   CO2- The learner will be able to analyze the complexities associated with management of individual and group behavior in the organization.

   CO3- The learner will be able to understand how organizational behavior can integrate in understanding the motivation (why) behind behavior of people in the organization.

5) **Category of Course : Value Education Course (VEC)**
6) **Semester :** I
7) **Total Hours:** 30 Hours
8) **Total Credits:** 02 Credits
9) **Evaluation Pattern** :

a. **Total Marks:** 50 Marks (10 Point Grading System)

b. **Passing Criteria:** 40% Marks (04 Grade Points)

c. **Marking Scheme :** 60:40 Pattern
   - 30 Marks – Written Semester End Exam (Passing: 12 Marks)
   - 20 Marks – Internal Exam (Passing: 08 Marks)

d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 30 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	**10 Marks**
	B.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	
Q.2.		Attempt any two questions : Module 1	5 Marks each	**10 Marks**
Q.3.		Attempt any two questions : Module 2	5 Marks each	**10 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 20 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam (Objectives + Short Notes)	10 Marks
Subject Oriented Activities / PRACTICAL EXAM • PPT Presentations • Assignments • Case Studies • Field Research	07 Marks
Class Participation & Attendance	03 Marks
TOTAL	**20 marks**

10) Modules/Units :

MODULE NO.	MODULE TOPIC	CONTENTS COVERED
I	**Introduction to Behaviour, Organisational Behaviour and Group dynamics (15 hours)**	• Individual behaviour: Factors influencing individual differences and Influence of Environment. • Personality: Traits and determinants (Big 5 Model) and Johari window. • Organisational Behaviour: Goals of organisational behaviour, Scope of organisational behaviour. • Group formation and its types • Power and politics • Teams and types of teams • Negotiations.
II	**Organisation Culture (15 hours)**	• Work culture, Transmission of culture. • Organisational Change:- Factors influencing Organisational change, ways of resistance • Motivational Theories: - Maslow theory, ERG, X &Y theory and carrot and stick approach. • Stress: Types, causes, consequences and coping. • Time Management • Conflict management

11) References:

- Aswathappa, K. *Organizational Behaviour; Text, Cases and Games.* Mumbai. Himalaya Publishing House Pvt. Ltd. 2011.
- Ghanekar, Dr. Anjali. *Organizational Behaviour; Concept and Cases.* Pune. Everest Publishing House. 2006.
- Luthans, Fred. *Organizational Behaviour.* Singapore. McGraw – Hills Book Co. 1995.
- Luthans, Fred. *Organizational Behaviour.* Singapore. McGraw – Hills Book Co. 2002
- Luthans, Fred. *Organizational Behaviour.* Singapore. McGraw – Hills Book Co. 2004
- Singh, Yogendra. Pandey, Mamta. *Organizational Behaviour.* Delhi. A.I.T.B.S. Publishers. 2004.

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title : Department of Lifelong Learning & Extension (DLLE)**
2) **Course Code** : SF-MS-1-CC-DLLE
3) **Category of Course : CC (Co-Curricular)**
4) **Semester :** I / III
5) **Total Hours: Minimum 30 Hours**
6) **Total Credits:** 02 Credits
7) **Evaluation Pattern : Completion of required hours**

CONTENT	HOURS	PROJECT/ACTIVITIES
MAJOR PROJECT **(COMPULSORY:ANY 1)**	MINIMUM 30 HOURS	1) Annapoorna Yojana (APY) 2) Career Project (CP) 3) Status of Women Survey (SWS) 4) Population Education Club (PEC)
MINOR PROJECTS	MINIMUM 25 Hours	1) Poster Making Competition 2) Cleanliness/ Awareness Drives 3) Essay Writing Competition 4) Waste Management & Energy Saving 5) Other Social Activities
MEETINGS & REPORT WRITING	MINIMUM 05 Hours	Attend Orientation Programmes, Meetings and Filling of Final Semester Report

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Principles of Marketing**
2) **Course Code :** SF-MS-2 -MJ- MKT
3) **Course Objective:** The Course will help the learner –
   - To understand the scope of marketing.
   - To study consumer and industrial market and understand the value of marketing mix in the marketing planning process.
   - With a firm foundation in marketing theory and marketing lexicon.
4) **Course Outcome (CO) :**

   CO1 – The learner will be able to comprehend marketing decision, based upon the combination of product, price, promotion and distribution elements if he wishes to be in the Marketing/Entrepreneurial field.

   CO2- The learner will be able to apply key framework and methods and can develop analytical skills to solve marketing problems.
5) **Category of Course : Major- Mandatory**
6) **Semester :** II
7) **Total Hours:** 45 hours
8) **Total Credits:** 03 Credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies •Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Marketing**	• Introduction to Marketing: Definition, features, advantages and scope of marketing. The 4P's and 4C's of marketing. Marketing v/s Selling. • Concepts of Marketing: Needs, wants and demands, transactions, transfer and exchanges. • Orientations of a firm: Production concept; Product concept; selling concept and marketing concept, social relationship, Holistic marketing.
II	**Marketing Environment, Research and Consumer Behaviour**	• The micro environment of business: Management structure; Marketing Channels; Markets in which a firm operates; competitors and stakeholders. • Macro environment: Political Factors; Economic Factors; Socio Cultural Factors, Technological Factors (PEST Analysis) • Marketing research: Meaning, features, Importance of marketing research. Types of marketing research: Product research; Sales research; consumer/customer research; production research • MIS: Meaning, features and Importance • Consumer Behaviour: Meaning, feature, importance, factors affecting Consumer Behaviour
III	**Marketing Mix**	• Marketing mix: Meaning – elements of Marketing Mix. • Product-product mix-product line lifecycle-product planning – New product development- failure of new product-levels of product. • Branding –Packing and packaging – role and importance • Pricing – objectives- factors influencing pricing policy and Pricing strategy. • Physical distribution – meaning – factor affecting channel selection-types of marketing channels • Promotion – meaning and significance of promotion. Promotion tools
IV	**Segmentation, Targeting and Positioning and Trends In Marketing**	• Segmentation – meaning , importance , basis • Targeting – meaning , types • Positioning – meaning – strategies • New trends in marketing – E-marketing , Internet marketing and marketing using Social network • Social marketing/ Relationship marketing • Ambush Marketing, Green Marketing, Guerilla Marketing.

11) References:

- Kotler, Philip, *Marketing Management*, Prentice Hall, New Delhi.
- Stanton, Etzel, Walker, *Fundamentals of Marketing*, Tata-McGraw Hill, New Delhi.
- Saxena, Rajan, *Marketing Management*, Tata-McGraw Hill, New Delhi.
- McCarthy, E.J., *Basic Marketing: A managerial approach*, Irwin, New York.
- Pillai R S, Bagavathi, *Modern Marketing*

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Managerial Economics - II**
2) **Course Code :** SF-MS-2-MJ-ECO
3) **Course Objective:** The Course will help the learner –

- To know about the macroeconomics
- To know about the determinants of macroeconomics conditions (national output, employment, and inflation), causes of business cycles
- To know about interactions of monetary and financial markets with the real economy, familiarizing themselves in the process with major economic theories of relevance.

4) **Course Outcome (CO) :**

CO1 - The learner will be able to use the concepts of Macroeconomics and its interrelations with Microeconomics.

CO2 - The learner will be able to can apply the principle of Macroeconomics in explaining the behaviour of Macroeconomic variables at national as well as global level.

5) **Category of Course : Major Mandatory**
6) **Semester :** II
7) **Total Hours:** 45 hours
8) **Total Credits:** 03 Credits
9) **Modules / Units :**

MODULE NO.	TOPIC	CONTENTS COVERED
I	**The Economics of Aggregates**	• Macroeconomics: Meaning and Importance. • Circular flow of aggregate income and expenditure: closed and open economy models • Short run economic fluctuations : Features and Phases of Trade Cycles • The Keynesian Principle of Effective Demand: Aggregate Demand and Aggregate Supply - Consumption Function - Investment function and multiplier.
II	**Money, Inflation and Monetary Policy**	• Money, Inflation and Monetary Policy • Money Supply: Determinants of Money Supply - Factors influencing Velocity of Circulation of Money

		• Demand for Money: Classical approach - Keynes' liquidity preference theory. • Inflation: Causes, - measures to control inflation. • Monetary policy: Meaning, objectives and instruments.
III	**Public Finance-I**	• Meaning of Public Finance • Tax and Non-tax revenue • Public Expenditure – Causes of increasing public expenditure.
IV	**Public Finance-II**	• Public Debt - Types (Internal and External Debt)-Burden of External Debt • Fiscal Policy: Meaning, Objectives and Instruments • Budget & Types of Budget. .

10) References:

- Reference Books Business Economics –II
- Ackley.G (1976), Macro Economic Theory and Policy, Macmillan Publishing Co. New York
- Ahuja. H.L., Modern Economics — S.Chand Company Ltd. New Delhi.
- Bhatia H.L.: Public Finance. Vikas Publishing House Pvt. Ltd
- Dornbush , Fisher and Startz, Macroeconomics, Tata-Mac Graw Hill, New Delhi
- . Dwivedi, D.N. (2001), Macro Economics: Theory and Policy, Tata-Mac Graw Hill, New Delhi.
- Friedman Hilton (1953) Essays in Positive Economics, University of Chicago Press, London.
- Francis Cherunilam International Economics Tata McGraw – Hill Publishing Co. Ltd. New Delhi.
- Gregory .N. Mankiw, Macroeconomics, Fifth Edition (2002) New York:Worth Publishers
- Jhingan, M.L., Principles of Economics — Vrinda Publications (P) Ltd
- Jhingan M.L. – International Economics – Vrinda publication Pvt. Ltd - Delh
- Musgrave, R.A and P.B. Musgrave (1976) : Public Finance in Theory and Practice, Tata McGraw Hill, Kogakusha, Tokyo
- Shapiro, E (1996), Macro-Economic Analysis, Golgotha Publication, New Delhi.
- Singh.S.K. (2014): Public finance in Theory and Practice, S.Chand &co Pvt Ltd, New Delhi
- Salvatore Dominick – International Economics – John Wiley & sons, Inc Singapore
- Vaish .M.C. (2010) Macro Economic Theory 14th edition, Vikas Publishing House(P)Ltd

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Financial Management**
2) **Course Code:** SF-MS-2-MIN-FM
3) **Course Objective:** The Course will help the learner –
   - To develop ability to analyze and interpret various tools of financial analysis and planning.
   - To gain knowledge of management and financing of working capital
   - To understand concepts relating to financing and investment decisions
4) **Course Outcome (CO):** After studying this course, learner will be able to-

   CO1 – Learn about different sources of funds available to business, both internal and external.

   CO2 – Discuss and interpret the types of leverages.

   CO3 - Evaluate investment projects using various capital budgeting techniques like Payback period, NPV, ARR, IRR, etc.

5) **Category of Course :** Minor Course
6) **Semester :** II
7) **Total Hours:** 30 hours
8) **Total Credits:** 2 credits
9) **Evaluation Pattern** :

   a. **Total Marks:** 50 Marks (10 Point Grading System)

   b. **Passing Criteria:** 40% Marks (04 Grade Points)

   c. **Marking Scheme :** 60:40 Pattern
      - 30 Marks – Written Semester End Exam (Passing: 12 Marks)
      - 20 Marks – Internal Exam (Passing: 08 Marks)

   d. **Mode of Evaluation of Answer-book :** Online/Offline

   e. **Paper Pattern of Semester End Exam (S.E.E.): 30 Marks Classification**

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	**10 Marks**
	B.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	
Q.2.		Attempt any two questions : Module 1	5 Marks each	**10 Marks**
Q.3.		Attempt any two questions : Module 2	5 Marks each	**10 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 20 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam (Objectives + Short Notes)	10 Marks
Subject Oriented Activities / PRACTICAL EXAM • PPT Presentations • Assignments • Case Studies • Field Research	07 Marks
Class Participation & Attendance	03 Marks
TOTAL	**20 marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Financial Management and Leverages**	• Introduction to FM • Meaning • Importance, Scope and Objectives • Profit vs Value Maximization • Types of financing • Introduction to Leverage • EBIT & EPS • Analysis Types of Leverages: Operating • Leverage, Financial Leverage & Composite • Leverage Relationship between Operating • Leverage and Financial Leverage (Including Practical Problems)
II	**Capital Budgeting**	• Payback Period • Discounted Payback period • Average Rate of Return • Net Present Value • Profitability Index • Internal Rate of Return

11) References:

- Fundamentals of Financial Management by D. Chandra Bose, PHI Learning Pvt. Ltd., New Delhi
- Fundamentals of Financial Management by Bhabotosh Banerjee, PHI Learning Pvt. Ltd., New Delhi
- Fundamentals of Financial Management by Vyuptakesh Sharma, Pearson Education, New Delhi
- Financial Management: Text and Problems by M.Y. Khan and P.K. Jain, Tata McGraw Hill, New Delhi
- Financial Management: Theory and Practice by Prasanna Chandra, Tata McGraw Hill, New Delhi

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Business Law**
2) **Course Code :** SF-MS-2 -OE-BLW
3) **Course Objective:** The Course will help the learner –
   - To understand the basic concept of Business Law.
   - To provide a learner with the practical legal knowledge of a general business.
   - To study the rights and obligations arising out of Contracts.
   - To get better understanding of contract of sales.
   - To get detailed knowledge about the application of negotiable instruments and its legal provisions.
   - To understand legal nature of Company Law.
   - To explain the basic concept related to Consumer Education and Protection.
   - To introduce fundamental and legal aspects of intellectual property rights to a learner.
4) **Course Outcome (CO) :**

   CO1 - Learner can acquire knowledge about meaning, types and sources of Business law.

   CO2 - It will help a learner to identify the basic legal principles behind contractual Agreements and gives clarity in understanding how the law of contract affect us on daily basis

   CO3 - A learner will be able to understand the objects of consumer law.

   CO4 - They will get a detailed knowledge about the application of negotiable instruments and intellectual property law principles.

   CO5 - It will get clear knowledge about the concept of company and shares under company law.

   CO6 - It will help to understand the use of memorandum of association and articles of association in a company.
5) **Category of Course : Open Elective**
6) **Semester :** II
7) **Total Hours:** 60 hours
8) **Total Credits:** 04 Credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)

c. Marking Scheme : 60:40 Pattern

- 60 Marks – Written Semester End Exam (Passing: 24 Marks)
- 40 Marks – Internal Exam (Passing: 16 Marks)

d. Mode of Evaluation of Answer-book : Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies •Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction, Contract Act, 1872 & Sale of Goods Act, 1930**	• **Introduction to Business Law :** Meaning and Definitions of Law and Business Law, Scope and Objectives of Business Law, Sources of Business Law, Importance and Problems of Business Law, Requirements of Effective Business Law • **Contract Act, 1872**: Essential elements of Contract; Agreement and Contract –Capacity to Contract, free consent, consideration, lawful objects/ consideration, Breach of contract. Remedies for breach of Contract. • **Sale of Goods Act, 1930**: Scope of Act, Sale and Agreement to sell, essential of a valid Sale Contract – Conditions and warranties – Implied Condition and warranties, Rights of an unpaid seller.
II	**Negotiable Instrument Act, 1981 & Consumer Protection Act, 1986**	• **Negotiable Instrument Act, 1981**: Introduction of Negotiable Instruments– Characteristics of negotiable instruments, Promissory note, Bills of exchange, Cheque, Dishonour of Cheque. • **Consumer Protection Act, 1986**: Objects of Consumer Protection- Introduction of Consumers, who is consumer? Meaning of the words "Goods and services" –Meaning of the words "Defects and Deficiencies of goods and services" Consumer disputes and Complaints.
III	**Company Law**	**Company Law**: What is company? – Incorporation of company – MOA, AOA, Prospectus, Meetings, Meaning of transfer and transmission of shares.
IV	**Intellectual Property Rights(IPR)**	IPR definition/ objectives Patent definition. What is patentable? What is not patentable? Invention And its Attributes, Inventors and Applications Trademarks, definition, types of trademarks, infringement and passing off.

		Copy right definition and subject in which copy right exists, Originality, Meaning and Content, Authors and Owners, Rights and Restrictions. Geographical indications (only short notes)

11) References :

- Bulchandani, K.R. *Business Law*. Mumbai. Himalaya Publishing House. 2010.
- Kapoor, N.D. *Business Law*. New Delhi. Sultan Chand and Sons (P.) Ltd. 2019.
- Kuchhal, M.C. *Business Law*. New Delhi. Vikas Publishing House Pvt. Ltd. 2011.
- Nadhani, Asok. *Business and Corporate Laws*. New Delhi. BPB Publications. 2009.
- Vechalekar, Prof. Dr. N.M. *Business Law*. Pune. Everest Publishing House. 2013.

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Business Maths & Stats – 2**
2) **Course Code :** SF-MS-2 OE- MTS
3) **Course Objective:**
   - This course aims to equip Learner with a broad based knowledge of mathematics with emphasis on management applications.
   - The basic objective of this course is to impart knowledge of different quantitative methods and mathematical tools in business decisions and management.
4) **Course Outcome (CO) :**

   CO1 – The learner will be able to explain and have a good working practice of mathematical tools for taking appropriate decisions in managerial situations.

   CO2 – The learner will be able to compare and analyze business data by gaining knowledge about basic mathematical tools used in business.
5) **Category of Course : Open Elective**
6) **Semester :** II
7) **Total Hours:** 60 hours
8) **Total Credits:** 4 credits
9) **Evaluation Pattern** :

a. Total Marks: 100 Marks (10 Point Grading System)

b. Passing Criteria: 40% Marks (04 Grade Points)

c. Marking Scheme: 60:40 Pattern

- 60 Marks – Written Semester End Exam (Passing: 24 Marks)
- 40 Marks – Internal Exam (Passing: 16 Marks)

d. Mode of Evaluation of Answer-book: Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Elementary Financial Mathematics**	• Simple and Compound Interest: Interest compounded once a year, more than once a year, continuous, nominal and effective rate of interest • Annuity-Present and future value-sinking funds • Depreciation of Assets: Equated Monthly Installments (EMI) - using flat interest rate and reducing balance method. • Functions: Algebraic functions and the functions used in business and economics, Break Even and Equilibrium point. • Permutation and Combination: (Simple problems to be solved with the calculator only)
II	**Matrices and Determinants**	• Matrices: Some important definitions and some important results. Matrix operation (Addition, scalar multiplication , matrix multiplication, transpose of a matrix) • Determinants of a matrix of order two or three: properties and results of Determinants • Solving a system of linear equations using Cramer's rule • Inverse of a Matrix (up to order three) using ad-joint of a matrix and matrix inversion method • Case study: Input Output Analysis
III	**Derivatives and Applications of Derivatives**	Introduction and Concept: Derivatives of constant function, logarithmic functions, polynomial and exponential function • Rules of derivatives: addition, multiplication, quotient • Second order derivatives • Application of Derivatives: Maxima, Minima, Average Cost and Marginal Cost. Total revenue, Marginal revenue, Average revenue. Average and Marginal profit. Price elasticity of demand

IV	**Numerical Analysis [Interpolation]**	• Introduction and concept: Finite differences – forward difference operator – Newton's forward difference formula with simple examples • Backward Difference Operator. Newton's backward interpolation formula with simple examples

11) References:

- Ramasastri A.S, *Quantitative Methods for Banking and Finance*, Delhi, Macmillan, 2008.
- Verma A.P, *Business Mathematics*, New Delhi, Asian Book Private Limited, 2007.

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Introduction to Information Technology - 2**
2) **Course Code :** SF-MS-2-VSC-IT
3) **Course Objective:** The Course will help the learner –
   - To be familiar with the essential contrivances for steering business transactions through the various resources of information technology.
   - To have knowledge about the E-Commerce, Cyber Law, use of Tally and PowerPoint

4) **Course Outcome (CO) :**

   CO1 – The learners will be able to gain knowledge of E-Commerce and its importance in today's business world.

   CO2 – The learner will be able to understand Cyber Law, application of Tally in accounting and use of PowerPoint in business.
5) **Category of Course : VSC (Vocational & Skill Enhancement Course)**
6) **Semester :** II
7) **Total Hours:** 30 hours
8) **Total Credits:** 2 credits
9) **Evaluation Pattern** :

   a. **Total Marks:** 50 Marks (10 Point Grading System)

   b. **Passing Criteria:** 40% Marks (04 Grade Points)

   c. **Marking Scheme :** 60:40 Pattern
      - 30 Marks – Written Semester End Exam (Passing: 12 Marks)
      - 20 Marks – Internal Exam (Passing: 08 Marks)

   d. **Mode of Evaluation of Answer-book :** Online/Offline

   e. **Paper Pattern of Semester End Exam (S.E.E.): 30 Marks Classification**

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	**10 Marks**
	B.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	
Q.2.		Attempt any two questions : Module 1	5 Marks each	**10 Marks**
Q.3.		Attempt any two questions : Module 2	5 Marks each	**10 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 20 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam (Objectives + Short Notes)	10 Marks
Subject Oriented Activities / PRACTICAL EXAM • PPT Presentations • Assignments • Case Studies • Field Research	07 Marks
Class Participation & Attendance	03 Marks
TOTAL	**20 marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**E-commerce, M-Commerce and Cyber Law in India (10 hours)**	**E-commerce, M-Commerce :** Concept of E-commerce and M-Commerce, Definition of E-commerce and M-Commerce, Business models of e-commerce: models based on transaction party (B2B, B2C, B2G, C2B, C2C, E-Governance), Models based on revenue models, Electronic Funds Transfer, Electronic Data Interchange. **Cyber Law in India:** Cyber Crimes: internet fraud Various threats and attacks, Phishing, Key Loggers, Identity Theft, Call & SMS forging, e-mail related crimes, Denial of Service Attacks, Hacking, Online shopping frauds, Credit card frauds, Cyber Stalking • Cyber Security: Computer Security, E-Security, Password Security and Reporting
II	**Basics of Tally Software and PowerPoint Presentations (20 hours including Practicals)**	**Basics of Tally Software:** • Introduction to Tally and its Features • Installing and activating Tally Software • Setting up New Company, Alteration and Shutting own Company in Tally • Security Controls in Tally III Voucher Entry in Tally Software • Types of vouchers in Tally • Entering Transactions in Tally **PowerPoint Presentations:** Creating a presentation with minimum 20 slides with a script. Presenting indifferent views, Inserting Pictures, Videos, Creating animation effects on them, Slide Transitions, Timed Presentations and Rehearsal of presentation.

11) References:

- Fundamentals of Computers – Rajaram V – Prentice Hall
- Computer today (3rd edition) – Sanders, Donald H – McGraw Hill
- Computers and Common sense – Hunt, Roger and Shelly John – Prentice Hall
- Computers – Subramaniam N – Wheeler
- Introduction to Computers – Xavier C. – New Age
- Computer in Business – Sanders D – McGraw Hill
- Computers and Information Management – S C Bhatnagar & V Ramant – Prentice Hall
- Internet for Business – Brummer, Lavrej – Cambridge
- E-mail for Everyone – Leon Alexis & Leon – Methews

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Business Communication - II**
2) **Course Code :** SF-MS-2-SEC-BC
3) **Course Objective:**
   - This course will give a comprehensive view of Presentation Skills, Group Communication, Business Correspondence and Language & Writing Skills which are pre-requisites in the outside market.
   - This course will make learners to acquire Presentation, Communication and Language & Writing Skills which will make them competent enough to stand in outside market.
4) **Course Outcome (CO) :**

   CO1 – The learner will be able to develop Presentation and Group Communication skills which can be effectively applied in the outside market to deliver effective presentations

   CO2- The course will make the learner competent enough in business correspondence

   CO3- The course will make a learner competent in report writing.
5) **Category of Course : SEC (Skill Enhancement Course)**
6) **Semester :** II
7) **Total Hours:** 30 Hours
8) **Total Credits:** 02 Credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 50 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 30 Marks – Written Semester End Exam (Passing: 12 Marks)
      - 20 Marks – Internal Exam (Passing: 08 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 30 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	**10 Marks**
	B.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	
Q.2.		Attempt any two questions : Module 1	5 Marks each	**10 Marks**
Q.3.		Attempt any two questions : Module 2	5 Marks each	**10 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 20 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam (Objectives + Short Notes)	10 Marks
Subject Oriented Activities / PRACTICAL EXAM • PPT Presentations • Assignments • Case Studies • Field Research	07 Marks
Class Participation & Attendance	03 Marks
TOTAL	**20 marks**

10) Modules/Units :

MODULE NO.	MODULE TOPIC	CONTENTS COVERED
I	**Individual & Group Communication (15 hours)**	• Interviews, Preparing for an Interview, Types of Interviews, Group Discussion. • Meetings: Meaning & Conducting of a Meeting, Types of a meeting, Drafting of Notice & Agenda. • Conference: Meaning and Organizing a Conference.
II	**Business Correspondence: Trade Letters, Sales Letters and Consumer Letters (15 hours)**	**Trade Letters**: Letters of Inquiry, Letters of Complaints, Order, Credit and Status Enquiry, Collection, Claims & Adjustments Letter. **Sales Letters:** Sales Letters, Promotional leaflets and fliers. **Consumer Letters:** Consumer Grievance Letters, Letter under Right to Information (RTI) Act.

11) References:

- Agarwal, Anju D A Practical Handbook for Consumers, IBH.1989
- Alien, R.K. Organisational Management through Communication.1970
- Ashley,A A Handbook Of Commercial Correspondence, Oxford University Press. 1992
- Ecouse Barry, Competitive Communication: A Rhetoric for Modern Business, OUP. 1999
- Ghanekar,A Communication Skills for Effective Management. Everest Publishing House, Pune.1996
- Martson, John E. The Nature of Public Relations, McGraw Hill, New Delhi. 1963
- Majumdar,P.K. Commentary on the Consumer protection Act, Prentice, New Delhi.1992

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***NEP Course Details For Semester: I & II***

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COURSE DETAILS (APPROVED)

1) **Title of the Course: Modern English Language- II**
2) **Course Code :** SF-MS-2-AEC-MEL
3) **Course Objective:**
   - To develop LSRW (Listening, Speaking, Reading and Writing) skills in the learner.
   - To improve creativity and skills of expression in the learner.
   - To improve reading speed and comprehension.
   - To develop the ability to read and write analytically.
   - To nurture an appreciation for literary texts.
4) **Course Outcome (CO) :**

   After completing this course, the learner will be able:
   CO1: To improve their reading and comprehension skills.
   CO2: To improve their speaking skills for social and professional purposes
   CO3: To listen in an active and comprehensive manner.
   CO4: To write more expressively and efficiently.
   CO5: To develop an appreciation for literary texts and how these interpret the world around us.

5) **Category of Course : AEC (Ability Enhancement Course)**
6) **Semester :** II
7) **Total Hours:** 30 Hours
8) **Total Credits:** 02 Credits
9) **Modules/Units :**

MODULE NO.	MODULE TOPIC	CONTENTS COVERED
I	**Receptive Skills - Reading and Listening Skills:**	• Vocabulary building: Synonyms, antonyms, homonyms • Types, functions, and transformation of sentences • Listening to a passage and suggesting a title
II	**Productive Skills – Speaking and Writing Skills:**	Introducing guests, welcome speech, vote of thanks, Cloze test, Dialogue writing
III	**Literary Appreciation Skills:**	**Poems:** • The Cold Within – James Patrick Kinney • Small Towns and the River – Mamang Dai

		Prose: • The Gift of the Magi – O'Henry • Excerpt from Malgudi Days – R.K. Narayan

10) REFERENCES:

TBA

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title of the Course: Indian Demographics & Value Education**
2) **Course Code** : SF-MS-2-VEC-IDVE
3) **Course Objective:** The Course will help the learner –
   - To know multi-cultural diversity of Indian Society
   - To make them aware of The Indian Constitution and Fundamental Duties of the Indian Citizen
   - To understand Concept of Human Rights and Rights of Citizens in India
   - To understand Concept of Human Values and various values which is to be acquired to be a successful person.
4) **Course Outcome (CO) :**

   CO1 – Learner will get to know multi-cultural diversity of Indian Society

   CO2 – Learner will get aware of The Indian Constitution and Fundamental Duties of the Indian Citizen

   CO3 – Learner will understand Concept of Human Rights and Rights of Citizens in India

   CO4 – Learner will understand Concept of Human Values and various values which is to be acquired to be a successful person.
5) **Category of Course : Value Education Course (VEC)**
6) **Semester :** II
7) **Total Hours:** 30 Hours
8) **Total Credits:** 02 Credits
9) **Evaluation Pattern** :

a. **Total Marks:** 50 Marks (10 Point Grading System)

b. **Passing Criteria:** 40% Marks (04 Grade Points)

c. **Marking Scheme :** 60:40 Pattern
   - 30 Marks – Written Semester End Exam (Passing: 12 Marks)
   - 20 Marks – Internal Exam (Passing: 08 Marks)

d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 30 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	**10 Marks**
	B.	Objectives : 5 questions (FIB/MCQ/ T or F)	5 Marks	
Q.2.		Attempt any two questions : Module 1	5 Marks each	**10 Marks**
Q.3.		Attempt any two questions : Module 2	5 Marks each	**10 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 20 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam (Objectives + Short Notes)	10 Marks
Subject Oriented Activities / PRACTICAL EXAM • PPT Presentations • Assignments • Case Studies • Field Research	07 Marks
Class Participation & Attendance	03 Marks
TOTAL	**20 marks**

10) Modules/Units :

MODULE NO.	MODULE TOPIC	CONTENTS COVERED
I	**Overview of Indian Society and Indian Constitution** **(Indian Demographics)** **15 hours**	• Overview of Indian Society: multi-cultural diversity of Indian society, linguistic diversity in India, situation; regional variations (rural, urban and tribal characteristics) • Indian Constitution : The features and structure of the Constitution: the Preamble, Main Body and Schedules; Fundamental Duties of the Indian Citizen • Human Rights : Concept of Human Rights; The Universal Declaration of Human Rights • Rights of Citizens in India as stated in the Indian Constitution • Aspects of Indian Politics: The party system in Indian politics; Local self-government in urban and rural areas; Role and significance of women in politics

III	**Value Education** **15 hours**	• Concept of Human Values • Types of Values : Social Values, Professional Values, Religious Values, Aesthetic Values, National Integration and International understanding • Distinction between Moral Education and Value Education • Negative Traits to be avoided : Resentment, Irritating habits, Envy or Jealousy, Self-pity • Tolerance, peace and communal harmony as crucial values in strengthening the social fabric of Indian society

11) References:

- Asthana, D. K., and Asthana, Meera, Environmental Problems and Solutions, S. Chand, New Delhi, 2012.
- Bajpai, Asha, Child Rights in India, Oxford University Press, New Delhi, 2010.
- Bhatnagar Mamta and Bhatnagar Nitin, Effective Communication and Soft Skills, Pearson India,New Delhi, 2011.
- G Subba Rao, Writing Skills for Civil Services Examination, Access Publishing, New Delhi, 2014
- Kaushal, Rachana, Women and Human Rights in India, Kaveri Books, New Delhi, 2000.
- Mohapatra, Gaur Krishna Das, Environmental Ecology, Vikas, Noida, 2008.
- Motilal, Shashi, and Nanda, Bijoy Lakshmi, Human Rights: Gender and Environment, Allied Publishers, New Delhi, 2007.
- Murthy, D. B. N., Disaster Management: Text and Case Studies, Deep and Deep Publications,New Delhi, 2013.
- Parsuraman, S., and Unnikrishnan, ed., India Disasters Report II, Oxford, New Delhi, 2013
- Reza, B. K., Disaster Management, Global Publications, New Delhi, 2010.
- Sathe, Satyaranjan P., Judicial Activism in India, Oxford University Press, New Delhi, 2003.
- Singh, Ashok Kumar, Science and Technology for Civil Service Examination, Tata McGraw Hill, New Delhi, 2012
- Thorpe, Edgar, General Studies Paper I Volume V, Pearson, New Delhi, 2017.

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***NEP Course Details For Semester: I & II***

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COURSE DETAILS

1) **Title : Department of Lifelong Learning & Extension (DLLE)**
2) **Course Code** : SF-MS-2-CC-DLLE
3) **Category of Course : CC (Co-Curricular)**
4) **Semester :** I / III
5) **Total Hours: Minimum 30 Hours**
6) **Total Credits:** 02 Credits
7) **Evaluation Pattern : Completion of required hours**

CONTENT	HOURS	PROJECT/ACTIVITIES
MAJOR PROJECT **(COMPULSORY:ANY 1)**	MINIMUM 30 HOURS	1) Annapoorna Yojana (APY) 2) Career Project (CP) 3) Status of Women Survey (SWS) 4) Population Education Club (PEC)
MINOR PROJECTS	MINIMUM 25 Hours	1) E-Waste Management 2) Cleanliness/ Awareness Drives 3) Paper bag making (Say No to Plastic) 4) Street Plays 5) Other Social Activities
MEETINGS & REPORT WRITING	MINIMUM 05 Hours	Attend Orientation Programmes, Meetings and Filling of Final Semester Report

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: III & IV***

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SEMESTER – III

COURSE DETAILS

1) **Title of the Course: Managerial Economics- II**
2) **Course Code :** SF-MS-III-C-MEC
3) **Course Objective:**

   The Course will help the learner -

   - To know about the determinants of macroeconomic conditions (national output, employment, and inflation), causes of business cycles, and interactions of monetary and financial markets with the real economy, familiarizing themselves in the process with major economic theories of relevance.

4) **Course Outcome (CO) :**

   CO1 – The learner will be able to use the concepts of Macroeconomics and its interrelations with Microeconomics and can apply the principle of Macroeconomics in explaining the behaviour of Macroeconomic variables at national as well as global level.

5) **Category of Course :** Core Course
6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :

   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**The Economics of Aggregates** **(15 lectures)**	• Macroeconomics: Meaning and Importance. • Difference between Micro & Macro Economics • Circular flow of aggregate income and expenditure: closed and open economy models • Relationship between National Income and Economic Welfare. • Short run economic fluctuations : Features and Phases of Trade Cycles • The Keynesian Principle of Effective Demand: Aggregate Demand and Aggregate Supply - Consumption Function - Investment function & Multiplier
II	**Money, Inflation and Monetary Policy** **(15 lectures)**	• Money, Inflation and Monetary Policy • Money Supply: Determinants of Money Supply - Factors influencing Velocity of Circulation of Money • Demand for Money: Why Money is preferred as a medium of Exchange- Keynes' liquidity preference theory • Inflation: Causes - Effects of Inflation- Measures to control inflation. • Monetary policy: Meaning, objectives and instruments.
III	**Public Finance** **(15 lectures)**	• Meaning of Public Finance- Difference between Public Income and public revenue- Sources of Public Revenue • Tax & Non tax Revenue - Canons of taxation • Public Expenditure – Causes of increasing Public Expenditure - Public Debt – Types (Internal & External) • Fiscal Policy – Objectives & Instruments • Budget & Types of Budget • FRBM Act, 2003.
IV	**International Trade** **(15 lectures)**	• International Trade - Meaning & Advantages • Ricardo's Theory of comparative cost advantage V/s Heckscher – Ohlin theory of factor endowments. • Terms of trade - Gains from trade - Free trade versus protection • Foreign Investment : Foreign Direct Investment & Importance - Role of Multinational corporations • FPI – Meaning ,Difference between FDI & FPI • Balance of Payments: Structure - Types of Disequilibrium - Measures to correct disequilibrium in BOP. • Foreign Exchange market: Meaning, Participants & Functions. Determination of Equilibrium Rate of Exchange.

11) References:

- Reference Books Business Economics –II
- Ackley.G (1976), Macro Economic Theory and Policy, Macmillan Publishing Co. New York
- Ahuja. H.L., Modern Economics — S.Chand Company Ltd. New Delhi.
- Bhatia H.L.: Public Finance. Vikas Publishing House Pvt. Ltd
- Dornbush , Fisher and Startz, Macroeconomics, Tata-Mac Graw Hill, New Delhi
- . Dwivedi, D.N. (2001), Macro Economics: Theory and Policy, Tata-Mac Graw Hill, New Delhi.
- Friedman Hilton (1953) Essays in Positive Economics, University of Chicago Press, London.
- Francis Cherunilam International Economics Tata McGraw – Hill Publishing Co. Ltd. New Delhi.
- Gregory .N. Mankiw, Macroeconomics, Fifth Edition (2002) New York:Worth Publishers
- Jhingan, M.L., Principles of Economics — Vrinda Publications (P) Ltd
- Jhingan M.L. – International Economics – Vrinda publication Pvt. Ltd - Delh
- Musgrave, R.A and P.B. Musgrave (1976) : Public Finance in Theory and Practice, Tata McGraw Hill, Kogakusha, Tokyo
- Shapiro, E (1996), Macro-Economic Analysis, Golgotha Publication, New Delhi.
- Singh.S.K. (2014): Public finance in Theory and Practice, S.Chand &co Pvt Ltd, New Delhi
- Salvatore Dominick – International Economics – John Wiley & sons, Inc Singapore
- Vaish .M.C. (2010) Macro Economic Theory 14th edition, Vikas Publishing House(P)Ltd

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Accounting for Managerial Decisions**
2) **Course Code :** SF-MS-III-C-AMD
3) **Course Objective:**

   The Course will help the learner –

   - To acquire basic accounting fundamentals.
   - To develop financial analysis skills among learners
   - To know the core concepts of Working Capital & Receivables Management and its importance in managing a business

4) **Course Outcome (CO) :**

   CO1 – The learner will be in a position to analyze the Financial Statement of a concern for future actions

   CO2 - The learner will be able to make and analyze the Cash Flow Statements of a concern

   CO3 - Knowledge of Working Capital and Receivables Management will help learner to manage and fulfill the requirements of business finance effectively

5) **Category of Course :** Core Course
6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :

   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Q.1 A. Objectives : (Any 8 out of 10) MCQ/True or False /Match the Column-08 Marks OR Q.1 B. Objectives : (Any 7 out of 10) MCQ/True or False/Match the Column- 07 Marks
Q.2 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.2 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.3 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.3 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.4 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.4 B. Short Notes / Short practical questions - 15 Marks (Any 3 out of 5)

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Analysis and Interpretation of Financial statements (15 lectures)**	• Vertical Form of Balance Sheet and Profit & Loss A/c • Trend Analysis, Comparative Statement & Common Size
II	**Ratio analysis and Interpretation (15 lectures)**	• Ratio analysis and Interpretation (based on vertical form of financial statements) • Balance Sheet Ratios • Revenue Statement Ratios • Combined Ratios
III	**Cash flow statement (15 lectures)**	• Preparation of cash flow statement (Accounting Standard 3 - indirect method only)
IV	**Working capital and Receivables management (15 lectures)**	• **Working Capital:** Concept, Estimation of requirements in case of Trading & Manufacturing Organizations. • **Receivables Management :** Meaning & Importance, Credit Policy Variables, methods of Credit Evaluation, Monitoring the Debtors Techniques

11) References:

- Srivastava R M, Essentials of Business Finance, Himalaya Publications
- Anthony R N and Reece JS., Accounting Principles , Hoomwood Illinos , Richard D. Irvin
- Bhattacharya SK and Dearden J., Accounting for Management. Text and Cases , New Delhi.
- Hingorani NL and Ramanathan AR, Management Accounting , New Delhi
- Ravi M. Kishore , Advanced management Accounting, Taxmann , New Delhi
- Maheshwari SN - Management and Cost Accounting , Sultan Chand , New Delhi
- Gupta. SP, Management Accounting, Sahitya Bhawan , Agra .

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Equity & Debt Market**
2) **Course Code :** SF-MS-III-C-EDM
3) **Course Objective:**

The Course will help the learner –

- To understand the evaluation of various aspects of financial markets.
- To study financial policies and development of financial instruments.
- To examine process and evolving the strategies during crisis.

4) **Course Outcome (CO) :**

CO1 – The learner will help them develop good understanding of primary market and secondary market in equity market.

CO2 – The learner will understand the role and functioning of the market.

CO3 – The learner will be aware of the legislative, executive and judicial functions of such regulatory authorities.

5) **Category of Course :** Core Course
6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Financial Market** **(15 lectures)**	Equity market – meaning & definitions of equity share; Growth of Corporate sector & simultaneous growth of equity shareholders; divorce between ownership and management in companies; development of Equity culture in India & current position. Debt market – Evolution of Debt markets in India; Money market & Debt markets in India; Regulatory framework in the Indian Debt market.
II	**Dynamics of Equity Market** **(15 lectures)**	• Primary: 1)IPO – methods followed (simple numerical) 2) Book building 3)Role of merchant bankers in fixing the price 4)Red herring prospectus – unique features 5)Numerical on sweat equity, ESOP & Rights issue of shares • Secondary: 1) Definition & functions of stock exchanges 2) Evolution & growth of stock exchanges 3)Stock exchanges in India 4)NSE, BSE OTCEI & overseas stock exchanges 5)Recent developments in stock exchanges 6)Stock market Indices
III	**Players in debt markets** **(15 lectures)**	• Players in debt markets: 1)Govt. securities 2)Public sector bonds & corporate bonds 3)open market operations 4)Security trading corp. of India 5)Primary dealers in Govt. securities • Bonds: 1)Features of bonds 2)Types of bonds
IV	**Valuation of Equity & Bonds** **(15 lectures)**	• Valuation of equity: 1. Balance sheet valuation 2. Dividend discount model (zero growth, constant growth & multiple growth) 3. Price earning model • Valuation of bonds 1. Determinants of the value of bonds 2. Yield to Maturity 3. Interest rate risk 4. Determinants of Interest Rate Risk

11) References:

- Allen, Larry.1750-2000. *The Global Financial System*.
- Ian H, Giddy. 1994. *Global Financial Markets*. Houghton Mifflin.
- Saunders, Anthony. And Cornett, Marica Millon. *Financial markets & institutions: A modern perspective: TMIT.*
- L,M Bhole. *Financial institutions & markets: Structure, growth & innovations*. 5th ed. TMH.
- Chandra, P. 2011.*Corporate Valuation and Value Creation.*1st ed. TMH.

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course:** Information Technology - I
2) **Course Code :** SF-MS-III-AB-IT
3) **Course Objective:**

   The Course will help the learner –

   - To learn basic concepts of Information Technology, its support and role in Management, for managers
   - To understand basic concepts of Email, Internet and websites, domains and security therein
   - To recognize security aspects of IT in business, highlighting electronic transactions, advanced security features

4) **Course Outcome (CO) :**

   CO1 – Learners would know about the use of commercial activity using electronic media.

   CO2 - Learners know about the basic working of different technology and latest MS-Office software

   CO3 – Learners would learn to make documents, presentations and spreadsheets.

5) **Category of Course :** Skill /Ability Enhancement Course
6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to IT Support in Management** **(15 lectures)**	**• Information Technology concepts** Concept of Data, Information and Knowledge Concept of Database **• Introduction to Information Systems and its major components**. • Types and Levels of Information systems. Main types of IT Support systems, Computer based Information Systems (CBIS) • Types of CBIS - brief descriptions and their interrelationships/hierarchies Office Automation System(OAS) • Transaction Processing System(TPS) • Management Information System(MIS) • Decision Support Systems (DSS) • Executive Information System(EIS) • Knowledge based system, Expert system **Success and Failure of Information Technology.** Failures of Nike and AT&T **IT Development Trends.** Major areas of IT Applications in Management **Concept of Digital Economy and Digital Organization**. **IT Resources** Open Source Software - Concept and Applications. Study of Different Operating Systems. (Windows / Linux/ DOS)
II	**Office Automation using MS-Office** **(15 lectures)**	**Learn Word:** Creating/Saving of Document, Editing and Formatting Features, Designing a title page, Preparing Index, Use of SmartArt, Cross Reference, Bookmark and Hyperlink. Mail Merge Feature. **•Spreadsheet application (e.g. MS-Excel/openoffice.org)** Creating/Saving and editing spreadsheets, Drawing charts. Using Basic Functions: text, math & trig, statistical, date & time, database, financial, logical, Using Advanced Functions : Use of VLOOKUP/HLookup Data analysis – sorting data, filtering data (AutoFilter , Advanced Filter), data validation, what-if analysis (using

		data tables/scenarios), creating sub-totals and grand totals, pivot table/chart, goal seek/solver, **• Presentation Software** Creating a presentation with minimum 20 slides with a script. Presenting indifferent views, Inserting Pictures, Videos, Creating animation effects on them , Slide Transitions, Timed Presentations ,Rehearsal of presentation
III	**Email, Internet and its Applications:** **(15 lectures)**	**• Introduction to Email** Writing professional emails, Creating digitally signed documents. **• Use of Outlook:** Configuring Outlook, Creating and Managing profile in outlook, Sending and Receiving Emails through outlook, Emailing the merged documents. Introduction to Bulk Email software **• Internet:** Understanding Internet Technology Concepts of Internet, Intranet, Extranet, Networking Basics, Different types of networks. Concepts (Hubs, Bridges, Routers, IP addresses),Study of LAN, MAN, WAN **• DNS Basics.** Domain Name Registration, Hosting Basics. **• Emergence of E-commerce and M-Commerce** Concept of E-commerce and M-Commerce, Definition of E-commerce and M-Commerce, Business models of e-commerce: models based on transaction party (B2B, B2C,B2G, C2B, C2C, E-Governance), Models based on revenue models, Electronic Funds Transfer, Electronic Data Interchange..
IV	**E-Security** **(15 lectures)**	**• Threats to Computer systems and control measures**. **Types of threats-** Virus, hacking, phishing, spyware, spam, physical threats (fire, flood, earthquake, vandalism) Threat Management **• IT Risk:-** Definition, Measuring IT Risk, Risk Mitigation and Management **• Information Systems Security** **• Security on the internet** Network and website security risks Website Hacking and Issues therein. Security and Email **• E-Business Risk Management Issues** Firewall concept and component, Benefits of Firewall **•Understanding and defining Enterprise wide security framework**

		• **Information Security Environment in India with respect to real Time Application in Business** Types of Real Time Systems, Distinction between Real Time, On – line and Batch Processing System. Real Time Applications viz. Railway / Airway / Hotel Reservation System, ATMs, EDI Transactions - definition, advantages, examples: E- Cash, Security requirements for Safe E-Payments Security measures in International and Cross Border financial transactions • **Threat Hunting Software**

11) References:

- Information Technology for Management, 6TH ED (With CD By Efraim Turban, Dorothy Leidner, Ephraim Mclean, James Wetherbe (Ch1, Ch2)
- Microsoft Office Professional 2013 Step by Step By Beth Melton, Mark Dodge, Echo Swinford, Andrew Couch
- Tata McGraw Hill Joseph, P.T. : E-commerce An Indian Perspective (Ch-13,Ch-14)
- Computer Viruses and Related Threats: A Management Guide (Ch-2, Ch-3) By John P. Wack, Lisa J Carnahan(EBook:https://play.google.com/books/reader?id=tsP15h9gr8MC&printsec=frontcover&output=readerhl=en&pg=GBS.PR7.w.2.1.0)
- Electronic Commerce - Technologies & Applications.Bharat, Bhaskar
- https://play.google.com/books/reader?id=F1zbUaBtk7IC&printsec=frontcover&output=reader&hl=en&pg=GBS.PP1

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Foundation Course – II (Environmental Management)**
2) **Course Code :** SF-MS-III-ID-FC
3) **Course Objective:**

   The Course will help the learner –

   - To get an awareness of the environment as a whole and its related problem.
   - To develop the ability to evaluate measures for the improvement and protection of environment.

4) **Course Outcome (CO) :**

   CO1 – The learner will be able to apply knowledge for the protection and improvement of the environment.

   CO2 – The learner will be able to monitor and design the various pollution control system.

   CO3 – The learner will be able to select and use suitable waste treatment techniques.

5) **Category of Course :** Multi-disciplinary / Inter-disciplinary course
6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 2 credits

9) **Evaluation Pattern** :

   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Environmental Concepts** **(12 lectures)**	• Environment: Definition and composition, Lithosphere, Atmosphere, • Hydrosphere, Biosphere • Biogeochemical cycles - Concept and water cycle • Ecosystem & Ecology; Food chain, food web & Energy flow pyramid • Resources: Meaning, classification(Renewable & non-renewable), types • & Exploitation of Natural resources in sustainable manner
II	**Environment degradation** **(11 lectures)**	• Degradation-Meaning and causes, degradation of land, forest and agricultural land and its remedies • Pollution – meaning, types, causes and remedies (land, air, water and others) • Global warming: meaning, causes and effects. • Disaster Management: meaning, disaster management cycle. • Waste Management: Definition and types -solid waste management anthropogenic waste, e-waste & biomedical waste (consumerism as a cause of waste)
III	**Sustainability and role of business** **(11 lectures)**	• Sustainability: Definition, importance and Environment Conservation. • Environmental clearance for establishing and operating Industries in India. • EIA, Environmental auditing, ISO 14001 • Salient features of Water Act, Air Act and Wildlife Protection Act. • Carbon bank & Kyoto protocol
IV	**Innovations in business- an environmental perspective** **(11 lectures)**	• Non-Conventional energy sources- Wind, Bio-fuel, Solar, Tidal and Nuclear Energy. • Innovative Business Models: Eco-tourism, Green marketing, Organic farming, Eco-friendly packaging, Waste management projects for profits, other business projects for greener future

11) References:

- N.K. Uberoi (2002), Environment Management, Delhi, Excel Books
- Bala Krishnamoorthy (2005), Environmental Management - Text & Cases, Prentice Hall of India
- Environmental Management- National and global Perspectives, (2004), Swapan C. Deb, JAICO
- Dr.Anand S. Bal (2009) Environmental Management, Himalaya Publishing House

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Advanced Excel**
2) **Course Code:** SF-MS-III-AD-AEX
3) **Course Objective:**

   The course will help the learner to -

   - Enter and edit data.
   - Format data and cells.
   - Construct formulas, including the use of built-in functions, and relative and absolute references.
   - Create Pivot tables and charts.
   - Convert text and validate and consolidate data.
   - Import and Export Data

4) **Course Outcome (CO):**

   CO1- The learner will be able to master Microsoft Excel from Beginner to Advanced

   CO2- The learner will be able to build a solid understanding on the Basics of Microsoft Excel

   CO3- The learner will be able to learn the most common Excel functions used in the Office

   CO4- The learner will be able to maintain large sets of Excel data in a list or table

   CO5- The learner will be able to create dynamic reports by mastering one of the most popular tools, PivotTables

5) **Category of Course :** Additional Course
6) **Semester:** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 2 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Excel and Logical Functions** **(15 lectures)**	1. Using Basic Functions 2. Formatting and Proofing 3. Mathematical functions 4. Protecting files 5. Date and time functions 6. Printing workbook 7. What if analysis 8. If analysis 9. Nested Ifs 10. Complex if functions
II	**Data Validations and Look Up functions** **(15 lectures)**	• Manage primary and secondary axis. • Dynamic Dropdown • V Lookup and H Look functions • Index and match • Nested V Lookup • Worksheet linking
III	**Pivot Tables** **(15 lectures)**	• Creating pivot tables • Advance value field setting • Grouping based on numbers and dates • Array functions • Using array formulas • Array with if and lookup functions
IV	**Chart and Slicers** **(15 lectures)**	• Bar Chart, Pie Chart, Line chart, etc • Filter data using slicers • Manage primary and secondary axis • Excel Dashboard • Planning a dash board • Adding tables and charts to dashboard • Adding dynamic content to dashboard

11) References:

- Microsoft Excel 2016 Bible: The Comprehensive Tutorial Resource.
- Excel 2016 ALL-IN-ONE for Dummies.
- Excel: QuickStart Guide from Beginner to Expert.
- Excel 2016: Pivot Table Data Crunching. ...
- Power Pivot and Power BI: The Excel User's Guide to DAX, Power Query, Power BI, and Power Pivot.
- Microsoft Excel Dashboards and Reports

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: III & IV***

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SPECIALIZATION: FINANCE

ELECTIVE COURSE DETAILS (SEM- III)

1) **Title of the Course: Cost Accounting- I**
2) **Course Code :** SF-MS-III-E (F)-COST
3) **Course Objective:**
   - This course exposes the Learners to the basic concepts and the tools used in Cost Accounting.
   - It will enable the Learners to understand the principles and procedure of cost accounting and to apply them to different practical situations.
   - It will enable the Learners to understand inventory control and preparation of stock ledger.
   - To understand attendance, payroll procedures, calculation of remuneration and incentive plans in preparation of labour cost statement.
   - It will enable the Learners to understand analysis of overheads, allocation, absorption and apportionment of overheads.
   - It will enable the Learners to understand Classification of Costs and preparation of Cost Sheet.
   - It will enable the Learners to reconcile Cost and Financial Accounts
   - To understand Uniform Costing and Inter-Firm Comparison and other Emerging Cost Concepts.

4) **Course Outcome (CO) :**

CO1 –Learners will understand various elements of costs and tolls for costing, cost allocation and cost management.

CO2 - Learners will understand the process costing-Equivalent Units of Production and Inter-process Profit.

CO3 – Learner will be able to understand how to allocate Cost in a Manufacturing Concern with respect to Material, Labour & Overheads.

CO4 – Learners will be able to classify costs and prepare cost sheet.

CO5 – Learners will be able to reconcile cost and financial statements.

CO6 –Learners can obtain in-depth knowledge about Uniform Costing and Inter- Firm Comparison other Emerging Cost Concepts.

5) **Category of Course :** Elective Course (Specialization : FINANCE)
6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern :**

a. **Total Marks:** 100 Marks (10 Point Grading System)

b. **Passing Criteria:** 40% Marks (04 Grade Points)

c. **Marking Scheme :** 60:40 Pattern

- 60 Marks – Written Semester End Exam (Passing: 24 Marks)
- 40 Marks – Internal Exam (Passing: 16 Marks)

d. **Mode of Evaluation of Answer-book :** Online/Offline

e. **Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification**

Q.1 A. Objectives : (Any 8 out of 10) MCQ/True or False /Match the Column-08 Marks OR Q.1 B. Objectives : (Any 7 out of 10) MCQ/True or False/Match the Column- 07 Marks	
Q.2 A. Practical Question (may be divided into 2 sub questions of 07 and 08 marks) OR Q.2 B. Practical Question (may be divided into 2 sub questions of 07 and 08 marks)	- 15 Marks - 15 Marks
Q.3 A. Practical Question (may be divided into 2 sub questions of 07 and 08 marks) OR Q.3 B. Practical Question (may be divided into 2 sub questions of 07 and 08 marks)	- 15 Marks - 15 Marks
Q.4 A. Practical Question (may be divided into 2 sub questions of 07 and 08 marks) OR Q.4 B. Short Notes / Short practical questions (Any 3 out of 5)	- 15 Marks - 15 Marks

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	**TOPIC**	**CONTENTS COVERED**
I	**Introduction** **(15 lectures)**	• Meaning, Nature and scope-Objective of Cost Accounting-Financial Accounting v/s Cost Accounting- Advantages and disadvantages of Cost Accounting-Elements of Costs-Cost classification (concept only)- - Installation of Cost Accounting System, Process (Simple and Inter process) and Job Costing (Practical Problems)
II	**Elements of Cost** **(15 lectures)**	• Material Costing- Stock valuation (FIFO & weighted average method), EOQ, EOQ with discounts, Calculation of Stock levels (Practical Problems) • Labour Costing – (Bonus and Incentive Plans) (Practical Problems) • Overhead Costing (Primary and Secondary Distribution)
III	**Cost Projection** **(15 lectures)**	• Cost Sheet (Current and Estimated)) (Practical Problems) • Reconciliation of financial accounts and cost accounting (Practical Problems)
IV	**Emerging Cost Concepts** **(15 lectures)**	Uniform Costing and Interfirm Comparison, Emerging Concepts – Target Costing, Benchmarking, JIT, The Balanced Scorecard; Strategic Based Control; concept, process, implementation of Balanced Scorecard, Challenges in implementation of Balanced Scorecard

11) References :

- Arora, M.N. *Cost Accounting; Principles and Practice.* New Delhi. Vikas Publishing House Pvt. Ltd. 2011.
- Arora, M.N. *Cost and Management Accounting; Theory, Problems and Solutions.* Mumbai. Himalaya Publishing House. 2016.
- Kishore, R.M. *Cost Accounting.* New Delhi. Taxmann Publication. 2008.
- Kishore, R.M. *Cost and Management Accounting.* New Delhi. Taxmann Publication. 2006.
- Khanna, B.S. Pandey, I.M. Abuja, G.K. and Batra, S.C.L. *Practical Costing.* New Delhi. S. Chand and Company Ltd. 2010.
- Shukla, M.C. Grewal, T.S. and Gupta, Dr. M.P. *Cost Accounting; Text and Problems.* New Delhi. S Chand and Company. 2007.

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: III & IV***

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SPECIALIZATION: FINANCE

ELECTIVE COURSE DETAILS (SEM- III)

1) **Title of the Course: Audit - I**
2) **Course Code :** SF-MS-III-E(F)-AUD
3) **Course Objective:**

   The Course will help the learner –

   - To get acquainted with the various concepts of auditing.
   - To understand and practice the various techniques of auditing while managing their finances.
   - To study verification and vouching technique of auditing.

4) **Course Outcome (CO) :**

   CO1 – The learner will get basic knowledge about auditing.

   CO2 - The learner will understand the Techniques, procedure, planning about auditing.

   CO3 – The learner will understand different types of audit & their responsibility.

5) **Category of Course :** Elective Course (Specialization : FINANCE)
6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits

9) **Evaluation Pattern** :

   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Q.1 A. Objectives : (Any 8 out of 10) MCQ/True or False /Match the Column-08 Marks OR Q.1 B. Objectives : (Any 7 out of 10) MCQ/True or False/Match the Column- 07 Marks
Q.2 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.2 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.3 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.3 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.4 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.4 B. Short Notes / Short practical questions - 15 Marks (Any 3 out of 5)

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Auditing** **(15 lectures)**	• Basics – Financial Statements, Users of Information, Definition of Auditing, Objectives of Auditing – Primary and Secondary, Expression of opinion, Detection of Frauds and Errors, Inherent limitations of Audit. Difference between Accounting and Auditing, Investigation and Auditing. • Errors & Frauds – Definitions, Reasons and Circumstances, Types of Error – Commission, Omission, Compensating error. Types of frauds, Risk of fraud and Error in Audit, Auditors Duties and Responsibilities in case of fraud • Principles of Audit – Integrity, Objectivity, Independence, Skills, Competence, Work performed by others, Documentation, Planning, Audi Evidence, Accounting System and Internal Control, Audit Conclusions and Reporting • Types of Audit – Meaning, Advantages, Disadvantages of Balance sheet Audit, Interim Audit, Continuous Audit, Concurrent Audit and Annual Audit
II	**Audit Planning, Procedures and Documentation** **(15 lectures)**	• Audit Planning – Meaning, Objectives, Factors to be considered, Sources of obtaining information, Discussion with Client, Overall Audit Approach. • Audit Program – Meaning, Factors, Advantages and Disadvantages, Overcoming Disadvantages, Methods of Work , Instruction before commencing Work, Overall Audit Approach • Audit Working Papers - Meaning, importance, Factors determining Form and Contents, Main Functions / Importance, Features, Contents of Permanent Audit File, Temporary Audit File, Ownership, Custody, Access of Other Parties to Audit Working Papers, Auditors Lien on Working Papers, Auditors Lien on Client's Books • Audit Notebook – Meaning, structure, Contents, General Information, Current Information, Importance
III	**Auditing Techniques and Internal Audit Introduction** **(15 lectures)**	• Test Check - Test Checking Vs Routing Checking, test Check meaning, features, factors to be considered, when Test Checks can be used, advantages disadvantages precautions.

		• Audit Sampling - Audit Sampling, meaning, purpose, factors in determining sample size -Sampling Risk, Tolerable Error and expected error, methods of selecting Sample Items Evaluation of Sample Results auditors Liability in conducting audit based on Sample • Internal Control - Meaning and purpose, review of internal control, advantages, auditors duties, review of internal control, Inherent Limitations of Internal control, internal control samples for sales and debtors, purchases and creditors, wages and salaries. Internal Checks Vs Internal Control, Internal Checks Vs Test Checks • Internal Audit - Meaning, basic principles of establishing Internal audit, objectives, evaluation of internal Audit by statutory auditor, usefulness of Internal Audit, Internal Audit Vs External Audit,, Internal Checks Vs Internal Audit
IV	**Auditing Techniques: Vouching &Verification** **(15 lectures)**	• Audit of Income - Cash Sales, Sales on Approval, Consignment Sales, Sales Returns Recovery of Bad Debts written off, Rental Receipts, Interest and Dividends Received Royalties Received • Audit of Expenditure - Purchases, Purchase Returns, Salaries and Wages, Rent, Insurance Premium, Telephone expense Postage and Courier, Petty Cash Expenses, Travelling Commission Advertisement, Interest Expense • Audit of Assets Book Debts / Debtors, Stocks -Auditors General Duties; Patterns, Dies and Loose Tools, Spare Parts, Empties and Containers Quoted Investments and Unquoted Investment Trade Marks / Copyrights Patents Know-How Plant and Machinery Land and Buildings Furniture and Fixtures • Audit of Liabilities - Outstanding Expenses, Bills Payable Secured loans Unsecured Loans, Contingent Liabilities

11) References:

- Bansal, Surbhi. *Advanced Auditing & Professional Ethics*. Delhi. Bestword Publication Pvt Ltd. 2014.
- Basu, Sanjib.*Auditing: Principles & Techniques*. India.Pearson India.2004.
- Dalal, Chetan. *Fraud Detection:A Practical Approach ForAuditors*. Mumbai. Finesse Graphics & Prints Pvt.Ltd.2006.
- Garg,Pankaj. *Auditing & Assurance*. New Delhi. Taxmann Publication (P)Ltd. 2014.
- Jha, Aruna. *Learners Workbook OnAuditing*. New Delhi.Taxman Allied Services (P.)Ltd. 2007.
- Jha, Aruna. *Auditing*. Taxmann Publications(p.) Ltd. 2013.
- Nadhani, Asok. K. *Auditing And Assurance*. India. Bpb Publications.2009.
- Rawat, D.S. *Learners's Guide To Auditing Standards*. New Delhi. Taxmann Publications(p.) Ltd.2014.
- Sharma, Dr. N. K. *Auditing Theory And Practice*.Jaipur. Shree Niwas Publications.2009.
- Tandaon, B.N. And Sudharsanam. *A Handbook Of Practical Auditing*.New Delhi. S.Chand & Company Ltd.2012.

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: III & IV***

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SPECIALIZATION: FINANCE

ELECTIVE COURSE DETAILS (SEM- III)

1) **Title of the Course: Wealth Management**
2) **Course Code :** SF-MS-III-E(F)-WM
3) **Course Objective:**
   - To make aware the learner about various aspects related to wealth management
   - To study the relevance and importance of wealth management
   - To understand various components of retirement planning
   - To acquaint the learners with issues and challenges in wealth management

4) **Course Outcome (CO) :**

   CO1 – The learner will understand the various aspects of Wealth Management with respect to Insurance, Investment, Tax, Estate and Retirement Planning

   CO2 – The learner will develop Financial Analysis skills.

   CO3 – The learner will be able to guide and make a plan related to Insurance, Investment, Tax, Estate and Retirement Planning.

5) **Category of Course :** Elective Course (Specialization : FINANCE)
6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 Credits

9) **Evaluation Pattern** :

a. **Total Marks:** 100 Marks (10 Point Grading System)
b. **Passing Criteria:** 40% Marks (04 Grade Points)
c. **Marking Scheme :** 60:40 Pattern
   - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
   - 40 Marks – Internal Exam (Passing: 16 Marks)
d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Q.1 A. Objectives : (Any 8 out of 10) MCQ/True or False /Match the Column-08 Marks OR Q.1 B. Objectives : (Any 7 out of 10) MCQ/True or False/Match the Column- 07 Marks
Q.2 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.2 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.3 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.3 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.4 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.4 B. Short Notes / Short practical questions - 15 Marks (Any 3 out of 5)

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction** **(15 lectures)**	• **Introduction To Wealth Management:** Meaning, Scope, Components, Process of Wealth Management, Needs & Expectation of Clients, Code of Ethics for Wealth Manager • **Personal Financial Statement Analysis:** Financial Literacy, Financial Goals and Planning, Cash Flow Analysis, Building Financial Plans, Life Cycle Management. • **Economic Environment Analysis:** Interest Rate, Yield Curves, Real Return, Key Indicators-Leading, Lagging, Concurrent
II	**Insurance Planning and Investment Planning** **(15 lectures)**	• **Insurance Planning:** Meaning, Basic Principles of Insurance, Functions and Characteristics of Insurance, Rights and Responsibilities of Insurer and Insured, Types of life Insurance Policies, Types of General Insurance Policies, Health Insurance – Mediclaim – Calculation of Human Life Value - Belt Method/CPT • **Investment Planning:** Types of Investment Risk, Risk Profiling of Investors & Asset Allocation (Life Cycle Model), Asset Allocation Strategies (Strategic, Tactical, Life-Cycle based), Goal-based Financial Planning, Active & Passive Investment Strategies
III	**Financial Mathematics/ Tax and Estate Planning** **(15 lectures)**	• **Financial Mathematics:** Calculation of Returns (CAGR ,Post-tax Returns etc.), Total Assets, Net Worth Calculations, Financial Ratios • **Tax and Estate Planning:** Tax Planning Concepts, Assessment Year, Financial Year, Income Tax Slabs, TDS, Advance Tax, LTCG, STCG, Carry Forward & Set-off, Estate Planning Concepts –Types of Will – Requirements of a Valid Will– Trust – Deductions - Exemptions
IV	**Retirement Planning/ Income Streams & Tax Savings Schemes** **(15 lectures)**	• **Retirement Planning:** Understanding of different Salary Components, Introduction to Retirement Planning, Purpose & Need, Life Cycle Planning, Financial Objectives in Retirement Planning, Wealth Creation (Factors and Principles), Retirement (Evaluation & Planning), Pre & Post-Retirement Strategies - Tax Treatment • **Income Streams & Tax Savings Schemes:**Pension Schemes, Annuities-Types of Annuities, Various Income Tax Savings Schemes

11) References:

- Harold Even sky, Wealth Management, McGraw Hill Publication
- NCFM, CFP, IIBF, etc., Wealth Management modules
- Harold Even sky, The new wealth Management, CFA Institute Investment Series Publication

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: III & IV***

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SPECIALIZATION: MARKETING

ELECTIVE COURSE DETAILS (SEM- III)

1) **Title of the Course: Consumer Buying Behaviour**
2) **Course Code :** SF-MS-III-E(M)-CBB
3) **Course Objective:**

   The course gives an understanding of how a consumer selects, purchases, uses and disposes of products and services is pertinent to successfully managing the marketing function and also learn the role of consumer behaviour within marketing.

4) **Course Outcome (CO) :**

   The learner will be able to -

   CO1- Develop an understanding about the consumer decision making process and its applications in marketing function of firms.

   CO2- Get basic knowledge about issues and dimensions of Consumer Behaviour.

   CO3- Learners are expected to develop the skill of understanding and analyzing consumer information and using it to create consumer- oriented marketing strategies.

5) **Category of Course :** Elective Course (Specialization : MARKETING)
6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits

9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction To Consumer Behaviour:** **(15 lectures)**	• Meaning of Consumer Behaviour, Features and Importance • Types of Consumer (Institutional & Retail), Diversity of consumers and their behaviour- Types Of Consumer Behaviour • Profiling the consumer and understanding their needs • Consumer Involvement • Application of Consumer Behaviour knowledge in Marketing • Consumer Decision Making Process and Determinants of Buyer Behaviour, factors affecting each stage, and Need recognition.
II	**Individual- Determinants of Consumer Behaviour** **(15 lectures)**	• Consumer Needs &Motivation (Theories - Maslow, Mc Cleland). • Personality – Concept, Nature of personality, Freudian, non – Freudian and Trait theories, Personality Traits and its Marketing significance, • Product personality and brand personification. • Self-Concept • Consumer Perception • Learning - Theory, Nature of Consumer Attitudes, Consumer Attitude • Formation &Change. • Attitude - Concept of attitude
III	**Environmental Determinants of Consumer Behaviour** **(15 lectures)**	• Family Influences on Buyer Behaviour, • Roles of different members, needs perceived and evaluation rules. • Factors affecting the need of the family, family life cycle stage and size. • Social Class and Influences. • Group Dynamics & Consumer Reference Groups, Social Class & Consumer • Behaviour - Reference Groups, Opinion Leaders and Social Influences In-group versus out-group influences, role of opinion leaders in diffusion of innovation and in purchase process.

		• Cultural Influences on Consumer Behaviour Understanding cultural and sub-cultural influences on individual, norms and their role, customs, traditions and value system.
IV	**Consumer decision making models and New trends** **(15 lectures)**	• Consumer Decision making models: Howard Sheth Model, Engel Blackwell, • Miniard Model, Nicosia Models of Consumer Decision Making • Diffusion of innovations Process of Diffusion and Adoption, Innovation, Decision process, Innovator profiles • E-Buying behaviour The E-buyer vis-a vis the Brick and Mortar buyer, Influences on E-buying

11) References:

- Solomon, M.R, 2009. Consumer Behaviour –New Delhi, Buying, Having, and Being. (8th ed.)
- Blackwell, R.D., Miniard, P.W., & Engel, J. F, 2009. Consumer Behaviour. New Delhi, Cengage Learning.
- Hawkins, D.I., Best, R. J., Coney, K.A., &Mukherjee, A, 2007, New Delhi, Consumer Behaviour Building, New York,McGraw-Hill College
- Kotler, P. & Keller, K. L, 2012. Marketing Management (Global Edition) (14th ed.) New Delhi, Pearson
- Nair, Suja R,2004- Consumer Behavior in Indian Perspective, New Delhi, Himalaya Publishing

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: III & IV***

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SPECIALIZATION: MARKETING

ELECTIVE COURSE DETAILS (SEM- III)

1) **Title of the Course:** Advertising
2) **Course Code :** SF-MS-III-E(M)-ADV
3) **Course Objective:**

   The Course will help the learner –

   - To understand and examine the growing importance of advertising
   - To understand the construction of an effective advertisement
   - To understand the role of advertising in contemporary scenario
   - To understand the future and career in advertising

4) **Course Outcome (CO) :**

   CO1 – Learner will understand and examine the growing importance of advertising in communication mix.

   CO2 - Learner will understand the construction of an effective advertisement in various media.

   CO3 – Learner will understand the role and issues of advertising in contemporary society.

5) **Category of Course :** Elective Course (Specialization : MARKETING)
6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Advertising** **(15 lectures)**	• Definition, Evolution of Advertising, Importance, Scope, Features, Benefits, Five M's of Advertising • Types of Advertising –consumer advertising, industrial advertising, institutional advertising, classified advertising, national advertising, generic advertising • Theories of Advertising : Stimulus Theory, AIDA, Hierarchy Effects Model, Means – End Theory, Visual Verbal Imaging, Cognitive Dissonance • Ethics and Laws in Advertising : Puffery, Shock Ads, Subliminal Advertising, Weasel Claim, Surrogate Advertising, Comparative Advertising Code of Ethics, Regulatory Bodies, Laws and Regulation – CSR, Public Service Advertising, Corporate Advertising, Advocacy Advertising • Social, cultural and Economic Impact of Advertising, the impact of ads on Kids, Women and Advertising
II	**Strategy and Planning Process in Advertising** **(15 lectures)**	• Advertising Planning process & Strategy : Introduction to Marketing Plan, Advertising Plan-Background, situational analysis related to Advertising issues, Marketing Objectives, Advertising Objectives, Target Audience, Brand Positioning (equity, image personality), creative Strategy, message strategy, media strategy, Integration of advertising with other communication tools • Role of Advertising in Marketing Mix : Product planning, product brand policy, price, packaging, distribution, Elements of Promotion, Role of Advertising in PLC • Advertising Agencies – Functions – structure – types - Selection criteria for Advertising agency – Maintaining Agency–client relationship, Agency Compensation.
III	**Creativity in Advertising** **(15 lectures)**	• Introduction to Creativity – definition, importance, creative process , Creative strategy development – Advertising Campaign – determining the message theme/major selling ideas – introduction to USP – positioning strategies – persuasion and types of

		advertising appeals – role of source in ads and celebrities as source in Indian ads – execution styles of presenting ads. • Role of different elements of ads – logo, company signature, slogan, tagline, jingle, illustrations, etc – • Creating the TV commercial – Visual Techniques, Writing script, developing storyboard, other elements (Optical, Soundtrack, Music) • Creating Radio Commercial – words, sound, music – scriptwriting the commercial – clarity, coherence, pleasantness, believability, interest, distinctiveness • Copywriting: Elements of Advertisement copy – Headline, sub-headline, Layout, Body copy, slogans. Signature, closing idea, Principles of Copywriting for print, OOH, essentials of good copy, Types of Copy, Copy Research
IV	**Budget, Evaluation, Current trends and careers in Advertising** **(15 lectures)**	• Advertising Budget – Definition of Advertising Budget, Features, Methods of Budgeting • Evaluation of Advertising Effectiveness – Pre-testing and Post testing Objectives, Testing process for Advertising effectiveness, Methods of Pre-testing and Post-testing, Concept testing v/s Copy testing • Current Trends in Advertising : Rural and Urban Advertising, Digital Advertising, Content Marketing (Advertorials), retail advertising, lifestyle advertising, Ambush Advertising, Global Advertising – scope and challenges – current global trends • Careers in Advertising : careers in Media and supporting firms, freelancing options for career in advertising, role of Advertising Account Executives, campaign Agency family tree – topmost advertising agencies and the famous advertisements designed by them

11) References:

- Belch, Michael, "Advertising and Promotion: An integrated marketing communications perspective" Tata McGraw Hill 2010
- Mohan,Manendra"Advertising Management Concept and Cases",Tata Mcgraw Hill 2008
- Kleppner,Rassell J;Thomac,Lane W , "Advertising Procedure", Prentice Hall 1999
- Shimp,Terence, "Advertising and promotion :An IMC Approach", Cengage Learning 2007

- Sharma, Sangeeta and Singh, Raghuvir "Advertising planning and Implementation", Prentice Hall of India 2006
- Clow ,Kenneth E and Baack, Donald E "Inetegrated Advertising Promotion and Marketing Communication", Pearson Edu 2014
- Duncan,Tom,"Principles of Advertising and IMC",Tata McGraw Hill Pub 2006

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: III & IV***

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SPECIALIZATION: MARKETING

ELECTIVE COURSE DETAILS (SEM- III)

1) **Title of the Course: Social Marketing**
2) **Course Code :** SF-MS-III-E(M)-SOMKT
3) **Course Objective:**

   The Course will help the learner –

   - To understand the concept of social marketing, compare and contrast marketing in a profit-oriented corporate and a nonprofit social environment.
   - To analyze the impact of environment on social marketing & study the various behavior models/frameworks/theories for social change.
   - To study the basis of Segmentation, Targeting and Positioning and identify marketing mix of social marketing.

4) **Course Outcome (CO) :**

   CO1 – The learner will understand the concept of social media and marketing.

   CO2 – This will help the learner to learn the new trends in social marketing.

   CO3 – The learner gets depth knowledge about careers in marketing.

5) **Category of Course :** Elective Course (Specialization : MARKETING)
6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Social Marketing & Its Environment** **(15 lectures)**	• Definition of Social Marketing, Features, Need for Social Marketing, Evolution of Social Marketing, Social Marketing v/s Commercial Marketing, Challenges of Social Marketing. Social Marketing Unique Value Preposition, Relevance of Social marketing. Environment in Social Marketing, Components, Impact of Environment on Social Marketing.
II	**Social Marketing Plan, STP and Marketing Mix** **(15 lectures)**	• Social Marketing Plan, Segmentation, Targeting & Positioning Social Marketing Plan, Steps in developing social marketing plan, importance of planning. Segmentation, Basis of Segmentation, Criteria for evaluating segments, Targeting, Selecting Target Audience for Social Marketing, Positioning and Types of positioning. • Social Marketing Mix 1. Product: Social Product, Level of Product, Social Product Branding Decision. 2. Price: Monetary and non-monetary incentives for desired behavior, Pricing Objectives, Pricing Strategies. 3. Place: 5 A's of Distribution of Product in social marketing, Types of distribution channel 4. Promotion: Developing a Promotion Mix for social product, Message Strategy, Messenger Strategy, Creativity Strategy, selecting communication channel.
III	**Managing Behaviour for Social Change & NPO & CSR** **(15 lectures)**	• Managing Behaviour for Social Change Types of Behaviour Objectives, Knowledge objectives and belief objectives, Behaviour Change Models, Theories and Frameworks: Social Norm Theory, The diffusion of innovation model, The health belief model, The ecological model, Theory of reasoned action and theory of planned behaviour. Social Cognitive theory/social learning, The behavioural economics framework and the nudge factor, the science of habit framing, • Not for Profit Organization (NPO) & CSR Meaning, NGO, Voluntary Organization, Third Sector, NPO Sector. Status of Voluntary sector in India. Starting

		a Voluntary Organization in India: Trust, Society, Section & Company under the Companies Act of 2013. CSR, Meaning, Overview of CSR in India, Overview of CSR rules for corporation under Companies Act of 2013, CSR Impact Evaluation. Need for Governance in Notfor Profit Sector, Ethics in Social Marketing
IV	**Social Marketing – A Sectoral Overview & Careers** **(15 lectures)**	•Marketing Health • Marketing Education • Marketing Medicare • Marketing Sanitation • Marketing Financial Literacy & Savings • Marketing Digital Literacy • Marketing of Social Issues of Youth

11) References:

- Andresen, A & Kotler, P .2008. *Strategic Marketing for Nonprofit Organizations.* 7th International Edition. Upper Saddle River NJ: Prentice Hall.
- Andresen, A.R. 2006. *Social Marketing in the 21st century*. London, UK: Sage.
- Nancy, Lee. And Sameer, Deshpande.2013.*Social Marketing in India*. SAGE Publications.
- S, M Jha. 2012. *Social Marketing*. 2nd Edition. Himalaya Publishing House.
- Nancy, R. Lee. And Philip, Kotler.2011*Social Marketing: Influencing Behaviors for Good*. 4th Edition. SAGE Publications.
- French, J. it all.2010. *Social Marketing and Public Health, Theory and Practice,* UK: Oxford Press.
- Weinrich, HK. 2011. *Hands-on social marketing: a step-by-step guide to designing change for good*. Second Edition. Sage Thousand Oaks.

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: III & IV***

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SPECIALIZATION: HUMAN RESOURCE MANAGEMENT

ELECTIVE COURSE DETAILS (SEM- III)

1) **Title of the Course**: **Recruitment & Selection**
2) **Course Code :** SF-MS-III-E(HR)-REC
3) **Course Objective:**
   - The objective is to familiarize the Learners with concepts and principles, procedure of Recruitment and Selection in an organization.
   - It gives an in depth insight into various aspects of Human Resource management and make them acquainted with practical aspect of the subject.

4) **Course Outcome (CO) :**

   CO1- Learner can learn the skills and knowledge needed to conduct full and fair recruitment and selection in the HR Profile.

5) **Category of Course** : Elective Course (Specialization : HUMAN RESOURCE MANAGEMENT)
6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 Credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Recruitment** **(15 lectures)**	• Concepts of Recruitment- -Meaning, Objectives, Scope & Definition, Importance and relevance of Recruitment. • Job Analysis--Concept, Specifications, Description, Process And Methods, Uses of Job Analysis • Job Design--Introduction, Definition, Modern Techniques, Factors affecting Job Design, Contemporary Issues in Job Designing. • Source or Type of Recruitment– a) Direct/Indirect, b) Internal/ External. Internal-Notification, Promotion– Types, Transfer – Types, Reference External-Campus Recruitment, Advertisement, Job Boards Website/Portals, Internship, Placement Consultancies-Traditional (In-house, Internal Recruitment, On Campus, Employment and Traditional Agency). Modern (Recruitment Books, Niche Recruitments, Internet Recruitment, Service Recruitment, Website and Job, Search Engine, Social Recruiting and Candidate Paid Recruiters). • Technique of Recruitment-Traditional Vs Modern Recruitment • Evaluation of Recruitment-Outsourcing Programme
II	**Selection** **(15 lectures)**	• Selection-Concept of Selection, Criteria for Selection, Process, Advertisement and Application (Blank Format). • Screening-Pre and Post Criteria for Selection, Steps of Selection • Interviewing-Types and Guidelines for Interviewer & Interviewee, Types of Selection Tests, Effective Interviewing Techniques. • Selection Hurdles and Ways to Overcome Them
III	**Induction** **(15 lectures)**	• Induction-Concept, Types-Formal /Informal, Advantages of Induction, How to make Induction Effective Orientation & On boarding-Programme and Types, Process. • Socialization-Types-Anticipatory, Encounter, Setting in, Socialization Tactics • Current trends in Recruitment and Selection Strategies– with respect to Service, Finance, I.T., Law And Media Industry
IV	**Soft Skills** **(15 lectures)**	• Preparing Bio-data and C.V. • Social and Soft Skills – Group Discussion &Personal Interview, Video and Tele Conferencing Skills, • Presentation and Negotiation Skills, Aesthetic Skills, • Etiquettes-Different Types and Quitting Techniques. • Exit Interview-Meaning, importance.

11) References:

- Dipak Kumar Bhattacharya - Human Resource Management
- Arun Monappa- Managing Human Resource.
- C.B. Memoria -Personnel Management
- Armstrong, Michael & Baron Angela. (2005). Handbook of Strategic HRM (1st ed.). New Delhi: Jaico Publishing House.
- Mello, Jeffrey A. (2007). Strategic Human Resource Management (2nd ed.). India: Thomson South Western.

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: III & IV***

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SPECIALIZATION: HUMAN RESOURCE MANAGEMENT

ELECTIVE COURSE DETAILS (SEM- III)

1) **Title of the Course: Motivation & Leadership**
2) **Course Code :** SF-MS-III-E(HR)-MOT
3) **Course Objective:**

   The Course will help the learner –

   - To gain knowledge of the leadership strategies for motivating people and changing organizations.
   - To study how leaders facilitate group development and problem solving and work through problems and issues as well as transcend differences.
   - To acquaint the Learners about practical approaches to Motivation and Leadership & its application in the Indian context.

4) **Course Outcome (CO) :**

   CO1 – At the end of this course, Learners should be able to: Recognize and describe the role of leaders in business and other types of organizations and Identify and add to his or her own repertory of effective leader behaviors, and to better articulate a personal leadership development agenda.

5) **Category of Course :** Elective Course (Specialization : HUMAN RESOURCE MANAGEMENT)
6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Motivation -I** **(15 lectures)**	Concept of motivation, Importance, Tools of Motivation. Theory Z, Equity theory. Process Theories-Vroom's Expectancy Theory, Valence-Four drive model.
II	**Motivation-II** **(15 lectures)**	East v/s West, motivating workers (in context to Indian workers) The Indian scene – basic differences. • Work –Life balance – concept, differences, generation and tips on work life balance.
III	**Leadership-I** **(15 lectures)**	Leadership– Meaning, Traits and Motives of an Effective Leader, Styles of Leadership. • Theories –Trait Theory, Behavioural Theory, Path Goal Theory. • Transactional v/s Transformational leaders. • Strategic leaders– meaning, qualities. • Charismatic Leaders– meaning of charisma, Qualities, characteristics, types of charismatic leaders (socialized, personalized, office-holder, personal, divine)
IV	**Leadership-II** **(15 lectures)**	• Great leaders, their style, activities and skills (Ratan Tata, Narayan Murthy, Dhirubhai Ambani, Bill Gates, Mark Zuckerberg, Donald Trump) • Characteristics of creative leaders and organization methods to enhance creativity (Andrew Dubrein). • Contemporary issues in leadership–Leadership roles, team leadership, mentoring, self-leadership, online leadership, finding and creating effective leader.

11) References:

- Stephen P. Robbins, Timothy A. Judge (Author) - Organizational behaviour (15th Edition), Prentice Hall Publication
- Niraj Kumar- Organisational Behaviour: A New Looks (Concept, Theory & Cases), Himalaya Publishing House
- Strategic Leadership – Sahu & Bharati – Excel Books
- Peter I. Dowling & Denice E. (2006). International HRM (1st ed.). New Delhi. Excel Books. 5. French Wendell, Bell Cecil and Vohra Veena. (2004). Organization Development, Behavioral Science Interventions for Organization Improvement. (6th ed.)

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: III & IV***

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SPECIALIZATION: HUMAN RESOURCE MANAGEMENT

ELECTIVE COURSE DETAILS (SEM- III)

1) **Title of the Course: Employees Relations & Welfare**
2) **Course Code :** SF-MS-III-E(HR)-ERW
3) **Course Objective:**

   The Course will help the learner –

   - To understand the nature and importance of employee relations in an organization.
   - To understand the importance of collective bargaining and Workers participation.
   - To understand the causes and effects of employee grievances as well as the procedure to solve the same.
4) **Course Outcome (CO) :**

   CO1 – Learners will be able understand the elements and role of HR in employee relations.

   CO2 - They will be able to apply the theories of employee's welfare and learn the different approaches to employee's welfare in the industries.

   CO3 – They will get to know what are the responsibilities of employer towards labour welfare in the industries.

   CO4 – Learners will obtain in depth knowledge about workers participation in management.

   CO5 – They will be able to understand the cause and effects of employee grievance and find effective ways of handling those grievance.

5) **Category of Course :** Elective Course (Specialization : HUMAN RESOURCE MANAGEMENT)
6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)

d. Mode of Evaluation of Answer-book : Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Overview of Employee Relations and Collective Bargaining** **(15 lectures)**	• Employee Relations - Meaning, Scope, Elements of Employee Relations, Role of HR in Employee Relations • Employee Relation Policies – Meaning and Scope. • Ways to Improve Employee Relations • Collective Bargaining – Meaning, Characteristics, Need and Importance, Classification of collective bargaining - Distributive bargaining, Integrative bargaining, Attitudinal structuring and Intra-organizational bargaining; Principles of Collective Bargaining, Process, Causes for Failure of Collective Bargaining, Conditions for Successful Collective Bargaining • Collective Bargaining Strategies - Parallel or Pattern Bargaining, Multi-employer or Coalition Bargaining, Multi-unit or Coordinated Bargaining, and Single-unit Bargaining • Current Trends in Collective Bargaining
II	**Overview of Employee Welfare** **(15 lectures)**	• Meaning, Need for Employee Welfare, Principles of Employee/ Labour Welfare, Scope for Employee/ Labour Welfare in India, Types of Welfare Services –Individual and Group. • Historical Development of Employee/ Labour Welfare in India – Pre and Post-Independence, Employee/ Labour Welfare Practices in India • Approaches to Employee/ Labour Welfare – Paternalistic, Atomistic, Mechanistic, Humanistic approach • Theories of Employee Welfare–Policing Theory, Religion Theory, Philanthropic Theory, Trusteeship Theory, Public Relations Theory, Functional Theory • Administration of Welfare Facilities – Welfare Policy, Organisation of Welfare, Assessment of Effectiveness.
III	**Welfare and Work Environment Management** **(15 lectures)**	• Agencies for Labour Welfare – Central Government, State Government, Employers, Trade Union • Women Welfare - Meaning, Need for women welfare, Provision of Factories Act as applicable for women welfare • Responsibility of Employers towards labour welfare • Work Environment Management – Meaning, Need for healthy work environment, measures for providing healthy

		work, Fatigue at work – Meaning, Causes and Symptoms of Fatigue, Boredom at Workplace – Meaning, Hazards at Workplace – Meaning, Types of Hazards – Physical and Social, Hazard Management – Meaning and Process, Hazard Audit - Concept • Accidents and Safety Issues at Workplace – Safety, Safety Culture
IV	**Workers Participation and Employee Grievance** **(15 lectures)**	• Workers Participation in Management – Concept, Pre-requisites, forms & levels of participation, Benefit of Workers Participation in Management, Importance of Employee stock option plans as a method of participation. • Employee Grievance – Meaning, Features, Causes and Effects of Employee Grievances, Employee Grievance Handling Procedure, Effective Ways of Handling Grievance • Role of Industrial Relations Manager in Promoting & Establishing Peaceful Employee Relations

11) References:

- Personnel Management and Industrial relations – P. C. Shejwalkar and S. B. Malegaonkar
- Labour Management relations in India – K.M. Subramanian
- Trade Unionism Myth and Reality, New Delhi, Oxford University Press, 1982
- Dynamic Personnel Administration – Prof. M.N. Rudrabasavraj.

SEMESTER –IV

COURSE DETAILS

1) **Title of the Course:** Strategic Management
2) **Course Code :** SF-MS-IV-C-SM
3) **Course Objective:**

   The Course will help the learner –

   - The objective of this course is to learn the management policies and strategies at every Level to develop conceptual skills as well as their application in the corporate world.
   - The focus is to critically examine the management of the whole enterprise from the Top Management strategically.
   - This course deals with corporate level Policy & Strategy formulation areas. This course aims in developing conceptual skills in this area as well as their application in the corporate world.

4) **Course Outcome (CO) :**

   CO1 – It empowers Learners to develop and prepare organizational strategies that will be effective for the current business environment

   CO2 - Learners would be able to devise strategic approaches for managing a business successfully.

   CO3 – Learners would develop skills for applying these concepts to the solution of business problems.

5) **Category of Course :** Core Course
6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline
   e. **Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification**

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: III & IV***

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Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Strategic Management** **(15 lectures)**	• Business Policy-Meaning, Nature, Importance • Strategy-Meaning, Definition • Strategic Management-Meaning, Definition, Importance, Strategic management • Process & Levels of Strategy and Concept and importance of Strategic Business Units (SBU's) • Strategic Intent-Mission, Vision, Goals, Objective, Plans
II	**Strategy Formulation** **(15 lectures)**	• Environment Analysis and Scanning(SWOT) • Corporate Level Strategy (Stability, Growth, Retrenchment, Integration and Internationalization) • Business Level Strategy(Cost Leadership, Differentiation, Focus) • Functional Level Strategy(R&D, HR, Finance, Marketing, Production)
III	**Strategic Implementation** **(15 lectures)**	• Models of Strategy making. • Strategic Analysis& Choices &Implementation: BCG Matrix, GE 9Cell, Porter5 Forces, 7S Frame Work • Implementation: Meaning, Steps and implementation at Project, Process, Structural, Behavioral, Functional level.
IV	**Strategic Evaluation & Control** **(15 lectures)**	• **Strategic Evaluation & Control–** Meaning, Steps of Evaluation & Techniques of Control Synergy: Concept, Types, evaluation of Synergy. Synergy as a Component of Strategy & its Relevance. Change Management– Elementary Concept

11) References:

- Strategic Management, 12th Ed. Concepts and Cases, Arthur A. Jr. and A. . .J. Strickland
- Management Policy and Strategic Management (Concepts, Skills and Practices) , R.M.Shrivastava
- Business Policy and Strategic Management – P. SubbaRao
- Strategic Planning Formulation of Corporate Strategy , Ramaswamy

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Business Planning & Entrepreneurial Management**
2) **Course Code :** SF-MS-IV-C-BPEM
3) **Course Objective:**
   - Entrepreneurship is one of the major focus areas of the discipline of Management. This course introduces Entrepreneurship to budding managers.
   - To develop entrepreneurs &to prepare Learners to take the responsibility of full line of management function of a company with special reference to SME sector.

4) **Course Outcome (CO) :**

   CO1- Learner will be able to assess the commercial viability of new business opportunities.

   CO2- Learner will be able to possess the necessary skills to become successful entrepreneurs

   CO3- Learner will be able to Plan, organize, and execute a project or new venture with the goal of bringing new products and service to the market.

5) **Category of Course :** Core Course
6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Foundation of Entrepreneurship Development:** **(15 lectures)**	• Foundations of Entrepreneurship Development: • Concept and Need of Entrepreneurship Development • Definition of Entrepreneur, Entrepreneurship, • Importance and significance of growth of entrepreneurial activities • Characteristics and qualities of entrepreneur • Theories of Entrepreneurship: • Innovation Theory by Schumpeter &Imitating • Theory of High Achievement by McClelland • X-Efficiency Theory by Leibenstein • Theory of Profit by Knight • Theory of Social change by Everett Hagen External Influences on Entrepreneurship Development: • Socio-Cultural, Political, Economical, Personal. • Role of Entrepreneurial culture in Entrepreneurship Development.
II	**Types & Classification Of Entrepreneurs** **(15 lectures)**	• Intrapreneur –Concept and Development of Intrapreneurship • Women Entrepreneur – concept, development and problems faced by Women Entrepreneurs, Development of Women Entrepreneurs with reference to Self Help Group • Social entrepreneurship–concept, development of Social entrepreneurship in India. Importance and Social responsibility of NGO's. • Entrepreneurial development Program (EDP) – concept, factor influencing EDP. Option available to Entrepreneur. (Ancillarisation, BPO, Franchise, M&A)
III	**Entrepreneur Project Development &Business Plan** **(15 lectures)**	• Innovation, Invention, Creativity, Business Idea, Opportunities through change. • Idea generation– Sources-Development of product /idea, Environmental scanning and SWOT analysis • Creating Entrepreneurial Venture-Entrepreneurship Development Cycle

		• Business Planning Process-The business plan as an Entrepreneurial tool, scope and value of Business plan. • Elements of Business Plan, Objectives, Market and Feasibility Analysis, Marketing, Finance, Organization &Management, Ownership, Critical Risk Contingencies of the proposal, Scheduling and milestones.
IV	**Venture Development** **(15 lectures)**	• Steps involved in starting of Venture • Institutional support to an Entrepreneur • Venture funding, requirements of Capital (Fixed and working) • Sources of finance, problem of Venture set-up and prospects • Marketing: Methods, Channel of Marketing, Marketing Institutions and Assistance. • New trends in entrepreneurship

11) References:

- Dynamics of Entrepreneurial Development Management - Vasant Desai, Himalaya Publishing House.
- Entrepreneurial Development - S.S. Khanna
- Entrepreneurship & Small Business Management - CL Bansal, Haranand Publication
- Entrepreneurial Development in India - Sami Uddin, Mittal Publication

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Production & Total Quality Management**
2) **Course Code :** SF-MS-IV-C-PTQM
3) **Course Objective:**
   - To acquaint learners with the basic management decisions with respect to production and quality management
   - To make the learners understand the designing aspect of production systems
   - To enable the learners apply what they have learnt practically.

4) **Course Outcome (CO) :**

   CO1- Learners can implement the principles of TQM in manufacturing and service-based organization for continuous quality improvement

   CO2- Learners can apply the PDCA cycles to various organization process

   CO3- Learners can apply various quality improvement techniques

5) **Category of Course :** Core Course
6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Production Management** **(15 lectures)**	• Production Management • Objectives,Components–Manufacturing systems: Intermittent and Continuous Production Systems. • Product Development, Classification and Product Design. • Plant location &Plant layout– Objectives, Principles of good product layout, and types of layout. • Importance of purchase management.
II	**Materials Management** **(15 lectures)**	• Materials Management: • Concept, Objectives and importance of materials management • Various types of Material Handling Systems. • Inventory Management: • Importance–Inventory Control Techniques ABC, VED, FSN, GOLF, XYZ, SOS, HML. • EOQ: Assumptions limitations &advantages of Economic Order Quantity, • Simple numerical on EOQ, Lead Time, Reorder Level, Safety Stock.
III	**Basics Of Productivity & TQM** **(15 lectures)**	• Basics Of Productivity &TQM: • Concepts of Productivity, modes of calculating productivity. Importance Of Quality Management, factors affecting quality; TQM– concept and importance, Cost of Quality, Philosophies and Approaches To Quality: • Edward Deming, J. Juran, Kaizen , P. Crosby's philosophy. • Product & Service Quality Dimensions, SERVQUAL • Characteristics of Quality, Quality Assurance, Quality Circle: Objectives Of Quality Circles, Ishikawa Fish Bone, Applications in Organizations. Simple numerical on productivity
IV	**Quality Improvement Strategies &Certifications** **(15 lectures)**	• Quality Improvement Strategies &Certifications: • Lean Thinking, Kepner Tregor Methodology of problem solving, Sigma features, Enablers, Goals, DMAIC/DMADV.TAGUCHI'S QUALITY ENGINEERING, ISO 9000, ISO 1400, QS9000. Malcolm • Baldrige National Quality Award (MBNQA)

11) References:

- Production and Operations Management: R. Paneerselvam
- Production (Operations) Management: L.C. Jhamb
- K. Ashwathappa and K .Shridhar Bhatt ; Production and Operations management
- Productivity Management: Concepts and Techniques, Sawhney S.C., Tata McGraw Hill
- Srinivas Gondhalekar and Uday Salunkhe, "Productivity Techniques", Himalaya Publishing House
- Gerard Leone and Richard D. Rahn, "Productivity Techniques", Jaico Book House
- John S. Oakland, "TQM: Text with Cases", Butterworth-Heinemann
- David J. Sumanth, "Total Productivity Management (TMgt): A systematic and quantitative approach to compete in quality, price and time", St. Lucie Press

COURSE DETAILS

1) **Title of the Course: Information Technology - II**
2) **Course Code :** SF-MS-IV-AB-IT
3) **Course Objective:**

   The Course will help the learner –

   - To understand managerial decision-making and to develop perceptive of major functional area of MIS
   - To have conceptual study of Enterprise Resource Planning, Supply Chain Management, Customer Relationship Management, Key issues in implementation. This module provides understanding about emerging MIS technologies like ERP, CRM, SCM and trends in enterprise applications.
   - To understand relationship between database management and data warehouse approaches, the requirements and applications of data warehouse.
   - To learn outsourcing concepts. BPO/KPO industries, their structures, Cloud computing.

4) **Course Outcome (CO) :**

   CO1 – Learners would know about the use of commercial activity using electronic media.

   CO2 - Learners know about the basic working of different technology and new trends in commerce using electronic media

   CO3 – Learners would learn to make documents, presentations and spreadsheets.

5) **Category of Course :** Skill /Ability Enhancement Course
6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Management Information System** **(15 lectures)**	**Overview of MIS:-** Definition, Characteristics **Subsystems of MIS** (Activity and Functional subsystems) **Structure of MIS** **Reasons for failure of MIS**. **Understanding Major Functional Systems**:- Marketing & Sales Systems, Finance & Accounting Systems Manufacturing & Production Systems, Human Resource Systems ,Inventory Systems **Sub systems, description and organizational levels** **Decision support system**:- Definition, Relationship with MIS **Evolution of DSS, Characteristics, classification, objectives, components, applications of DSS**
II	**ERP/E-SCM/E-CRM** **(15 lectures)**	**Concepts of ERP** **Architecture of ERP:-** Generic modules of ERP **Applications of ERP** **ERP Implementation concepts**:- ERP lifecycle **Concept of XRP** (extended ERP) **Features of commercial ERP software**:- Study of SAP, Oracle Apps, MS Dynamics NAV, PeopleSoft **Concept of e-CRM:-** E-CRM Solutions and its advantages, How technology helps? **CRM Capabilities** and customer Life cycle, Privacy Issues and CRM **Data Mining and CRM**:- CRM and workflow Automation **Concept of E-SCM:-** Strategic advantages, benefits of E-SCM Components and Chain Architecture **Major Trends in e-SCM** **Case studies ERP/SCM/CRM**

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: III & IV***

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III	**Introduction to Data base and Data warehouse:** **(15 lectures)**	**Introduction to DBMS:** Meaning of DBMS, Need for using DBMS. Concepts of tables, records, attributes, keys, integrity constraints, schema architecture, data independence. **Data Warehousing and Data Mining:** Concepts of Data warehousing, Importance of data warehouse for an organization, Characteristics of Data warehouse, Functions of Data warehouse, Data warehouse architecture, Business use of data warehouse Standard, Reports and queries **Data Mining:** The scope and the techniques used **Business Applications of Data warehousing and Data mining**
IV	**Outsourcing** **(15 lectures)**	**Introduction to Outsourcing:** Meaning of Outsourcing, Need for outsourcing, Scope of Outsourcing. Outsourcing : IT and Business Processes **Business Process Outsourcing (BPO):** Introduction **BPO Vendors:** How does BPO Work?, BPO Service scope, Benefits of BPO, BPO and IT Services, Project Management approach in BPO, BPO and IT-enabled services **BPO Business Model:** Strategy for Business Process Outsourcing, Process of BPO**,** ITO Vs BPO **BPO to KPO:** Meaning of KPO, KPO vs BPO, KPO : Opportunity and Scope, KPO challenges, KPO Indian Scenario **Outsourcing in Cloud Environment:** Cloud computing offerings **Traditional Outsourcing Vs. Cloud Computing**

11) References:

- Information Technology for Management, 6TH ED (With CD By Efraim Turban, Dorothy Leidner, Ephraim Mclean, James Wetherbe (Ch1, Ch2)
- Microsoft Office Professional 2013 Step by Step By Beth Melton, Mark Dodge, Echo Swinford, Andrew Couch
- Tata McGraw Hill Joseph, P.T. : E-commerce An Indian Perspective (Ch-13,Ch-14)
- Computer Viruses and Related Threats: A Management Guide (Ch-2, Ch-3) By John P. Wack, Lisa J Carnahan
- (EBook:https://play.google.com/books/reader?id=tsP15h9gr8MC&printsec=frontcover&output=readerhl=en&pg=GBS.PR7.w.2.1.0)
- Electronic Commerce - Technologies & Applications.Bharat, Bhaskar
- https://play.google.com/books/reader?id=F1zbUaBtk7IC&printsec=frontcover&output=reader&hl=en&pg=GBS.PP1

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Foundation Course – III (Ethics & Governance)**
2) **Course Code :** SF-MS-IV-ID-FC
3) **Course Objective:**

The Course will help the learner –

- To understand significance of ethics and ethical practices in business which are indispensable for the progress of a country
- To learn the applicability of ethics in functional areas of marketing, finance and human resource management
- To Identify ethical dilemmas and understand their implications
- To enable learners, understand the scope of Corporate Governance

4) **Course Outcome (CO) :**

CO1- The learner would be able to apply theoretical and practical approaches to business ethics, CSR and CG relevant to contemporary environment.

CO2- The learner would be able to promote ethical standards at work place and provide a consistent example of desired ethical conduct.

CO3- The learner would be able to demonstrate a critical appreciation of importance of corporate responsibility and how it relates to corporate strategy.

5) **Category of Course :** Multi-disciplinary / Inter-disciplinary course
6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 2 credits
9) **Evaluation Pattern :**
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Ethics and Business Ethics** **(12 lectures)**	• Ethics: Concept of Ethics, Evolution of Ethics, Nature of Ethics- Personal, Professional, Managerial Importance of Ethics, Objectives, Scope, Types – Transactional, Participatory and Recognition • Business Ethics: Meaning, Objectives, Purpose and Scope of Business Ethics, Towards Society and Stakeholders, Role of Government in Ensuring Business Ethics, Principles of Business Ethics, 3 Cs of Business Ethics – Compliance, Contribution and Consequences Myths about Business Ethics, Ethical Performance in Businesses in India
II	**Ethics in Marketing, Finance and HRM** **(11 lectures)**	• Ethics in Marketing: Ethical issues in Marketing Mix, Unethical Marketing, Practices in India, Ethical Dilemmas in Marketing, Ethics in Advertising and Types of Unethical Advertisements • Ethics In Finance: Scope of Ethics in Financial Services, Ethics of a Financial Manager – Legal Issues, Balancing Act and Whistle Blower, Ethics in Taxation, Corporate Crime - White Collar Crime and Organised Crime, Major Corporate Scams in India, Role of SEBI in Ensuring Corporate Governance, Cadbury Committee Report, 1992 • Ethics in Human Resource Management: Importance of Workplace Ethics, Guidelines to Promote Workplace Ethics, Importance of Employee Code of Conduct, Ethical Leadership
III	**Corporate Governance** **(11 lectures)**	• Concept, History of Corporate Governance in India, Need for Corporate Governance • Significance of Ethics in Corporate Governance, Principles of Corporate Governance, Benefits of Good Governance, Issues in Corporate Governance • Theories- Agency Theory, Shareholder Theory, Stakeholder Theory and Stewardship Theory • Corporate Governance in India, Emerging Trends in Corporate Governance, Models of Corporate Governance, Insider Trading.

IV	**Corporate Social Responsibility (CSR) (11 lectures)**	• Meaning of CSR, Evolution of CSR, Types of Social Responsibility • Aspects of CSR- Responsibility, Accountability, Sustainability and Social Contract • Need for CSR • CSR Principles and Strategies • Issues in CSR • Social Accounting • Tata Group's CSR Rating Framework • Sachar Committee Report on CSR • Ethical Issues in International Business Practices • Recent Guidelines in CSR • Society's Changing Expectations of Business With Respect to Globalisation • Future of CSR.

11) References:

- Laura P. Hartman, Joe DesJardins, Business Ethics, Mcgraw Hill, 2nd Edition
- C. Fernando, Business Ethics – An Indian Perspective, Pearson, 2010
- Joseph DesJardins, An Introduction to Business Ethics, Tata McGraw Hill, 2nd Edition
- Richard T DeGeorge, Business Ethics, Pearson, 7th Edition
- Dr.A.K. Gavai, Business Ethics, Himalaya Publishing House, 2008
- S.K. Mandal, Ethics is Business and Corporate Governance, McGraw Hill, 2010
- Laura Pincus Hartman, Perspectives in Business Ethics, McGraw Hill International Editions.

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: III & IV***

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COURSE DETAILS

1) **Title of the Course: Dynamic Public Speaking**
2) **Course Code :** SF-MS-IV-AD-DPS
3) **Course Objective:**

   The Course will help the learner to substantially increase his/her confidence and presence as a dynamic speaker.
4) **Course Outcome (CO) :**

   CO1- The learner will be able to prepare effective speeches for various purposes

   CO2- The learner will be able to develop delivery techniques for voice, movement, and gesture

   CO3- The learner will be able to Master Speechwriting techniques for storytelling, argument, style, topic framing, and discussing evidence.
5) **Category of Course :** Additional Course
6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 2 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Public Speaking (15 lectures)**	• Public Speaking • Importance of Public Speaking • Fundamentals of Public Speaking
II	**Essentials Skills for Dynamic Public Speaking (15 lectures)**	• Type of Audience • Topic Selection and Content of Speech • Attention Grabbing opening • Presenters Style • Audience – Centric • Connecting with Audience • Visually Pleasing Presentations • Delivering Persuasive Message • Self-appraisal
III	**Different Types / Techniques of Public Speaking (15 lectures)**	• Speaking to inform / Informative Technique • Speaking to persuade / Persuasive • Speaking to Inspire: Ceremonial and Motivational Speech / Ceremonial Technique • Speaking to action / Demonstrative Technique
IV	**Practical (15 lectures)**	Practical Sessions on Public Speaking

11) References:

- Gall, Carmine. *Talk Like TED.* St. Martin's Press.2014.
- Lucas Stephen E... *The Art of Public Speaking*. McGraw Hill Education.1983
- Dale Carnegie. *How to Develop Self-Confidence & Influence People by Public Speaking*.1956.
- Dan O'Hair, Hannah Rubenstein, and Rob Stewart. *A Pocket Guide to Public Speaking*.2003
- Reddy Ramakrishna. *Public Speaking Essentials: Six Steps to Sizzle on Stage*.2016.

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: III & IV***

****

SPECIALIZATION: FINANCE

ELECTIVE COURSE DETAILS (SEM- IV)

1) **Title of the Course: Strategic Cost Management**
2) **Course Code :** SF-MS-IV-E(F)-SCM
3) **Course Objective:**

The Course will help the learner –

- To develop skills of analysis, evaluation and synthesis in cost and management accounting
- To cover the complex modern industrial organizations within which the various facets of decision-making and controlling operations take place.
- To study the relevant concept of activity based costing and activity based management
- To study concept of marginal costing and how to apply it in managerial decision making.
- To study the concept and process of managerial decision making.
- To study relevant information regarding cost audit and management audit.
- To study the importance of standard costing.
- To study the concept of divisional performance in responsibility accounting.

4) **Course Outcome (CO) :**

CO1 – Learners will get detailed knowledge about the important concept of strategic cost management with its objective, philosophies and different aspects.

CO2 – Learners Understand concept Activity Based Costing and Activity Based Management and also elaborate the steps of activity based costing.

CO3 – Learners will be able to apply marginal costing in managerial decision making.

CO4 – Learners will be able to implement budgetary control system in the business operation and ascertain performance evaluation by using standard costing.

CO5 – Learners will be able to evaluate the profit center and investment center in responsibility accounting.

5) **Category of Course :** Elective Course (Specialization : FINANCE)
6) **Semester :** IV
7) **Total Hours:** 60 hours

8) **Total Credits:** 3 credits

9) **Evaluation Pattern** :

   a. **Total Marks:** 100 Marks (10 Point Grading System)

   b. **Passing Criteria:** 40% Marks (04 Grade Points)

   c. **Marking Scheme :** 60:40 Pattern

      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)

   d. **Mode of Evaluation of Answer-book :** Online/Offline

   e. **Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification**

Q.1 A. Objectives : (Any 8 out of 10) MCQ/True or False /Match the Column-08 Marks OR Q.1 B. Objectives : (Any 7 out of 10) MCQ/True or False/Match the Column- 07 Marks
Q.2 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.2 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.3 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.3 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.4 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.4 B. Short Notes / Short practical questions - 15 Marks (Any 3 out of 5)

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	**TOPIC**	**CONTENTS COVERED**
I	**Introduction to Strategic Cost Management and Introduction to Budgetary control** **(15 lectures)**	• **Strategic Cost Management (SCM):** Concept and Philosophy-Objectives of SCM-Environmental influences on cost management practices, • **Key elements in SCM**-Different aspects of Strategic Cost Management: Value Analysis & Value Engineering, Wastage Control, Disposal Management, Business Process Re-engineering, • **Introduction to budgetary control** – Meaning and Objectives of Budgets, Purchase Budget, Production Budget and Flexible Budget.
II	**Activity Based Costing** **(15 lectures)**	• Activity Based Management and Activity Based Budgeting: • Concept, rationale, issues, limitations. Design and Implementation of Activity Based Costing (Practical Problems on ABC), and Back Flush Costing. • Evaluation criterion; Return on Cash Systems; Transfer Pricing and Divisional Performance. • Transfer Pricing in International Business, Marginal Costing and Managerial Decision Mix (Practical Problems)
III	**Strategic Cost Management performance assessment (Only theory)** **(15 lectures)**	• Cost Audit & Management Audit under companies Act, with reference to strategic assessment of cost & managerial performance • Strategic Cost-Benefit Analysis of different business restructuring propositions-Entrepreneurial approach to cost Management, with reference to core competencies, strategic advantages & long-term perspective of cost Management. Six Sigma, Learning Curve, Praise Analysis and Simulation

IV	**Variance Analysis & Responsibility Accounting (Practical Problems** **(15 lectures)**	• Standard Costing (Material, Labour, Overhead, Sales & Profit) • Responsibility Accounting –Introduction, Types & Evaluation of Profit Centre and Investment Centre

11) References:

- Dr. Girish Jakhotiya-Strategic Financial Management
- Lall, B.M. and Jain, I.C. – Cost Accounting: Principles and Practice, Prentice Hall, Delhi
- Welsch, Glenn A., Ronald W. Hilton and Paul N. Gordan – Budgeting, Profit and Control, Prentice Hall, Del
- John K Shank & Vijay Govindaraja, Strategic Cost Management - The new tool for Competitive Advantage, Free Press

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: III & IV***

****

SPECIALIZATION: FINANCE

ELECTIVE COURSE DETAILS (SEM- IV)

1) **Title of the Course: Financial Institution & Markets**
2) **Course Code :** SF-MS-IV-E(F)-FIM
3) **Course Objective:**
   - The Course aims at providing the Learners basic knowledge about the structure, role and functioning of financial institutions and markets in the financial system in India.
   - To inculcate understanding relating to managing of financial system.

4) **Course Outcome (CO) :**

CO1 – The learner would be able to define the functions of financial markets and intermediary institutions, also can Compute economic value of bonds & stocks.

5) **Category of Course :** Elective Course (Specialization : FINANCE)
6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Financial System in India (15 lectures)**	• Financial System in India • Financial System Theoretical Settings – Meaning, Importance, Functions of financial system, Indian financial system from financial neutrality to financial activism and from financial volatility to financial stability. Role of government in Financial development , Phases of Indian financial system since independence (State Domination – 1947-1990, Financial sector reforms 1991 till Financial sector Legislative Reforms Commission 2013) (Only an Overview) Monitoring Framework for financial Conglomerates, • Structure of Indian financial system – Financial Institutions (Banking & Non-Banking), Financial Markets (Organized and Unorganized) Financial Assets/Instruments, Financial Services(Fund based & Free Based) – (In details) • Microfinance - Conceptual Framework – Origin, Definitions, Advantages, Barriers, Microfinance Models in India
II	**Financial Regulators & Institutions in India (detail discussion on their role and functions) (15 lectures)**	• Financial Regulators – Ministry of Finance (Dept. of DEA, Expenditure ,Revenue, financial services and disinvestment) RBI- Changing role of RBI in the financial sector, global crisis and RBI, Ministry of Corporate Affairs, SEBI, Pension Fund Regulatory and Development Authority, IRDA. • Financial Institutions- Role, Classification, Role of Commercial banks, IFCI, IDBI, Industrial Credit and Investment Corporation of India, SFC, Investment institutions in India (LIC, GIC) NBFC services provided by NBFC. • Specialized Financial Institutions – EXIM, NABARD, SIDBI, NHB, SIDC, SME Rating agency of India Ltd, IIFCL, IWRFC (Their role, functions and area of concerns)
III	**Financial Markets (In Details) (15 lectures)**	• Indian Money Market – Meaning, Features, Functions, Importance, Defects, Participants, Components (Organized and Unorganized) (in details) and Reforms • Indian Capital Market - Meaning, Features, Functions, Importance, Participants, Instruments, Reforms in Primary and Secondary Market, Stock Indices, NSE, BSE, ADR and GDR

		• Introduction of Commodity and Derivative Markets • Insurance and Mutual funds – An introduction
IV	**Managing Financial Systems Design (15 lectures)**	• Financial System Design – Meaning, Stakeholder Lender Conflict, Manager Stock holder conflict, Conflict Resolution and Financial System Design, Bank oriented systems and Market oriented systems its advantages and drawbacks, Dimensions of well-functioning financial systems • At global level – Financial system designs of Developed countries (Japan, Germany , UK and USA) (Brief Summary) • Case studies relating to disinvestments polices of PSU in India, Global crises and failures in market systems around world

11) References:

- M. Bhole, Financial Institutions and Markets, TATA McGraw Hill
- V. A. Avadhani, Marketing of Financial Services, Himalaya Publishers, Mumbai
- Vasant Desai, Indian Financial Systems, Himalaya Publishers
- Gordon and Natarajan, Financial Services, Himalaya Publishers
- Meir Khan, Financial Institutions and Markets, Oxford Press
- Financial Markets and Institutions-Dr. S. Gurusamy, Tata McGraw Hill.
- The Indian Financial System-Dr. Bharti Pathak, Pearson.
- Indian Financial System-M.Y.Khan, Mc.Graw Hill
- Machiraju, H.R., Indian Financial System, Vikas Publications

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: III & IV***

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SPECIALIZATION: FINANCE

ELECTIVE COURSE DETAILS (SEM- IV)

1) **Title of the Course: International Finance**
2) **Course Code :** SF-MS-IV-E(F)-IF
3) **Course Objective:**
   - To familiarize with the fundamental aspects of various issues associated with International Finance
   - To get a comprehensive overview of International Finance as a separate area in International Business
   - To get introduced to the basic concepts, functions, process, techniques and create an awareness of the role, functions and functioning of International Finance in this Globalized Market.

4) **Course Outcome (CO) :**

   CO1- The learner will be able to learn the scope of International Finance and to understand the challenges faced

   CO2- The learner will learn concepts of International Monetary System.

   CO3- The learner will understand the functions of foreign exchange market and understand the factors affecting exchange rate.

   CO4 - The learner will be able to get an overview of currency options, equity market and capital budgeting.

   CO5 - The learner will know types of risk, types of taxation and Project Appraisal approach.

5) **Category of Course:** Elective Course (Specialization : FINANCE)
6) **Semester :** IV
7) **Total Hours:** 60 Hours
8) **Total Credits:** 3 Credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)

d. Mode of Evaluation of Answer-book : Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Q.1 A. Objectives : (Any 8 out of 10) MCQ/True or False /Match the Column-08 Marks OR Q.1 B. Objectives : (Any 7 out of 10) MCQ/True or False/Match the Column- 07 Marks
Q.2 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.2 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.3 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.3 B. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks)
Q.4 A. Practical Question - 15 Marks (may be divided into 2 sub questions of 07 and 08 marks) OR Q.4 B. Short Notes / Short practical questions - 15 Marks (Any 3 out of 5)

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules/Units:

MODULE NO.	MODULE TOPIC	CONTENTS COVERED
I	Module I : **Fundamentals of International Finance** **(15 lectures)**	• **Introduction to International Finance:** Meaning/ Importance of International Finance, Scope of International Finance, Globalization of the World Economy, Goals of International Finance, The Emerging Challenges in International Finance. • **International Monetary Systems:** Evolution of International Monetary System , Gold Standard System , Bretton Woods System, Flexible Exchange Rate Regimes – 1973 to Present, Current Exchange Rate Arrangements, European Monetary System, Fixed & Flexible Exchange Rate System. • **An introduction to Exchange Rates:** Foreign Bank Note Market, Spot Foreign Exchange Market, Exchange Rate Quotations, Direct & Indirect Rates, Cross Currency Rates, Spread & Spread %, Factors Affecting Exchange Rates
II	Module II : **Foreign Exchange Markets, Exchange Rate Determination & Currency Derivatives** **(15 lectures)**	• **Foreign Exchange Markets:** Introduction to Foreign Exchange Markets, Structure of Foreign Exchange Markets, Types of Transactions & Settlement Date, Exchange Rate Quotations & Arbitrage, Forward Quotations (Annualized Forward Margin) • **International Parity Relationships & Foreign Exchange Rate:** Interest Rate Parity, Purchasing Power Parity & Fishers Parity, Forecasting Exchange Rates (Efficient Market Approach, Fundamental Approach, Technical Approach, Performance of the Forecasters), Global Financial Markets & Interest Rates (Domestic & Offshore Markets, Money Market Instruments) • **Currency & Interest Rate Futures:** Introduction to Currency Options (Option on Spot, Futures & Futures Style Options), Futures Contracts, Markets & the Trading Process, Hedging & Speculation with Interest Rate Futures, Currency Options in India.
III	Module III : **World Financial Markets & Institutions & Risks** **(15 lectures)**	• **Euro Currency Bond Markets:** Introduction to Euro Currency Market, Origin of Euro Currency Market, Euro Bond Market (Deposit, Loan, Notes Market), Types of Euro Bonds, Innovation in the Euro Bond Markets, Competitive Advantages of Euro Banks, Control Regulation of Euro Bond Market

		• **International Equity Markets & Investments:** Introduction to International Equity Market, International Equity Market Benchmarks, Risk & Return from Foreign Equity Investments, Equity Financing in the International Markets, Depository Receipts – ADR,GDR,IDR • **International Foreign Exchange Markets:** Meaning of International Foreign Exchange Market, FERA v/s FEMA, Scope & Significance of Foreign Exchange Markets, Role of Forex Manager, FDI v/s FPI, Role of FEDAI in Foreign Exchange Market
IV	Module IV: **Foreign Exchange Risk, Appraisal & Tax Management.** **(15 lectures)**	• **Foreign Exchange Risk Management:** Introduction to Foreign Exchange Risk Management, Types of Risk, Trade & Exchange Risk, Portfolio Management in Foreign Assets, Arbitrage Speculation • **International Project Appraisal:** Meaning of Project Appraisal, Review of Net Present Value Approach (NPV), Option Approach to Project Appraisal, Project Appraisal in the International Context, Practice of Investment Appraisal

11) References:

- P G Apte, International Financial Management, 5th Edition, The McGraw Hill
- Cheol . S. Eun & Bruce G. Resnick, International Finance Management
- Maurice D. Levi, International Finance – Special Indian Edition
- Prakash G. Apte, International Finance – A Business Perspective
- V A.Aadhani, International Finance

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: III & IV***

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SPECIALIZATION: MARKETING

ELECTIVE COURSE DETAILS (SEM- IV)

1) **Title of the Course: Integrated Marketing Communication**
2) **Course Code :** SF-MS-IV-E(M)-IMC
3) **Course Objective:**

   The Course will help the learner –

   - To equip the Learners with knowledge about the nature, purpose and complex construction in the planning and execution of an effective Integrated Marketing Communication (IMC) program.
   - To understand the various tools of IMC and the importance of coordinating them for an effective marketing communication program.

4) **Course Outcome (CO) :**

   CO1 –Learner can understand the nature of IMC and describe its environment

   CO2 - Learner can Analyze and evaluate the cost effectiveness of various forms of media

   CO3- Learner can explain the behavioral factors that influence the effectiveness of communications

5) **Category of Course :** Elective Course (Specialization : MARKETING)
6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 Credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Integrated Marketing Communication (15 lectures)**	• Meaning, Features of IMC, Evolution of IMC, Reasons for Growth of IMC. • Promotional Tools for IMC, IMC planning process, Role of IMC in Marketing • Communication process, Traditional and alternative Response Hierarchy Models • Establishing objectives and Budgeting: Determining Promotional Objectives, Sales vs Communication Objectives, DAGMAR, Problems in setting objectives, setting objectives for the IMC Program.
II	**Elements of IMC – I (15 lectures)**	• Advertising – Features, Role of Advertising in IMC, Advantages and Disadvantages, Types of Advertising, Types of Media used for advertising. • Sales promotion – Scope, role of Sales Promotion as IMC tool, Reasons for the growth, Advantages and Disadvantages, Types of Sales Promotion, objectives of consumer and trade promotion, strategies of consumer promotion and trade promotion, sales promotion campaign, evaluation of Sales Promotion campaign.
III	**Elements of IMC – II (15 lectures)**	• Direct Marketing - Role of direct marketing in IMC, Objectives of Direct Marketing, Components for Direct Marketing, Tools of Direct Marketing – direct mail, catalogues, direct response media, internet, telemarketing, alternative media evaluation of effectiveness of direct marketing • Public Relations and Publicity – Introduction, Role of PR in IMC, Advantages and Disadvantages, Types of PR, Tools of PR ,Managing PR – Planning, implementation, evaluation and Research, Publicity, Sponsorship – definition, Essentials of good sponsorship, event sponsorship, cause sponsorship • Personal Selling – Features, Role of Personal Selling in IMC, advantages and disadvantages of Personal Selling, Selling process, Importance of Personal Selling

IV	**Evaluation & Ethics in Marketing Communication (15 lectures)**	• Evaluating an Integrated Marketing program – Evaluation process of IMC – Message Evaluations, Advertising tracking research – copy testing – emotional reaction test, cognitive Neuro science – online evaluation, Behavioral Evaluation – sales and response rate, POPAI, Toll free numbers, QR codes and Facebook likes, response cards, Internet responses, redemption rate Test Markets – competitive responses, scanner data, Purchase simulation tests • Ethics and Marketing communication – stereotyping, targeting vulnerable customers, offensive brand messages – legal issues – Commercial free speech, misleading claims, puffery, fraud, questionable B2B practices • Current Trends in IMC – Internet & IMC, Advertising on internet, PR through Internet Banner, Sales promotion on Internet, direct marketing on internet.

11) References:

- Belch, Michael, Belch,George "Advertising and Promotion: An integrated marketing communications perspective" Tata McGraw Hill 2010
- Clow ,Kenneth E ;Back, Donald E "Integrated Advertising Promotion and Marketing Communication", Pearson Edu 2014
- Duncan,Tom,"Principles of Advertising and IMC",Tata McGraw Hill Pub 2006
- Shah, Kruti ;D'Souza, Allan, "Advertising and IMC",Tata McGraw Hill 2014
- Shimp, Terence, "Advertising and promotion: An IMC Approach", Cengage Learning. 2007
- Dutta,Kirti, "Integrated Marketing Communication" Oxford University Press ,2016
- Gopalakrishnan, P S , "Integrated Marketing Communication: Concepts and Cases",ICFAI University Press,2008

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: III & IV***

****

SPECIALIZATION: MARKETING

ELECTIVE COURSE DETAILS (SEM- IV)

1) **Title of the Course: Event Marketing**
2) **Course Code :** SF-MS-IV-E(M)-EVENT
3) **Course Objective:**

   The Course will help the learner –

   - To understand basic concepts of Event Marketing.
   - To impart knowledge to learners about categories of Events.
   - To understand segmenting, targeting and positioning in the context of Event Marketing.
   - To familiarize learners with trends and challenges in Event Marketing.

4) **Course Outcome (CO) :**

   CO1 – Enables the Learners to enquire the scope of event management practice and come up with new methodologies of working.

   CO2- Learner will identify business opportunities, developing creative outcomes and build a viable business model and business plan.

   CO3- Learner will develop good communication skills in order to efficiently interact with clients and articulate ideas and get trained in effective decision-making skills.

5) **Category of Course :** Elective Course (Specialization : MARKETING)
6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Events (15 lectures)**	• Definition and Meaning of Event Marketing ; The Evolution of Event Marketing, • Advantages of Event Marketing, 5 C's of Events-Conceptualization, costing, canvassing, customization, carrying-out; Event Designing; Reach; Interaction-Interaction Points, Direct Interaction, Indirect Interaction, Interaction Catalysts or Enablers. • Importance of Events as a Marketing Communication Tool; Events as a Marketing Tool: The Varied Marketing Needs Addressed by Events: Brand Building, Focus on Target Market, Implementation of Marketing Plan, Marketing Research, Relationship Building, Creating opportunities for better deals with different media, Events and their Economic implications. • Concept of Event Creativity, Key Elements of Events: Event Infrastructure; Customer Groups; Clients; Event Organizers; Venue; Media
II	**Segmenting, Targeting and Positioning of Events and Concept of Product in Events (15 lectures)**	• Concept of Market in Events; Segmentation and targeting of the Market for events; Positioning of events-Event Property. • Concept of Product in Events: Benefit Levels-Core, generic, expected, augmented; Categories of Events: Competitive Events, Artistic Expression, Cultural Celebrations, Exhibition Events, Charitable Events ,Special Business Events, Retail Events. • Event Variations- Time Frame Based, Concept Based, Artist Based, Client Industry Based
III	**Concept of Pricing and Promotion in Events (15 lectures)**	• Risk Rating, Setting Pricing Objectives, Understanding local legislations and tax laws, Feedback about events from the market, skills required for negotiating the best price, validation against pricing objectives, pricing decisions, Event Charges: Percentage of the total Event Cost, Flat Fee, Package Price, Hourly Rate. • Networking Components: Print Media, Radio, Television, Internet, Outdoor Media, Direct Marketing, Sales Promotion, Public Relations, Merchandising, In-venue Publicity.

		• Event Sponsorship: Concept of Sponsorship, Sponsorship in a communication context, Synergy between sponsor and Event, Identifying Potential sponsors, Impact Measurement, Practical Sponsor Incentivization, In-Kind Sponsorship.
IV	**Trends and Challenges in Event Marketing** **(15 lectures)**	• E-event marketing, Virtual Events, Societal Event Marketing, Green Event, Cause-Related Event Marketing, Sports Event Marketing. • Safety and Security of Event • Crisis Management • Growth of Event Industry in India • Career in Event Marketing

11) References:

- Preston C.A., "Event Marketing: How to successfully promote Events, Festivals, Conventions, and Expositions', Wiley, Second Edition, 2015
- Gaur Sanjaya Singh and Sanjay V Saggere, "Event Marketing and Management', Vikas Publishing House Pvt. Ltd. , 2003
- Sharma Diwakar, "Event Planning & Management', Deep and Deep Publications Pvt. Ltd., 2005
- Hoyle Leonard H., Ëvent Marketing-How to successfully Promote Events, Festivals, Conventions and Expositions", Wiley, 2009
- Genadinik Alex, "Event Planning-Management and Marketing for Successful Events', Create Space Independent Publishing Platform, 2015
- Harichandan C.P., "Event Management", Global Vision Publishing House, 2010
- Goyal K. Swarup, "Event Management", Adhyayan Publishers, 2013

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: III & IV***

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SPECIALIZATION: MARKETING

ELECTIVE COURSE DETAILS (SEM- IV)

1) **Title of the Course: Tourism Marketing**
2) **Course Code :** SF-MS-IV-E(M)-TOUR
3) **Course Objective:**
   - To understand basic concepts and strategies of Tourism Marketing.
   - To impart knowledge to learners about types of tourism.
   - To understand segmentation and Marketing mix in the context of Tourism Marketing
   - To familiarize learners with trends and challenges in Tourism Marketing

4) **Course Outcome (CO) :**

CO1 – By the end of this course, learners would be able to: understand fundamentals of tourism from the management, marketing and financial perspectives.

CO2- Learner will understand the concepts of travel and tourism, the framework of the system, types and forms of tourism as well as the impact on tourism.

5) **Category of Course :** Elective Course (Specialization : MARKETING)
6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Tourism Marketing (15 lectures)**	Meaning of Tourism & Tourist, Features of Tourism, Purpose of Tourism, Adverse Effects of Tourism, Factors Influencing growth of Tourism, Classification of Tourism; Types of Tourism: Health, adventure, rural, cultural, religious, eco-Tourism, wedding Tourism, cruise Tourism. • Tourism Marketing Meaning, Objectives of Tourism Marketing, Importance of Tourism Marketing, Problems of Tourism Marketing. • Phases of Tourism: Economic Approach, Environmental Approach, Cost Benefit Approach. • Tourism Planning: Process, Study of market, Levels of tourism planning, Organization of a tour. Tour Operators and Travel Agents: functions, types, distribution network, Travel agency operations, Travel Organization-Individual and group, travel itinerary. Travel Formalities and Documentation.
II	**Tourism Market Segmentation & Product Mix of Tourism Marketing (15 lectures)**	Tourism Market Segmentation: Meaning, Need for Market Segmentation in Tourism Importance of Market Segmentation in Tourism Bases for Segmentation in Tourism Tourist Typology: Cohens Typology, Plog's Typology • 4 'A's of Tourism Attraction: Meaning, Typology of Attraction, Natural, Artificial, Cultural, Social, Managed Attraction for Tourist, Peter's Inventory of Tourist Accommodation: Meaning, Typology of Accommodation Accessibility: Meaning, Transportation System for Tourism, Surface Transport, Railways and its contribution to tourism, Sea & Waterways, Airways Amenities: Meaning, Amenities & Facilities at the destination. • Marketing Strategy: Hard v/s Soft Tourism Strategy. • Product Mix of Tourism Marketing: Meaning, Tourism Destination Life Cycle, Factors for tourism destination selection, launching a new tourism product, Tourism Product and Package Tour, Itinerary meaning, Types of Itinerary, Drawing a Itinerary for Tourist, Reservation meaning, Sources of reservation, Modes of Reservation, Ticketing Procedure.
III	**Concept of Pricing, Place, Promotion and Expanded marketing mix for tourism marketing**	• Price: Meaning, Factors Influencing Tourism Pricing, Tourism Pricing Objectives, Tourism Pricing Policies • Place: Meaning, Factors Influencing Tourism Distribution, Tourism Distribution System, Middlemen in Tourism Industry,

	(15 lectures)	Functions of Middlemen, Travel Guide Meaning, Essential of an ideal travel guide. • Promotion: Tourism Advertising, Tourism Publicity, Tourism Public Relation, Tourism Sales promotion Technique, Personal Selling in Tourism, Skills required for Selling Tourism Product, Electronics Channel of Tourism • People: Moment of Truth in Tourism, Employee as an element of people mix, Internal Marketing, Objectives of Internal Marketing, Internal marketing Process. • Process: Meaning, Factors to be considered while designing the service process, Tourism Service Blueprinting: Meaning, Steps, Benefits of Blueprinting • Physical Evidence for Tourism
IV	**Global tourism, tourism organizations and Challenges for Indian Tourism Industry** **(15 lectures)**	Global Tourism Market: Overview of Tourism Market of America, Mauritius, Asia Pacific, Thailand, Vietnam, China, Singapore, Middle East and Gulf, UK and other European Countries. • Status of tourism in developing countries. • India as a Tourist Destination: A conceptual framework, Destination Image, Building Brand India; Incredible India Campaign • Challenges for Indian Tourism Industry • Tourism Organizations: World Trade Organization (WTO), International Civil Aviation Organization (ICAO), International Air Transport Association (IATA), Pacific Asia Travel Association (PATA), Universal Federation of Travel Agents Association (UFTAA), Travel Agents Association of India (TAAI), Indian Association of Tour Operators (IATO), Ministry of Tourism, Government of India, India Tourism Development Corporation.

11) References:

- S.M.Jha, Tourism Marketing, Himalaya Publishing House, Second Edition, 2011
- Prasanna Kumar, Marketing of Hospitality and Tourism Services, Tata McGraw Hill, 2010
- Kshitiz Sharma, Introduction to Tourism Management, McGraw Hill Education (India) Pvt. Ltd, 2014
- Sunil Kabia, Tourism and the developing countries, Mohit Publications, First edition, 2005
- M.V.Kulkarni, Tourism marketing, Everest Publishing House, First edition, 2005
- Alan A. Lew, A companion to tourism, Blackwell Publishing
- Krishnan K Kamra, Tourism: An Overview

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: III & IV***

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SPECIALIZATION: HUMAN RESOURCE MANAGEMENT

ELECTIVE COURSE DETAILS (SEM- IV)

1) **Title of the Course: Training & Development**
2) **Course Code :** SF-MS-IV-E(HR)-TD
3) **Course Objective:**

   The Course will help the learner –

   - To observe, interpret the issues and modify his approach and behavior.
   - To rapidly progress as technology has changed not only in the physical facilities but also in the abstract qualities required of the men who are using them.

4) **Course Outcome (CO) :**

   CO1 – This Course will attempt to orient the Learners to tailor themselves to meet the specific needs of the organizations in training and development activities

   CO2 – Learners will get acquainted with the recent trends, innovations and methodology that has changed HRM due to the advent of technology and dynamics of the businesses.

5) **Category of Course :** Elective Course (Specialization : HUMAN RESOURCE MANAGEMENT)
6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Overview of Training** **(15 lectures)**	• Overview of training– concept, scope, importance, objectives, features, need and assessment of training. • Process of Training–Steps in Training, identification of Job Competencies, criteria for identifying Training Needs (Person Analysis, Task Analysis, and Organisation Analysis), Types– On the Job &Off the Job Method. • Assessment of Training Needs, Methods & Process of Needs Assessment. • Criteria &designing-Implementation– an effective training program.
II	**Overview of Development** **(15 lectures)**	• Overview of development– concept, scope, importance & need and features, Human Performance Improvement • Counselling techniques with reference to development employees, society and organization. • Career development– Career development cycle, model for planned self-development, succession planning.
III	**Concept of Management Development (15 lectures)**	• Concept of Management Development. • Process of MDP. • Programs &methods, importance, evaluating a MDP.
IV	**Performance measurement, Talent management & Knowledge management** **(15 lectures)**	• Performance measurements– Appraisals, pitfalls &ethics of appraisal. • Talent management –Introduction ,Measuring Talent Management, Integration & future of TM, Global TM &knowledge management- OVERVIEW -Introduction: History, Concepts, Knowledge Management: Definitions and the Antecedents of KM Information Management to Knowledge Management ,Knowledge Management: What Is and What Is Not?, Three stages of KM, KM Life Cycle

11) References:

- Brinkerhoff, Robert, .Achieving Results from Training How to evaluate HRD to Strengthen programs and Increase impact. 1987, Jossey bass, San Francisco.
- Craig, Robert L. Training and Development Handbook. , 3rd ed. 1987. McGraw Hill, New York
- Employee Training And Development - Raymond Noe
- Every Trainers Handbook- Devendra Agochia
- 360 Degree Feedback, Competency Mapping And Assessment Centre- Radha Sharma
- Training And Development- S.K. Bhatia.

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: III & IV***

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SPECIALIZATION: HUMAN RESOURCE MANAGEMENT

ELECTIVE COURSE DETAILS (SEM- IV)

1) **Title of the Course: Change Management**
2) **Course Code :** SF-MS-IV-E(HR)-CHANGE
3) **Course Objective:**
   - To prepare Learners as organizational change facilitators using the knowledge and techniques of behavioural science.
   - To make Learners understand various forces for organizational change
   - To introduce Learners to the concept of resistance to change and also share insights on how to manage such resistance

4) **Course Outcome (CO) :**

   CO1 –Learners will know the concept of organizational change and adapt himself using the knowledge and techniques of behavioral science.

   CO2 - Learners understand various influencing factors for organizational change.

   CO3 –Learners will learn how to overcome resistance to change in an organization.

5) **Category of Course :** Elective Course (Specialization : HUMAN RESOURCE MANAGEMENT)
6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction (15 lectures)**	• Introduction &levels of change. Importance, imperatives of change, Forces of change. Causes-social, economic, technological and organizational. • Organizational culture& change. • Types & Models of change –Kurt Lewin's change model, Action research, Expanded Process Model., A.J. Leavitts model.
II	**Impact of Change (15 lectures)**	• Change & its implementation- individual change: concept, need, importance & risk of not having individual perspective. Team Change –concept, need, importance & limitation • Change & its impact– Resistance to change & sources-sources of individual resistance, sources of organizational resistance
III	**Resistance to Change (15 lectures)**	• Overcoming Resistance to change – Manifestations of resistance, Six box model • Minimizing RTC. • OD Interventions to overcome change-meaning and importance, Team intervention, Role analysis Technique, Coaching &mentoring, T-group, Job expectations technique, Behaviour modification, and managing role stress.
IV	**Effective Implementation of Change (15 lectures)**	• Effective implementation of change–change agents and effective change programs. • Systematic approach to change, client & consultant relationship • Classic skills for leaders • Case study on smart change leaders

11) References:

- Organisational Development by French and Bell
- An experiential approach to O.D. by Harvey and Brown
- Consultants and Consulting Styles by Dharani Sinha P.
- Kavita Singh- Organization change
- S.K. Bhatia- Organisational Change-
- K.Ashwathapa- Management & OB, HRM.
- Radha Sharma- Training & Development.

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: III & IV***

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SPECIALIZATION: HUMAN RESOURCE MANAGEMENT

ELECTIVE COURSE DETAILS (SEM- IV)

1) **Title of the Course: Conflict & Negotiation**
2) **Course Code :** SF-MS-IV-E(HR)-CONF
3) **Course Objective:**

   The Course will help the learner –

   - To understand the nature of conflicts, their causes and outcomes
   - To study the aspects of conflict management and how to handle them effectively
   - To get insight into negotiations and negotiation process
   - To understand the role of third party negotiation and skills for effective negotiation

4) **Course Outcome (CO) :**

   CO1 –The learner will learn the study of the theory, processes, and practices of negotiation, conflict resolution, and relationship management

   CO2 –To learner would be able to examine effective and ineffective strategies, relating to negotiations

   CO3 – The learner would be able to understand principles of negotiation and apply to a vast and diverse range of personal, business and public situations.

5) **Category of Course :** Elective Course (Specialization : HUMAN RESOURCE MANAGEMENT)
6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 Credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline
   e. **Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification**

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	**MARKS**
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	05 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Overview of Conflict** **(15 lectures)**	• Meaning of Conflict, Nature, and Transitions in Conflict Thought – Traditional View, Human Relations View, and Interactionist View. Functional and Dysfunctional Conflict, Levels of Conflicts, Process of Conflicts. • Meaning of Industrial/ Organizational Conflict, Causes, Benefits and Limitations of Conflicts to the Organization. • Conflict Outcomes - win-lose, lose-lose, compromise, win-win. Five belief domains of Conflicts – Superiority, Injustice, Vulnerability, Distrust, Helplessness
II	**Conflict Management** **(15 lectures)**	• Meaning of Conflict management, Need and Importance of Conflict management, Conflict Resolution Strategies - Competing, Accommodating, Avoiding, Compromising, and Collaborative. Strategies for resolving conflicts at – Intra-personal, Inter-personal, Intragroup and Inter group levels. • Prevention of Industrial Conflicts – Labour welfare officer, Tripartite and Bipartite Bodies, Standing Orders, Grievance Procedure, Collective Bargaining. • Settlement of Conflicts – Investigation, Mediator, Conciliation, Voluntary arbitration, compulsory arbitration, labour courts, industrial tribunals, national tribunals
III	**Overview of Negotiation** **(15 lectures)**	• Negotiation - Meaning, Importance of Negotiation, Process, Factors/ Elements affecting negotiation, Challenges for an Effective Negotiation • Role of Communication, Personality and Emotions in Negotiation. • Distributive and Integrative Negotiation (concepts) • Cross-Cultural Negotiation – Meaning, Factors influencing cross-cultural negotiations, Ways to resolve Cross Cultural negotiation. • Types of Negotiations in Corporate/ Work Place – Day to Day, Employer – Employee, Negotiation between Colleagues, Commercial Negotiation, Legal Negotiations

		• International Negotiations - Meaning, Factors affecting negotiation
IV	**Managing Negotiations, Ethics in Negotiation and 3D Negotiation** **(15 lectures)**	• Third Party Negotiation 1. Mediation - Meaning, Role of Mediator 2. Arbitration – Meaning, Role of Arbitrator 3. Conciliation – Meaning, Role of Conciliator 4. Consultation – Meaning, Role of Consultant • Skills for Effective Negotiation • Negotiation as an Approach to Manage Conflicts. • Ethics in Negotiation – Meaning, Need, Ethically Ambiguous Negotiation Tactics. • Culture and Negotiation – Meaning, Influence of culture on negotiations • 3D Negotiation – Meaning, The 3 Dimensions for successful negotiations

11) References:

- Lewicki, Saunders & Barry - Negotiation (Tata Mc Graw Hill, 5th Ed.)
- B. D. Singh - Negotiation Made Simple (Excel Books, 1st Ed.)
- Consultants and Consulting Styles by Dharani Sinha P.
- Kavita Singh- Organization change
- S.K. Bhatia- Organisational Change
- K.Ashwathapa- Management & OB, HRM.

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: V & VI***

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SEMESTER- V

COURSE DETAILS

1) **Title of the Course: Logistics & Supply Chain Management**
2) **Course Code :** SF-MS-V-C-LSCM
3) **Course Objective:**
   - To provide Learners with basic understanding of concepts of logistics and supply chain management.
   - To provide an insight in to the nature of supply chain, its functions and supply chain systems.
   - To understand global trends in logistics and supply chain management.

4) **Course Outcome (CO) :**

   CO1 – The learner will learn the basic concept of logistics and supply chain management.

   CO2 – This will help the learner to evaluate the demand forecasting.

   CO3 – It will help the learner to understand global trends in logistics and supply chain management.

5) **Category of Course :** Core Course
6) **Semester :** V
7) **Total Hours:** 60 hours
8) **Total Credits:** 4 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	15 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	10 Marks
TOTAL	**40 Marks**

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: V & VI***

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10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Overview of Logistics and Supply Chain Management**	a) Introduction to Logistics Management • Meaning, Basic Concepts of Logistics- Logistical Performance Cycle, Inbound Logistics, In process Logistics, Outbound Logistics, Logistical Competency, Integrated Logistics, Reverse Logistics and Green Logistics • Objectives of Logistics, Importance of Logistics, Scope of Logistics, Logistical Functions/Logistic Mix, Changing Logistics Environment b) Introduction to Supply Chain Management • Meaning, Objectives, Functions, Participants of Supply Chain, Role of Logistics in Supply Chain, Comparison between Logistics and Supply Chain Management, Channel Management and Channel Integration c) Customer Service: Key Element of Logistics • Meaning of Customer Service, Objectives, Elements, Levels of customer service, Rights of Customers d) Demand Forecasting • Meaning, Objectives, Approaches to Forecasting, Forecasting Methods, Forecasting Techniques, (Numerical on Simple Moving Average, Weighted Moving Average)
II	**Elements of Logistics Mix**	a) Transportation • Introduction, Principles and Participants in Transportation, Transport Functionality, Factors Influencing Transportation Decisions, Modes of Transportation- Railways, Roadways, Airways, Waterways, Ropeways, Pipeline, Transportation Infrastructure, Intermodal Transportation b) Warehousing • Introduction, Warehouse Functionality, Benefits of Warehousing, Warehouse Operating Principles, Types of Warehouses, Warehousing Strategies, Factors affecting Warehousing c) Materials Handling • Meaning, Objectives, Principles of Materials Handling, Systems of Materials Handling, Equipments used for

		Materials Handling, Factors affecting Materials Handling Equipment d) Packaging • Introduction, Objectives of Packaging, Functions/Benefits of Packaging, Design Considerations in Packaging, Types of Packaging Material, Packaging Costs
III	**Inventory Management, Logistics Costing, Performance Management and Logistical Network Analysis**	a) Inventory Management • Meaning, Objectives, Functions, Importance, Techniques of Inventory Management (Numerical - EOQ and Reorder levels) b) Logistics Costing • Meaning, Total Cost Approach, Activity Based Costing, Mission Based Costing c) Performance Measurement in Supply Chain • Meaning, Objectives of Performance Measurement, Types of Performance Measurement, Dimensions of Performance Measurement, Characteristics of Ideal Measurement System d) Logistical Network Analysis • Meaning, Objectives, Importance, Scope, RORO/LASH
IV	**Recent Trends in Logistics and Supply Chain Management**	a) Information Technology in Logistics • Introduction, Objectives, Role of Information Technology in Logistics and Supply Chain Management, Logistical Information System, Principles of Logistical Information System, Types of Logistical Information System, Logistical Information Functionality, Information Technology Infrastructure b) Modern Logistics Infrastructure • Golden Quadrilateral, Logistics Parks, Deep Water Ports, Dedicated Freight Corridor, Inland Container Depots/Container Freight Stations, Maritime Logistics, Double Stack Containers/Unit Trains c) Logistics Outsourcing • Meaning, Objectives, Benefits/Advantages of Outsourcing, Third Party Logistics Provider, Fourth Party Logistics Provider, Drawbacks of Outsourcing, Selection of Logistics Service Provider, Outsourcing-Value Proposition d) Logistics in the Global Environment • Managing the Global Supply Chain, Impact of Globalization on Logistics and Supply Chain Management, Global Logistics Trends, Global Issues and Challenges in Logistics and Supply Chain Management

11) References:

- David Simchi, Levi. and Philip, Kaminshy. *Designing & Managing the Supply Chain - Concepts, Strategies and Case Studies Logistics.*
- Donald Waters. *An Introduction to Supply Chain.*
- Martin, Christopher. *Logistics & Supply Chain Management - Strategies for Reducing Cost & Improving Services.*
- Vinod, Sople. *Logistic Management - The Supply Chain Imperative*.
- Donald J, Bowersox. and David J, Closs. *Logistic Management - The Integrated Supply Chain Process.*
- Alan, Rushton. *The Handbook of Logistics and Distribution Management Understanding the Supply Chain.*
- Donald, J. Bowersox & David J, Closs. *Logistical Management-The Integrated Supply Chain Process*. McGraw Hill Education.
- Ronald H, Ballou. & Samir K, Srivastava. *Business Logistics/ Supply Chain Management.* Pearson.
- Donald J, Bowersox. And David J, Closs. *Supply Chain Logistics Management*. The McGraw Hill Companies.

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: V & VI***

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COURSE DETAILS

1) **Title of the Course: Corporate Communication & Public Relations**
2) **Course Code :** SF-MS-V-C-CCPR
3) **Course Objective:**
   - To provide the Learners with basic understanding of the concepts of corporate communication and public relations
   - To introduce the various elements of corporate communication and consider their roles in managing organizations
   - To examine how various elements of corporate communication must be coordinated to communicate effectively
   - To develop critical understanding of the different practices associated with corporate communication

4) **Course Outcome (CO) :**

   CO1– Learner will be able to comprehend various aspects of corporate communication

   CO2 – Learner will be able to understand various aspects and theories of Public Relations

   CO3 – Learner able to understand various mass media laws and use of technology in CCPR

5) **Category of Course :** Core Course
6) **Semester :** V
7) **Total Hours:** 60 hours
8) **Total Credits:** 4 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	15 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	10 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Foundation of Corporate Communication**	• Corporate Communication: Scope and Relevance Introduction, Meaning, Scope, Corporate Communication in India, Need/ Relevance of Corporate Communication in Contemporary Scenario • Keys concept in Corporate Communication Corporate Identity: Meaning and Features, Corporate Image: Meaning, Factors Influencing Corporate Image, Corporate Reputation: Meaning, Advantages of Good Corporate Reputation • Ethics and Law in Corporate Communication Importance of Ethics in Corporate Communication, Corporate Communication and Professional Code of Ethics, Mass Media Laws: Defamation, Invasion of Privacy, Copyright Act, Digital Piracy, RTI
II	**Understanding Public Relations**	• Fundamental of Public Relations: Introduction, Meaning, Essentials of Public Relations, Objectives of Public Relations, Scope of Public Relations, Significance of Public Relations in Business • Emergence of Public Relations: Tracing Growth of Public Relations, Public Relations in India, Reasons for Emerging International Public Relations • Public Relations Environment: Introduction, Social and Cultural Issues, Economic Issues, Political Issues, Legal Issues • Theories used in Public Relations: Systems Theory, Situational Theory, Social Exchange Theory, Diffusion Theory
III	**Functions of Corporate Communication and Public Relations**	• Media Relations: Introduction, Importance of Media Relations, Sources of Media Information, Building Effective Media Relations, Principles of Good Media Relations • Employee Communication: Introduction, Sources of Employee Communications, Organizing Employee Communications, Benefits of Good Employee Communications, Steps in Implementing An Effective Employee Communications Programme, Role of Management in Employee Communications

		• Crisis Communication: Introduction, Impact of Crisis, Role of Communication in Crisis, Guidelines for Handling Crisis, Trust Building • Financial Communication: Introduction, Tracing the Growth of Financial Communication in India, Audiences for Financial Communication, Financial Advertising
IV	**Emerging Technology in Corporate Communication and Public Relations**	• Contribution of Technology to Corporate Communication Introduction, Today's Communication Technology, Importance of Technology to Corporate Communication, Functions of Communication Technology in Corporate Communication, Types of Communication Technology, New Media: Web Conferencing, Really Simple Syndication (RSS) • Information Technology in Corporate Communication Introduction, E-media Relations, E-internal Communication, E-brand Identity and Company Reputation • Corporate Blogging Introduction, Defining Corporate Blogging, Characteristics of a Blog, Types of Corporate Blogs, Role of Corporate Blogs, Making a Business Blog

11) References:

- Richard R. Dolphin, The Fundamentals of Corporate Communication
- Joep Cornelissen, Corporate Communications: Theory and Practice
- James L.Horton,Integrating Corporate Communication: The Cost Effective Use of Message & Medium
- Sandra Oliver, Handbook of Corporate Communication & Public Relations A Cross-Cultural Approach
- Rosella Gambetti, Stephen Quigley, Managing Corporate Communication
- Joseph Fernandez, Corporate Communications: A 21st Century Primer
- C.B.M. van Riel, Chris Blackburn, Principles of Corporate Communication
- Jaishri Jethwaney, Corporate Communication: Principles and Practice

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: V & VI***

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COURSE DETAILS

1) **Title of the Course: Introduction to Logic & Reasoning**
2) **Course Code:** SF-MS-V-AB-LAR
3) **Course Objective:**

The Course will help the learner –

- To identify the core skills associated with critical thinking.
- To construct a logically sound and well-reasoned argument.
- To avoid the various fallacies that can arise through the misuse of logic.

4) **Course Outcome (CO):**

After reading this course, learner would able to-

CO1 – Understand and explain the importance of critical thinking

CO2 - Demonstrate the difference between deductive and inductive reasoning

CO3 – Have a base of analytical thought process which would be a help in qualifying Competitive Exams.

5) **Category of Course:** Skill/Ability Enhancement Course
6) **Semester:** V
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	15 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	10 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Number and Letter Series**	• Types of Number Series • One Line Series • Two Line Series • Letter Series
II	**Coding-Decoding and Relationship**	• Letter Coding • Letter and Numerical Coding • Coding using Position Number of alphabet • Substitution Coding • Artificial Language coding • Relationships
III	**Logical Diagram and Venn Diagram**	• Venn Diagrams • Relationship diagrams
IV	**Ranking and Sitting Arrangement**	• Ranking • Seating Arrangements

11) References:

- *General Paper 1 Teaching and Research Aptitude.* Arihant Publications (India) Limited, Meerut (UP)

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: V & VI***

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COURSE DETAILS

1) **Title of the Course: Brand Management**
2) **Course Code :** SF-MS-V-ID-BRAND
3) **Course Objective:**

   The Course will help the learner –

   - To understand the meaning and significance of Brand Management
   - To Know how to build, sustain and grow brands
   - To know the various sources of brand equity

4) **Course Outcome (CO) :**

   CO1 – Learner gets knowledge of the nature and processes of branding and brand management

   CO2 - Learner can do brand management activity in an organisation and analyze how it relates to other business areas.

   CO3 – Learner can analyze and discuss contemporary brand related problems and develop appropriate strategies and initiatives.

5) **Category of Course :** Multi-disciplinary / Inter-disciplinary course
6) **Semester :** V
7) **Total Hours:** 60 hours
8) **Total Credits:** 2 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	15 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	10 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Brand Management**	• Meaning of Brand, Branding, Brand Management, Importance of Branding to Consumers, Firms, Brands v/s Products, Scope of Branding, Branding Challenges and Opportunities, Strategic Brand Management Process, Customer Based Brand Equity model (CBBE), Sources of Brand Equity, Steps of Brand Building including Brand Building Blocks, Brand Positioning: Meaning, Importance, Basis
II	**Planning and Implementing Brand Marketing Programs**	• Brand Elements: Meaning, Criteria for choosing Brand Elements, Types of Brand Elements • Integrating Marketing Programs and Activities • Personalizing Marketing: Experiential Marketing, One to One Marketing, Permission Marketing • Product Strategy: Perceived Quality and Relationship Marketing • Pricing Strategy: Setting Prices to Build Brand Equity • Channel Strategy: Direct, Indirect Channels • Promotion Strategy: Developing Integrated Marketing Communication Programs • Leveraging Secondary Brand Associations to Build Brand Equity: Companies, Countries, Channel of Distribution, Co-branding, Characters, Events.
III	**Measuring and Interpreting Brand Performance**	a) The Brand Value Chain b) Measuring Sources of Brand Equity: • Qualitative Research Techniques: Projective Techniques: Completion, Comparison, Brand Personality and Values: The Big Five, Free Association • Quantitative Research Techniques: Brand Awareness: Recognition, Recall, Brand Image, Brand Responses c) Young and Rubicam's Brand Asset Valuator d) Measuring Outcomes of Brand Equity • Comparative Methods: Brand based Comparative Approaches, Marketing Based Comparative Approaches, Conjoint Analysis • Holistic Methods: Residual Approaches, Valuation Approaches: Historical Perspectives and Interbrand's Brand Valuation Methodology

IV	**Growing and Sustaining Brand Equity**	a) Designing & Implementing Branding Strategies: • Brand Architecture: Meaning of Brand Architecture, The Brand-Product Matri, Breadth of a Branding Strategy, Depth of a Branding Strategy • Brand Hierarchy: Meaning of Brand Hierarchy, Building Equity at Different Hierarchy Levels • Cause Marketing to Build Brand Equity: Meaning of Cause Marketing, Advantages, Green Marketing b) Brand Extensions: • Meaning, Advantages, Disadvantages, Brand Extension and Brand Equity c) Managing Brands over Time: Reinforcing Brands, Revatilising Brands d) Building Global Customer Based Brand Equity

11) References:

- Keller Kevin Lane, Strategic Brand Management: Building, Measuring and Managing Brand Equity
- Keller Kevin Lane, Strategic Brand Management-2008
- Elliot, Richard, Strategic Brand Management-2008
- Kapferer, Jean-Noel, Strategic Brand Management-2000
- Kishen, Ram, Strategic Brand Management- 2013
- Keller Kevin Lane, Strategic Brand Management 4e-2015

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: V & VI***

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COURSE DETAILS

1) **Title of the Course: Research Methodology**
2) **Course Code :** SF-MS-V-AD-RM
3) **Course Objective:**

   The Course will help the learner –

   - To study analytical abilities and research skills.
   - To learn how to conduct a Research and its methodology.

4) **Course Outcome (CO) :**

   CO1 – This will help them to prepare different report as per requirement of organisation.

   CO2 – The learner will acquire the basic concept of research.

   CO3 – The learner will be able to do analysis with different statistical tools.

5) **Category of Course :** Project / Additional Course
6) **Semester :** V
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	15 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	10 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to business research methods**	• Meaning and objectives of research • Types of research– a) Pure, Basic and Fundamental b) Applied, c)Empirical d) Scientific & Social e)Historical f) Exploratory g) Descriptive h)Causal • Concepts in Research: Variables, Qualitative and Quantitative Research • Stages in research process. • Characteristics of Good Research • Hypothesis-Meaning, Nature, Significance, Types of Hypothesis, Sources. • Research design– Meaning, Definition, Need and Importance, Steps in research design, Essentials of a good research design, Areas / Scope of research design and Types-Descriptive, Exploratory and causal. • Sampling– a) meaning of sample and sampling, b) methods of sampling-i)Non Probability Sampling– Convenient, Judgment, Quota, Snow ball • ii) Probability– Simple Random, Stratified, Cluster, Multi Stage.
II	**Data collection and Processing**	• Types of data and sources-Primary and Secondary data sources • Methods of collection of primary data • Observation- i) structured and unstructured, ii) disguised and undisguised, iii) mechanical observations (use of gadgets) • Experimental i) Field ii) Laboratory • Interview – i) Personal Interview ii) focused group, iii) in-depth interviews - Method, • Survey– Telephonic survey, Mail, E-mail, Internet survey, Social media, and Media listening. • Survey instrument– i) Questionnaire designing. • Types of questions– i) structured/ close ended and ii) unstructured/ open ended, iii) Dichotomous, iv) Multiple Choice Questions. • g) Scaling techniques-i) Likert scale, ii) Semantic Differential scale

III	**Data analysis and Interpretation**	• Processing of data– i) Editing- field and office editing, ii)coding– meaning and essentials, iii) tabulation – note • Analysis of data-Meaning, Purpose, types. • Interpretation of data-Essentials, importance and Significance of processing data • Multivariate analysis– concept only • Testing of hypothesis– concept and problems– i) chi square test, ii) Zandt-test (for large and small sample)
IV	**Advanced techniques in Report Writing**	• Report writing – i) Meaning, importance, functions of reports, essential of a good report, content of report, steps in writing a report, types of reports, Footnotes and Bibliography • Ethics and research • Objectivity, Confidentiality and anonymity in Research • Plagiarism

11) References:

- Paul E, Green.and Donald S, Tull. *Research for Marketing Decisions.*
- Harper W.et all. *Marketing Research- Text and Cases.*
- O.R, Krishnaswamy. *Research methodology in Social sciences*. Himalaya Publication.
- Donald R, Cooper. And Pamela Schindler. *Business Research Methods*. Tata McGraw Hill.
- Naresh K, Malhotra. And Pearson. *Marketing research and applied orientation.*
- Levin and Reuben. *Statistics for management*. Prentice Hall.
- S, Shajahan. *Research Methods for Management*: Jaico Publishing

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: V & VI***

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SPECIALIZATION: FINANCE

ELECTIVE COURSE DETAILS (SEM- V)

1) **Title of the Course: Direct Tax**
2) **Course Code :** SF-MS-V-E(F)-DT
3) **Course Objective:**
   - To get aware of the various provisions of Income Tax Law in India
   - To develop the understanding of the various provisions of Income Tax Law
   - To acquire the ability to analyze and interpret the provisions of Income Tax Law
   - To develop the ability to apply the knowledge of Income Tax provisions in making basic Computation of Total Income

4) **Course Outcome (CO) :**

   CO1 - The learner will understand the Basic concepts of Income Tax Act

   CO2 - The learner will be able to determine Residential Status of a person in India on the basis of which the learner will be able determine the Scope of Total Income

   CO3 - The learner will understand five heads of income and will be able to classify all the incomes in the respective heads

   CO4 - The learner will understand the benefits of Deductions available under Chapter VI-A of Income Tax and will be able to make basic Computation of Total Income after taking available deductions

5) **Category of Course :** Elective Course (Specialization: FINANCE)
6) **Semester :** V
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 Credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	15 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	10 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Definitions, Basis of Charge and Exclusions from Total Income**	• **Definitions u/s 2 :** Assessee, Assessment Year, Assessment, Annual value, Business, Capital asset, Income, Person, Previous Year, Transfer • **Basis of Charge :** Section 3 to 9 - Previous Year, Residential Status, Scope Of Total Income, Deemed Income • **Exclusions from Total Income:** Section 10 - restricted to, Agricultural Income, Sums Received from HUF by Member, Share of Profit from Firm, Casual & Non – Recurring Receipts, Scholarships, Income of Minor Child, Allowance to Members of Parliament and Legislative Assembly. **Note -Exemptions related to specific Heads of Income to be covered with Relevant Provisions.**
II	**Heads of Income**	• **Income from Salary :** Section 15 – 17, Including Section 10 relating to House Rent Allowance, Travel Concession, Special Allowance, Gratuity, Pension, Leave Encashment, Compensation, Voluntary Retirement, Payment from Provident Fund • **Income From House Property :** Section 22 – 27, Including Section 2 – Annual Value • **Profits & Gains From Business & Profession :** Section 28-32, 36, 37, 40, 40A, 43B, 44AD, 44ADA & 44AE including : Section 2 – Business • **Capital Gains :** Section 45, 48, 49, 50, 54 and 55 • **Income from Other Sources:** Section 56 – 59
III	**Deductions under Chapter VI - A**	• **80 A -** Restriction on claim in Chapter VI- A deductions • **80 C -** Payment of LIC/PF and other eligible investments • **80CCC** - Contribution to certain Pension Fund • **80D** - Medical Insurance Premium • **80 DD -** Maintenance and medical treatment of handicapped dependent • **80E** - Interest on Educational Loan • **80 TTA** - Interest on Saving Bank account • **80U** - Deduction in the case of totally blind or physically handicapped or mentally retarded resident person

IV	**Computation of Total Income**	• Computation of Total Income of Individual and HUF with respect to above heads and deductions
Note : Relevant Law / Statute / Rules in force and relevant Standards in force on 1st April immediately preceding commencement of Academic Year is applicable for ensuring examination after relevant year. The syllabus is restricted to study of particular section/s, specifically mentioned rules and notification.		

11) References :

- V. K. Singhania, *Direct Taxes Law & Practice*, Taxmann
- Ahuja, Gupta, *Systematic Approach to Direct Tax*, Bharat Law House
- V. K. Singhania, *Income Tax Ready Recknoner*, Taxmann
- T. N. Manoharan, *Direct Tax Laws*, Snow White

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: V & VI***

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SPECIALIZATION: FINANCE

ELECTIVE COURSE DETAILS (SEM- V)

1) **Title of the Course: Investment Analysis & Portfolio Management**
2) **Course Code:** SF-MS-V-E(F)-IAPM
3) **Course Objective:**
   - To provide knowledge to the Learners about basic principles of Investment Analysis
   - To provide knowledge to the Learners about techniques of Investment analysis and Portfolio Management.
   - To help learner examine the relationships between returns and risks.
   - To help learning analysis and evaluate ordinary shares and fixed income securities.

4) **Course Outcome (CO):**

   On successful completion of the course Learners will be able to:

   CO1- Examine the relationships between returns and risks.

   CO2 -Demonstrate knowledge and skills in the core investment concepts, collecting financial information from electronic databases and employing analytical tools to value financial securities.

   CO3 - Demonstrate critical thinking, analytical and problem-solving skills in the context of investment theories and practices.

   CO4 - Analyse and evaluate ordinary shares and fixed income securities.

5) **Category of Course:** Elective Course (Specialization: FINANCE)
6) **Semester :** V
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)

d. Mode of Evaluation of Answer-book: Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	15 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	10 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Investment Environment**	**Introduction to Investment Environment** Introduction, Investment Process, Criteria for Investment, Types of Investors, Investment V/s Speculation V/s Gambling, Investment Avenues, Factors, Influencing Selection of Investment Alternatives **Capital Market in India** Introduction, Concepts of Investment Banks its Role and Functions, Stock, Market Index, The NASDAQ, SDL, NSDL, Benefits of Depository Settlement, Online Share Trading and its Advantages, Concepts of Small cap, Large cap, Midcap and Penny stocks
II	**Risk and Return Relationship**	• Meaning, Types of Risk- Systematic and Unsystematic risk, • Measurement of Beta, Standard Deviation, Variance, Reduction of Risk through Diversification. • Practical Problems on Calculation of Standard Deviation, Variance and Beta.
III	**Portfolio Management and Security Analysis**	**a) Portfolio Management:** Meaning and Concept, Portfolio Management Process, Objectives, Basic Principles, Factors affecting Investment Decisions in Portfolio Management, Portfolio Strategy Mix. **b) Security Analysis:** Fundamental Analysis, Economic Analysis, Industry Analysis, Company Analysis, Technical Analysis - Basic Principles of Technical Analysis. Uses of Charts: Line Chart, Bar Chart, Candlestick Chart, Mathematical Indicators: Moving Averages, Oscillators.
IV	**Theories, Capital Asset Pricing Model and Portfolio Performance Measurement**	**a) Theories:** Dow Jones Theory, Elloit Wave Theory, Efficient Market Theory **b) Capital Asset Pricing Model:** Assumptions of CAPM, CAPM Equation, Capital Market Line, Security Market Line **c) Portfolio Performance Measurement:** Meaning of Portfolio Evaluation, Sharpe's Ratio (Basic Problems), Treynor's Ratio (Basic Problems), Jensen's Differential Returns (Basic Problems)

11) References:

- Kevin. S, Security Analysis and Portfolio Management
- Donald Fischer & Ronald Jordon, Security Analysis & Portfolio Management
- Prasanna Chandra, Security Analysis & Portfolio Management
- Sudhindhra Bhatt, Security Analysis and Portfolio Management.

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: V & VI***

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SPECIALIZATION: FINANCE

ELECTIVE COURSE DETAILS (SEM- V)

1) **Title of the Course: Turnaround Management**
2) **Course Code :** SF-MS-V-E(F)-TM
3) **Course Objective:**
   - To understand the concept of Business
   - To enable Learners to understand the need of revival of sick business units.
   - To understand different approaches for growth and survival in an organisation.
   - To make Learners aware of the different turnaround strategies.
   - To give an overview of the recent business scenario.
   - To get in-depth knowledge on Leadership and Turnaround Management.

4) **Course Outcome (CO) :**

CO1-After the completion of this course, a learner will be able to understand about different types of business organisation with its importance and features.

CO2 - A learner can use different types of approaches for growth and survival in a business organization.

CO3- It will help a learner to identify the reason for failing performance in the market and rectify them.

CO4 - It will help a learner to understand and apply different turnaround strategies in an organization.

CO5 - A learner will acquire in-depth knowledge about recent business scenario.

CO6- Learners will understand and be able to use different styles of decision making in the turnaround process.

CO7- It will enable a learner to understand a leader's psychological role in the turnaround process.

5) **Category of Course :** Elective Course (Specialization : FINANCE)
6) **Semester :** V
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits

9) Evaluation Pattern :

a. Total Marks: 100 Marks (10 Point Grading System)

b. Passing Criteria: 40% Marks (04 Grade Points)

c. Marking Scheme : 60:40 Pattern

- 60 Marks – Written Semester End Exam (Passing: 24 Marks)
- 40 Marks – Internal Exam (Passing: 16 Marks)

d. Mode of Evaluation of Answer-book : Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	15 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	10 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Business**	• Meaning, Definition, Features, Importance, Symptoms, Types of Business Organization. • Different approaches for Growth and Survival. Internal Strategies External Strategies Survival Strategies
II	**Industrial Sickness**	• Meaning and Internal /External Reasons of Industrial Sickness Symptoms of Industrial Sickness Measures to Overcome Sickness by Government and Stakeholders Role of BIFR in Sick Industries
III	**Turnaround Management Strategies**	• Meaning and Internal /External Reasons of Industrial Sickness Symptoms of Industrial Sickness Measures to Overcome Sickness by Government and Stakeholders Role of BIFR in Sick Industries
IV	**Business Scenario, Leadership and Turnaround Management**	• Features, Advantages, Disadvantages, Types and Present Status of: Outsourcing Networking Franchising

		Free lancing Self-Financing Start up Outfitting the Management Team, Personal Characteristic, Focusing on Present Operations, Focus on Needs in Turnarounds, Styles of Decision Making in the Turnaround Process, Organizational Change. Quality in the Managerial Process, Dilemma of Management, Turnaround Management as a Skill.

11) References:

- Practical Shutdown & Turnaround Management for k, Engineers & Managers (English, Paperback, IDC Technologies Pvt Ltd.)
- Managing Corporate Turnaround Text & cases Ram AvtarYadav Concept Publishing Co.
- Business Process Reengineering,O.P.Agrawal
- The Turnaround Experience – Feddrick Zimerman

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: V & VI***

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SPECIALIZATION: MARKETING

ELECTIVE COURSE DETAILS (SEM - V)

1) **Title of the Course: E-Commerce & Digital Marketing**
2) **Course Code :** SF-MS-V-E(M)-ECOM
3) **Course Objective:**

The Course will help the learner –

- To understand increasing significance of E-Commerce and its applications in Business and Various Sectors
- To provide an insight on Digital Marketing activities on various Social Media platforms and its emerging significance in Business
- To understand Latest Trends and Practices in E-Commerce and Digital Marketing, along with its Challenges and Opportunities for an Organization

4) **Course Outcome (CO) :**

CO1 –It helps learner recognize e-marketing concepts, theories, and context: e-business models, performance metrics, online advertising, and principles and practices of e-commerce and m-commerce, and its implication on marketing strategy

CO2 – Learner can use new media such as mobile, online search, and social networking sites, and be able to apply measurement techniques to evaluate digital marketing efforts.

CO3 – Learner will acquire analytical skills to develop digital marketing strategy effectively.

5) **Category of Course :** Elective Course (Specialization: MARKETING)
6) **Semester :** V
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 Credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)

d. Mode of Evaluation of Answer-book : Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	15 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	10 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to E-commerce**	• Ecommerce- Meaning, Features of E-commerce, Categories of E-commerce, Advantages &Limitations of E-Commerce, Traditional Commerce &E-Commerce • Ecommerce Environmental Factors: Economic, Technological, Legal , Cultural & Social • Factors Responsible for Growth of E-Commerce, Issues in Implementing Ecommerce, Myths of E-Commerce • Impact of E-Commerce on Business, Ecommerce in India • Trends in E-Commerce in Various Sectors: Retail, Banking, Tourism, Government, Education • Meaning of M-Commerce, Benefits of M-Commerce, Trends in M-Commerce
II	**E-Business & Applications**	• E-Business: Meaning, Launching an E-Business, Different phases of Launching an E- Business • Important Concepts in E-Business: Data Warehouse, Customer Relationship Management , Supply Chain Management, Enterprise Resource Planning • Bricks and Clicks business models in E-Business: Brick and Mortar, Pure Online, Bricks and Clicks, Advantages of Bricks & Clicks Business Model, Superiority of Bricks and Clicks E-Business Applications: E-Procurement, E-Communication, EDelivery, E-Auction, E-Trading. • Electronic Data Interchange (EDI) in E-Business: Meaning of EDI, Benefits of EDI, Drawbacks of EDI, Applications of EDI. • Website : Design and Development of Website, Advantages of Website, Principles of Web Design, Life Cycle Approach for Building a Website, Different Ways of Building a Website
III	**Payment, Security, Privacy &Legal Issues in E-Commerce**	• Issues Relating to Privacy and Security in E-Business • Electronic Payment Systems: Features, Different Payment Systems: Debit Card, Credit Card, Smart Card, E-cash, E-Cheque, E-wallet, And Electronic Fund Transfer. • Payment Gateway: Introduction, Payment Gateway Process, Payment Gateway Types, Advantages and Disadvantages of Payment Gateway. • Types of Transaction Security

		• E-Commerce Laws: Need for E-Commerce laws, E-Commerce laws in India, Legal Issues in E-commerce in India, IT Act 2000
IV	**Digital Marketing**	• Introduction to Digital Marketing, Advantages and Limitations of Digital Marketing. • Various Activities of Digital Marketing: Search Engine Optimization, Search Engine Marketing, Content Marketing & Content Influencer Marketing, Campaign Marketing, Email Marketing, Display Advertising, Blog Marketing, Viral Marketing, Podcasts & Vodcasts. • Digital marketing on various Social Media platforms. • Online Advertisement, Online Marketing Research, Online PR • Web Analytics • Promoting Web Traffic • Latest developments and Strategies in Digital Marketing

11) References:

- D Nidhi ,E-Commerce Concepts and Applications, ,Edn 2011, International Book house P.ltd
- Bajaj Kamlesh K,E-Commerce- The cutting edge of Business
- Whiteley David, E-Commerce Technologies and Apllications-2013
- E-Business & E-Commerce Management 3rd Ed, Pearson Education Kalokota & Robinson,
- E-Business 2.0 Road map for Success, Pearson Education Elias M. Awad ,Electronic Commerce, 3rd Edition, Pearson Education
- Erfan Turban et.al ,Electronic Commerce - A Managerial Perspective, Pearson Education
- R. Kalokota, Andrew V. Winston, Electronic Commerce - A Manger's Guide, Pearson Education
- Tripathi, E-Commerce, Jaico Publishing House, Mumbai, Edn. 2010

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: V & VI***

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SPECIALIZATION: MARKETING

ELECTIVE COURSE DETAILS (SEM - V)

1) **Title of the Course: Sales & Distribution Management**
2) **Course Code :** SF-MS-V-E(M)-SDM
3) **Course Objective:**

   The Course will help the learner –

   - To develop understanding of the sales & distribution processes in organizations
   - To get familiarized with concepts, approaches and the practical aspects of the key decision making variables in sales management and distribution channel management

4) **Course Outcome (CO) :**

   CO1 –Learners develop understanding of the Sales & Distribution processes in organizations

   CO2 – Learner is familiarized with concepts, approaches and the practical aspects of the key decision making variables in sales force and distribution channel management

5) **Category of Course :** Elective Course (Specialization: MARKETING)
6) **Semester :** V
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	15 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	10 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction**	a) Sales Management: • Meaning, Role of Sales Department, Evolution of Sales Management • Interface of Sales with Other Management Functions • Qualities of a Sales Manager • Sales Management: Meaning, Developments in Sales Management- Effectiveness to Efficiency, Multidisciplinary Approach, Internal Marketing, Increased Use of Internet, CRM, Professionalism in Selling. • Structure of Sales Organization – Functional, Product Based, Market Based, Territory Based, Combination or Hybrid Structure b) Distribution Management: • Meaning, Importance, Role of Distribution, Role of Intermediaries, Evolution of Distribution Channels. c) Integration of Marketing, Sales and Distribution
II	**Market Analysis and Selling**	a) Market Analysis: • Market Analysis and Sales Forecasting, Methods of Sales Forecasting Types of Sales Quotas – Value Quota, Volume Quota, Activity Quota, Combination Quota • Factors Determining Fixation of Sales Quota • Assigning Territories to Salespeople b) Selling: • Process of Selling, Methods of Closing a Sale, Reasons for Unsuccessful Closing • Theories of Selling – Stimulus Response Theory, Product Orientation Theory, Need Satisfaction Theory • Selling Skills – Communication Skill, Listening Skill, Trust Building Skill, Negotiation Skill, Problem Solving Skill, Conflict Management Skill • Selling Strategies – Softsell Vs. Hardsell Strategy, Client Centered Strategy, Product-Price Strategy, Win-Win Strategy, Negotiation Strategy • Difference Between Consumer Selling and Organizational Selling • Difference Between National Selling and International Selling

III	**Distribution Channel Management**	• Management of Distribution Channel – Meaning & Need • Channel Partners- Wholesalers, Distributors and Retailers & their Functions in Distribution Channel, Difference Between a Distributor and a Wholesaler • Choice of Distribution System – Intensive, Selective, Exclusive • Factors Affecting Distribution Strategy – Locational Demand, Product Characteristics, Pricing Policy, Speed or Efficiency, Distribution Cost • Factors Affecting Effective Management Of Distribution Channels • Channel Design • Channel Policy • Channel Conflicts: Meaning, Types – Vertical, Horizontal, Multichannel, Reasons for Channel Conflict • Resolution of Conflicts: Methods – Kenneth Thomas's Five Styles of Conflict Resolution • Motivating Channel Members • Selecting Channel Partners • Evaluating Channels • Channel Control
IV	**Performance Evaluation, Ethics and Trends**	a) Evaluation & Control of Sales Performance: Sales Performance – Meaning Methods of Supervision and Control of Sales Force Sales Performance Evaluation Criteria- Key Result Areas (KRAs) Sales Performance Review Sales Management Audit b) Measuring Distribution Channel Performance: Evaluating Channels- Effectiveness, Efficiency and Equity Control of Channel – Instruments of Control – Contract or Agreement, Budgets and Reports, Distribution Audit c) Ethics in Sales Management d) New Trends in Sales and Distribution Management

11) References:

- A. Nag, Sales And Distribution Management, Mcgraw Hill, 2013 Edition
- Richard R. Still, Edward W. Cundiff, Norman A.P. Govoni, Sales Management, Pearson Education, 5th Edition
- Krishna K. Havaldar, Vasant M. Cavale, Sales And Distribution Management – Text & Cases, Mcgraw Hill Education, 2nd Edition, 2011
- Dr.Matin Khan, Sakes And Distribution Management, Excel Books, 1st Edition
- Kotler & Armstrong, Principles Of Marketing – South Asian Perspective, Pearson Education, 13th Edition Customer Relationship Management

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: V & VI***

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SPECIALIZATION: MARKETING

ELECTIVE COURSE DETAILS (SEM - V)

1) **Title of the Course: Services Marketing**
2) **Course Code :** SF-MS-V-E(M)-SERV
3) **Course Objective:**

   The Course will help the learner –

   - To understand distinctive features of services and key elements in services marketing
   - To provide insight into ways to improve service quality and productivity
   - To understand marketing of different services in Indian context

4) **Course Outcome (CO) :**

   CO1 – Learner will understand distinctive features of services and key elements in services marketing and to provide insight into ways to improve service quality and productivity

   CO2 - Learner will understand marketing of different services in Indian context

   CO3 – Learner will get an overview and insight into new and innovative services that have mushroomed due to the advent of technology and to study the current trends in existing services

5) **Category of Course :** Elective Course (Specialization: MARKETING)
6) **Semester : V**
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	15 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	10 Marks
TOTAL	**40 Marks**

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction of Services Marketing**	• Services Marketing Concept, Distinctive Characteristics of Services, Services Marketing Triangle, Purchase Process for Services, Marketing Challenges of Services • Role of Services in Modern Economy, Services Marketing Environment • Goods vs Services Marketing, Goods Services Continuum • Consumer Behaviour, Positioning a Service in the Market Place • Variations in Customer Involvement, Impact of Service Recovery Efforts on Consumer Loyalty • Type of Contact: High Contact Services and Low Contact Services • Sensitivity to Customers' Reluctance to Change
II	**Key Elements of Services Marketing Mix**	• The Service Product, Pricing Mix, Promotion & Communication Mix, Place/Distribution of Service, People, Physical Evidence, Process-Service Mapping-Flowcharting • Branding of Services – Problems and Solutions • Options for Service Delivery
III	**Managing Quality Aspects of Services Marketing**	• Improving Service Quality and Productivity • Service Quality – GAP Model, Benchmarking, Measuring Service Quality -Zone of Tolerance and Improving Service Quality • The SERVQUAL Model • Defining Productivity – Improving Productivity • Demand and Capacity Alignment
IV	**Marketing of Services**	• International and Global Strategies in Services Marketing: Services in the Global Economy- Moving from Domestic to Transnational Marketing • Factors favouring Transnational Strategy • Elements of Transnational Strategy • Recent Trends in Marketing Of Services in: Tourism, Hospitality, Healthcare, Banking, Insurance, Education, IT and Entertainment Industry • Ethics in Services Marketing: Meaning, Importance, Unethical Practices in Service Sector

11) References:

- Valarie A. Zeuhaml &Mary Jo Bitner, Service Marketing, Tata McgrawHill, 6th Edition
- Christoper Lovelock, JochenWirtz, Jayanta Chatterjee, Service Marketing People, Technology, Strategy A South Asian Perspective, Pearson Education, 7th Edition
- Ramneek Kapoor, Justin Paul &Biplab Halder, Services Marketing-Concepts And Practices, McgrawHill, 2011
- Harsh V.Verma, Services Marketing Text &Cases, Pearson Education, 2nd Edition
- K. Ram Mohan Rao, Services Marketing, Pearson Education, 2nd Edition, 2011
- C. Bhattacharjee, Service Sector Management, Jaico Publishing House, Mumbai, 2008
- Govind Apte, Services Marketing, Oxford Press, 2004

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: V & VI***

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SPECIALIZATION: HUMAN RESOURCE MANAGEMENT

ELECTIVE COURSE DETAILS (SEM- V)

1) **Title of the Course: Finance & Compensation of HR Professionals**
2) **Course Code :** SF-MS-V-E(HR)-FCOMP
3) **Course Objective:**
   - To orient learners with financial concepts to enable them to make prudent HR decisions
   - To understand the various compensation plans.
   - To study the issues related to compensation management and understand the legal framework of compensation management

4) **Course Outcome (CO) :**

   CO1 – Learner will understand the various dimensions of Compensation Management used by the companies to attract, retain, motivate and to reward employee performance.

   CO2 - Learner will get familiarized with the role of various bodies involved in Compensation Management in any organisation.

5) **Category of Course :** Elective Course (Specialization: HUMAN RESOURCE MANAGEMENT)
6) **Semester** : V
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 Credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	A.	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.3.	A.	Full Length Question	08 Marks	**15 Marks**
	B.	Full Length Question	07 Marks	
	OR			
	C.	Full Length Question	08 Marks	
	D.	Full Length Question	07 Marks	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	05 Marks Each	**15 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	15 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	10 Marks
TOTAL	**40 Marks**

LEARNING OUTCOME BASED CURRICULUM FRAMEWORK

[LOCF]

Sanskar Sarjan Education Society's

DTSS COLLEGE OF COMMERCE

[**AUTONOMOUS**]

PROGRAMME CODE: SFP – MS

Bachelor of Management Studies

[**B.M.S**]

w. e. f. 2021-22

PROGRAMME STRUCTURE

1) **Title of the Programme :** Bachelor of Management Studies (B.M.S)

2) **Programme Code :** SFP - MS

3) **Introduction of the Programme :**

Bachelor of Management Studies, commonly known as B.M.S, is a Three Year Undergraduate Programme highlighting the activities and functions under Management and Administration. The Programme covers specialization in the field of Finance, Marketing and Human Resource Management.

4) **Programme Objectives :**

Bachelor of Management Studies offers an in-depth knowledge of skills that are required for management of any organisation. It covers courses Human Resource Management, Entrepreneurship, Business Planning, Financial Markets, Industrial Acts, Employee Engagement, Integrated Marketing Communication, and Business Communication. The Programme offers practical implications of Management in the most strategic manner. The Programme is often considered as a base for pursuing future studies in Management.

5) **System :** Choice Based Credit System [CBCS]

6) **Duration of the Programme :** 03 Years

7) **Total Number of Semesters :** 06 Semesters

8) **Eligibility Criteria for Admission:**

The learner must have passed the Higher Secondary School Certificate examination conducted by the Maharashtra/ other Indian State Boards or equivalent examination.

9) **Intake capacity :** 60 Learners

10) **Total Credits :** 132 Credits

11) **Teacher's Qualification:** Post Graduation in Commerce & Management, NET /SET Qualified.

12) **Types of Courses :**

Course Type	Total (Sem I to VI)
a. Core Courses	16
b. Elective Courses	12 out of 18
c. Skill/Ability Enhancement Courses	06
d. Multi-disciplinary / Inter-disciplinary courses	06
e. Practical /Projects	06
Total :	**46 Courses**

Third Year Bachelor of Management Studies – TY.B.M.S.

Total Number of Courses (Semester-wise) :

SEMESTER	Category of Course	No. of Courses	Credits Allotted	Total Credits
V	A. Core Courses	02	04	08
	B. Elective Courses	02 out of 03	03	06
	C. Skill/Ability Enhancement Courses	01	03	03
	D. Multi-disciplinary /Inter-disciplinary courses	01	02	02
	E. Additional - Practical /Projects	01	03	03
	Total :	**07 out of 08**		**22**
VI	A. Core Courses	02	04	08
	B. Elective Courses	02 out of 03	03	06
	C. Skill/Ability Enhancement Courses	01	03	03
	D. Multi-disciplinary / Inter-disciplinary courses	01	02	02
	E. Additional - Practical /Projects	01	03	03
	Total :	**07 out of 08**		**22**

Course Titles:

Course Category	Credits	Semester – VI
Core Courses	04	Operation Research
	04	Customer Relationship Management
Elective Courses	03	Indirect Tax
Specialization : FINANCE	03	Strategic Financial Management
(Any 2)	03	Financial Analysis & Business Valuation
Elective Courses	03	Retail Management
Specialization:MARKETING (Any 2)	03	International Marketing
	03	Media Planning & Management
Skill /Ability Enhancement Courses	03	Entrepreneurship Management
Multi-disciplinary / Inter-disciplinary courses	02	International Business
Projects/Additional Courses	03	Project Work
TOTAL :	**22 Credits**	**07 out of 08 Courses**

Evaluation Pattern:

a. **Total Marks :** 46 Courses X 100 Marks = **4600 Marks (10 Point Grading)**

b. **Passing Criteria :** 40 % Marks = **1840 Marks (4 Grade Points)**

c. **Marking Scheme: 60:40 Pattern (Marks for Total Programme)**

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
1) Semester End Exam (S.E.E.) : Written Exam	60 Marks X 46 Courses = 2760 Marks	24 Marks X 46 Courses = 1104 Marks
2) Continuous Internal Assessment (C.I.A.) : Subject Oriented	40 Marks X 46 Courses = 1840 Marks	16 Marks X 46 Courses = 736 Marks
TOTAL :	**4600 Marks**	**1840 Marks**

d. **Mode of Evaluation of Answer-book :** Online/Offline

e. **Paper Pattern:**

ONLY FOR PRACTICAL SUBJECTS – Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	**A.**	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	08 Marks	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	07 Marks	
Q.2.	**A.**	Practical Question (1 Question of 15 marks or may be divided into 2 sub questions of 07 and 08 marks)	-	**15 Marks**
	OR			
	B.	Practical Question (1 Question of 15 marks or may be divided into 2 sub questions of 07 and 08 marks)	-	
Q.3.	**A.**	Practical Question (1 Question of 15 marks or may be divided into 2 sub questions of 07 and 08 marks)	-	**15 Marks**
	OR			
	B.	Practical Question (1 Question of 15 marks or may be divided into 2 sub questions of 07 and 08 marks)	-	
Q.4.	**A**	Practical Question (1 Question of 15 marks or may be divided into 2 sub questions of 07and 08 marks)	-	**15 Marks**
	OR			
	B	Short Notes / Short practical questions - Any 3 out of 5 ***(5 marks each)***	-	

ONLY FOR THEORY SUBJECTS – Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Sub-Question	Type of Question	Sub-Question Marks	Total Marks
Q.1.	**A.**	Objectives : (Any 8 out of 10) FIB/MCQ/T or F/MTC	**08 Marks**	**15 Marks**
	B.	Objectives : (Any 7 out of 10) FIB/MCQ/T or F/MTC	**07 Marks**	
Q.2.	**A.**	Full Length Question	**08 Marks**	**15 Marks**
	B.	Full Length Question	**07 Marks**	
	OR			
	C.	Full Length Question	**08 Marks**	
	D.	Full Length Question	**07 Marks**	
Q.3.	**A.**	Full Length Question	**08 Marks**	**15 Marks**
	B.	Full Length Question	**07 Marks**	
	OR			
	C.	Full Length Question	**08 Marks**	
	D.	Full Length Question	**07 Marks**	
Q.4.	-----	Short Notes/Short Sums: (Any 3 out of 4)	**05 Marks Each**	**15 Marks**

f. Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments • Case Studies • Field Research	15 Marks
Class Participation & Attendance	5 Marks
TOTAL	**40 Marks**

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: VI***

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SPECIALIZATION: FINANCE

ELECTIVE COURSE DETAILS (SEM - VI)

1) **Title of the Course: Indirect Tax**
2) **Course Code:** SF-MS-VI-E(F)-IDT
3) **Course Objective:**

   The Course will help the learner to acquire the ability and analyze and interpret the provisions of the goods and services tax and recommend solution to practical problems.

4) **Course Outcome (CO):**

   After studying this course, learner will be able to-

   CO1 – Explain the Concept of GST and need of GST in India

   CO2 – Understand and analyze the taxable event under GST Supply – it's Meaning and Scope

   CO3 – Describe the Intra State Supply, Inter State supply and provisions pertaining to levy and collection of GST.

   CO4 – Provide an overview of the Goods and Services exempt from GST.

   CO5 – Explain the provisions relating to determination of place of supply of Goods and Services, both in case of domestic as well as cross-border transactions and analyze the same to determine the place of supply of given situation.

   CO6 – Apply the concepts relating to time of supply of goods and/ or services in problem solving.

   CO7 – Compute the Value of supply in different scenarios

   CO8- Explain when a person becomes liable to get registered under GST, scenarios when registration is compulsory and identify the person not liable to get registered.

   CO9 – Identify the persons eligible to file various statements/ returns as also the forms prescribed therefore and explain the periodicity for filing such returns.

   CO10 – Explain the provisions relating to revised tax invoice, Bill of supply, receipt voucher, refund voucher, payment voucher, etc.

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: VI***

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5) **Category of Course:** Elective Course (Specialization : FINANCE)
6) **Semester:** VI
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits

9) **Modules / Units :**

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Indirect Taxation and GST**	• Basics for Indirect Taxation. • Introduction to GST • Definitions • Levy and Collection of GST.
II	**Concept of Supply**	• Taxable Event Supply • Place of Supply • Time of Supply • Value of Supply
III	**Registration and Computation of GST**	• Registration under GST • Computation and Payment of GST
IV	**Documentation and Filing of Returns**	• Documentation • Returns

10) References:

- Indirect Taxes: Law and Practice by V.S. Datey, Taxmann
- Indirect Taxes by V.S. Balchandra, Sultan Chand and Sons, New Delhi
- GST Law & practice with Customs & FTP by V.S. Datey, Taxmann
- GST & customs Law by K.M. Bansal, University Edition
- GST Law & practice with Customs & FTP by Vineet Sodhani, Snow White Publications
- GST Law & practice with Customs & FTP by Sanjiv Agarwal, Snow White Publications
- Indirect taxes (Containing GST, Customs & FTP) by MOhd. Rafi, Bharat Publications

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: VI***

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SPECIALIZATION: FINANCE

ELECTIVE COURSE DETAILS (SEM - VI)

1) **Title of the Course: Strategic Financial Management**
2) **Course Code:** SF-MS-VI-E(F)-SFM
3) **Course Objective:**

The Course will help the learner –

- To match the needs of current market scenario and upgrade the learner's skills and knowledge for long term sustainability.
- Changing scenario in Banking Sector and the inclination of learners towards choosing banking as a career option has made study of financial management in banking sector inevitable
- To acquaint learners with contemporary issues related to financial management making.

4) **Course Outcome (CO):**

After studying this course, learner will be able to-

CO1 – Understand Theories on Dividend policies and Practical considerations in Dividend Policies.
CO2 - Evaluate investment projects using various capital budgeting techniques like Payback period, NPV, ARR, IRR, etc.

CO3 – Calculate shareholders value and Corporate Governance.
CO4 – Estimate the working capital requirements for business entity.

5) **Category of Course:** Elective Course (Specialization : FINANCE)
6) **Semester:** VI
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern**:

a. **Total Marks:** 100 Marks (10 Point Grading System)
b. **Passing Criteria:** 40% Marks (04 Grade Points)
c. **Marking Scheme :** 60:40 Pattern

- 60 Marks – Written Semester End Exam (Passing: 24 Marks)
- 40 Marks – Internal Exam (Passing: 16 Marks)

d. Mode of Evaluation of Answer-book : Online/Offline

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Dividend Decision**	a) Dividend Decision: • Meaning and Forms of Dividend, Dividend-Modigliani and Miller's Approach, Walter Model, Gordon Model, • Factors determining Dividend Policy, Types of Dividend Policy
II	**Capital Budgeting and Capital Rationing**	a) Capital Budgeting: • Risk and Uncertainty in Capital Budgeting, Risk Adjusted Cut off Rate, Certainty Equivalent Method, Sensitivity Technique, Probability Technique, Standard Deviation Method, Co-efficient of Variation Method, Decision Tree Analysis, Construction of Decision Tree. b) Capital Rationing: • Meaning, Advantages, Disadvantages, Practical Problems
III	**Shareholder Value and Corporate Governance/Corporate Restructuring**	a) Shareholder Value and Corporate Governance: Financial Goals and Strategy, Shareholder Value Creation: EVA and MVA Approach, Theories of Corporate Governance, Practices of Corporate Governance in India b) Corporate Restructuring: Meaning, Types, Limitations of Merger, Amalgamation, Acquisition, Takeover, Determination of Firm's Value, Effect of Merger on EPS and MPS, Pre Merger and Post-Merger Impact.
IV	**Financial Management in Banking Sector and Working Capital Financing**	a) Financial Management in Banking Sector: An Introduction, Classification of Investments, NPA & their Provisioning, Classes of Advances, Capital Adequacy Norms, Rebate on Bill Discounting, Treatment of Interest on Advances b) Working Capital Financing: Maximum Permissible Bank Finance (Tandon Committee), Cost of issuing Commercial Paper and Trade Credit, Matching Approach, Aggressive Approach, Conservative Approach

11) References:

- C. Paramasivan& T. Subramanian, Financial Management
- IM Pandey, Financial Management
- Ravi Kishor, Financial Management
- Khan & Jain, Financial Management
- Van Horne & Wachowiz, Fundamentals of Financial Management
- Prasanna Chandra, Strategic Financial Management

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: VI***

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SPECIALIZATION: FINANCE

ELECTIVE COURSE DETAILS (SEM - VI)

1) **Title of the Course: Financial Analysis and Business Valuation**
2) **Course Code :** SF-MS-VI-E(F)-FABV
3) **Course Objective:**

   The Course will help the learner –

   - To understand the concepts of Financial Analysis and Valuation relating to Business
   - To understand the various models techniques used for Financial Analysis and Business Valuation purpose
   - To develop the skills required for Financial Analysis and Business Valuation

4) **Course Outcome (CO) :**

   CO1 – The learner will get familiarized with the models and techniques of Financial Analysis and Business Valuation

   CO2 – The learner will acquire the necessary skills required for Financial Analysis and Business Valuation which can be applied by him / her in practical life

5) **Category of Course :** Elective Course (Specialization : FINANCE)
6) **Semester :** VI
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 Credits
9) **Evaluation Pattern :**

   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: VI***

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10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Financial Modeling for Project Appraisal**	• Financial Modeling – concepts and application • Financial statements module area • Use of functions -NPV and IRR • Forecasting Techniques
II	**Financial Analysis, Growth Analysis and Sustainable Earning**	• **Financial Analysis** Financial Analysis, Financial Statement Analysis, Analysis of Balance Sheet Analysis of Income Statement Analysis of Statement of Shareholder Equity Analysis of Cash flow Statement Analysis of Profitability • **Growth Analysis and Sustainable Earning** Concept of Growth Analysis Analysis of changes in profitability and sustainable earnings Evaluation of P/B ratios and P/E ratios
III	**Basics of Valuation and Valuation Models**	• **Basics of Valuation** Introduction to valuation Value, Distinction between Price and Value Foundation of Business Valuation Purpose of business valuation Uncertainties in Business Valuation Role of valuation in business acquisition, legal and tax purposes, efficient market hypothesis • **Valuation Models** Introduction to valuation models : asset based approach, Income based approach, market based approach Discounted cash flow valuation Relative valuation Free Cash Flow valuation
IV	**Valuation of Assets and Liabilities**	• Valuation of Fixed Assets, Valuation of Inventories and Valuation of Investment • Valuation of Shares • Valuation of Goodwill, Patents, Copyrights, Brands, Real Estate • Valuation of Liabilities

11) References:

- Thomas Copeland- Wiley, Valuation : Measuring and Managing the value of Companies:
- Rovert F Reilly and Robert Swhweish , The Handbook of Advance Business Valuation, Mc Graw hill
- Pitabas Mohanty, Business Valuation, Taxmann
- Tim Koller, Valuation- Measuring and Managing the value of Companies, Mc Kinsey & Co.

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: VI***

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SPECIALIZATION: MARKETING

ELECTIVE COURSE DETAILS (SEM - VI)

1) **Title of the Course: Retail Management**
2) **Course Code :** SF-MS-VI-E(M)-RET
3) **Course Objective:**

The Course will help the learner –

- To study retail management concepts and operations.
- To provide understanding of retail management and types of retailers.
- To develop an understanding of retail management terminology including merchandize management, store management and retail strategy.

4) **Course Outcome (CO) :**

CO1 – The learner will understand concept and operation of retail management.

CO2 – The learner will get to know different types of retailers and the career opportunities in retail management.

5) **Category of Course :** Elective Course (Specialization : MARKETING)
6) **Semester :** VI
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Retail Management- An overview**	a) Retail Management: • Introduction and Meaning, Significance, Factors Influencing Retail Management, Scope of Retail Management b) Retail Formats: • Concept of Organized Retailing: Factors Responsible for the Growth of Organized Retail in India, Multichannel Retailing: Meaning and Types, E-tailing: Meaning, Advantages and Limitations c) Emerging Trends in Retailing • Impact of Globalization on Retailing • I.T in Retail: Importance, Advantages and Limitations, Applications of I.T. in Retail: EDI, Bar Coding, RFID Tags, Electronic Surveillance, Electronic Shelf Labels • FDI in Retailing: Meaning, Need for FDI in Indian Retail Scenario • Franchising: Meaning, Types, Advantages and Limitations, Franchising in India • Green Retailing • Airport Retailing
II	**Retail Consumer and Retail Strategy**	a) Retail Consumer/Shopper • Meaning of Retail Shopper, Factors Influencing Retail Shoppers, Changing Profile of Retail Shoppers, Market Research as a Tool for Understanding Retail Markets and Shoppers b) CRM in Retail: • Meaning, Objectives • Customer Retention Approaches: Frequent Shopper Programme, Special Customer Services, Personalization, Community c) Retail Strategy: • Meaning, Steps in Developing Retail Strategy, Retail Value Chain d) Store Location Selection: • Meaning, Types of Retail Locations, Factors Influencing Store Location e) HRM in Retail: • Meaning, Significance, Functions • Organization Structure in Retail: Meaning, Factors Influencing Designing Organization Structure, Organization Structure for Small Stores/Single Stores/Independent Retailers and Retail Store Chain/Department Store
III	**Merchandise Management and Pricing**	a) Merchandise Management • Concept, Types of Merchandise, Principles of Merchandising, Merchandise Planning- Meaning and Process, Merchandise Category – Meaning, Importance, Components, Role of Category

		Captain, Merchandise Procurement/SourcingMeaning, Process, Sources for Merchandise b) Buying Function: • Meaning, Buying Cycle, Factors Affecting Buying Functions, Functions of Buying for Different Types of Organizations Young and Rubicam's Brand Asset Valuator- Independent Store, Retail Chain, Non-store Retailer c) Concept of Lifestyle Merchandising d) Private Label • Meaning, Need and Importance, Private Labels in India e) Retail Pricing • Meaning, Considerations in Setting Retail Pricing • Pricing Strategies: High/ Low Pricing: Meaning, Benefits, Everyday Low Pricing: Meaning, Benefits, Market Skimming, Market Penetration, Leader Pricing, Odd Pricing, Single Pricing, Multiple Pricing, Anchor Pricing • Variable Pricing and Price Discrimination- Meaning Types: Individualized Variable Pricing/First Degree Price Self-Selected Variable Pricing/ Second Degree Price Discrimination Clearance and Promotional Markdowns, Coupons, Price Bundling, Multiple – Unit Pricing Variable Pricing by Market Segment/ Third Degree Price Discrimination
IV	**Managing and Sustaining Retail**	a) Retail Store Operations: • Meaning, Responsibilities of Store Manager, The 5S's of Retail Operations (Systems, Standards, Stock, Space, Staff) b) Store Design and Layout: • Store Design- Meaning, Objectives, Principles, Elements of Exterior and Interior Store Design, Store Atmospherics and Aesthetics • Store Layout- Meaning, Types: Grid, Racetrack, Free Form • Signage and Graphics: Meaning, Significance, Concept of Digital Signage • Feature Areas: Meaning, Types: Windows, Entrances, Freestanding Displays, End Caps, Promotional Aisles, Walls, Dressing Rooms, Cash Wraps C) Visual Merchandising and Display: • Visual Merchandising- Meaning, Significance, Tools Used for Visual Merchandising • The Concept of Planogram • Display- Meaning, Methods of Display, Errors in Creating Display d) Mall Management • Meaning and Components: Positioning, Zoning, Promotion and Marketing, Facility Management, Finance Management e) Legal and Ethical Aspects of Retailing • Licenses/Permissions Required to Start Retail Store in India • Ethical Issues in Retailing Career Options in Retailing

11) References:

- Michael, Levy. & Barton A, Weitz. *"Retailing Management"*. Tata Mc Graw Hill.
- Gibson G, Vedamani. "*Retail Management- Functional Principles and Practices"*. Mumbai. Jaico Publishing House.
- Jim. *"Retail Strategies-understanding why we shop"*. Mumbai. Jaico Publishing House.
- Dunne, Lusch. *"Retail Management"*. South Western Cengage Learning.
- K.S, Menon. *"Store Management"*. Macmillan India Ltd.
- Keith, Lincoln. And Lars, Thomessen. "*Retailization -Brand Survival in the Age of Retailer Power".* Kogan Page Ltd.
- Swapna, Pradhan. *"Retailing Management–Text and Cases".* 4th Edn. Tata Mc Graw Hill.
- Bajaj, Tulli. & Shrivastava. *"Retail Management"*.Oxford University Press.
- Kishore, Biyani. *"It Happens in India",& " The Wall Mart Story"*
- Store, Manager. Organiser / Planner- DMS Retail.
- Dr. RamKishen, Y. *"International Retail Marketing Strategies"*. Mumbai. Jaico Publishing House.

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: VI***

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SPECIALIZATION: MARKETING

ELECTIVE COURSE DETAILS (SEM - VI)

1) **Title of the Course: International Marketing**
2) **Course Code :** SF-MS-VI-E(M)-IM
3) **Course Objective:**

The Course will help the learner –

- To understand International Marketing, its Advantages and Challenges.
- To provide an insight on the dynamics of International Marketing Environment.
- To understand the relevance of International Marketing Mix decisions and recent developments in Global Market.

4) **Course Outcome (CO) :**

CO1 – Learner will develop a market oriented, global, entrepreneurial, and sustainable mindset, see dynamic business environments as opportunities, and be able to make strategic marketing decisions in such environments.

5) **Category of Course :** Elective Course (Specialization : MARKETING)
6) **Semester :** VI
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to International Marketing & Trade**	Introduction of International Marketing: • Meaning, Features of International Marketing, Need and Drivers of International Marketing, Process of International Marketing, Phases of International Marketing, Benefits of International Marketing, Challenges of International Marketing, Difference between Domestic and International Marketing, Different Orientations of International Marketing : EPRG Framework, Entering International Markets :Exporting, Licensing, Franchising, Mergers and Acquisition, Joint Ventures, Strategic Alliance, Wholly Owned Subsidiaries, Contract Manufacturing and Turnkey Projects, Concept of Globalization b) Introduction to International Trade: • Concept of International Trade, Barriers to Trade: Tariff and Non-Tariff, Trading Blocs : SAARC, ASEAN, NAFTA, EU, OPEC
II	**International Marketing Environment and Marketing Research**	a) International Marketing Environment: • Economic Environment : International Economic Institution (World Bank, IMF, IFC) ,International Economic Integration (Free Trade Agreement, Customs Union, Common Market, Economic Union) • Political and Legal Environment: Political System (Democracy, Authoritarianism, Communism), Political Risk, Political Instability, Political Intervention. Legal Systems (Common Law, Civil Law, Theocratic Law), Legal Differences, Anti-Dumping Law and Import License. • Cultural Environment : Concept , Elements of Culture (Language, Religion, Values and Attitude , Manners and Customs, Aesthetics and Education) , HOFSTEDE's Six Dimension of Culture , Cultural Values (Individualism v/s Collectivism) b) Marketing Research: Introduction, Need for Conducting International Marketing Research, International Marketing Research Process, Scope of International Marketing Research, IT in Marketing Research
III	**International Marketing Mix**	a) International Product Decision b) International Product Line Decisions, Product Standardization v/s Adaptation Argument, International Product Life Cycle, Role of Packaging and Labelling in International Markets, Branding Decisions in International Markets, International

		Market Segmentation and Targeting, International Product Positioning c) International Pricing Decision: • Concept of International Pricing, Objectives of International Pricing, Factors Affecting International Pricing • International Pricing Methods: Cost Based, Demand Based, Competition Based , Value Pricing, Target Return Pricing and Going Rate Pricing • International Pricing Strategies : Skimming Pricing, Penetration Pricing , Predatory Pricing • International Pricing Issues : Gray Market , Counter Trade, Dumping, Transfer Pricing c) International Distribution Decisions • Concept of International Distribution Channels, Types of International Distribution Channels, Factors Influencing Selection of International Distribution Channel d) International Promotion Decisions • Concept of International Promotion Decision • Planning International Promotional Campaigns: Steps - Determine the Target Audience, Determine Specific Campaigns, Determine Budget, Determine Message, Determine Campaign Approach and Determine Campaign Effectiveness • Standardization V/S Adaptation of International Promotional Strategies • International Promotional Tools/Elements
IV	**Developments in International Marketing**	a) Introduction -Developing International Marketing Plan: Preparing International Marketing Plan, Examining International Organisational Design, Controlling International Marketing Operations, Devising International Marketing Plan b) International strategies:Need for International Strategies, Types of International Strategies c) International Marketing of Services: Concept of International Service Marketing, Features of International Service Marketing, Need of International Service Marketing, Drivers of Global Service Marketing, Advantages and Disadvantages of Global Service Marketing, Service Culture

11) References:

- Dr. Shakeel Ahmad Siddiqui, International Marketing, Dreamtech press , Edition 2011
- Philip R.Cateora, John L. Graham, Prashanth Salwan, International Marketing , Tata Mcgraw hill Education Private limited, New Delhi, Thirteenth Edition .
- RajGopal, International Marketing, Vikas Publishing House Pvt. Ltd., Edition 2007.
- Sak Onkvisit, John J.Shaw, International Marketing Analysis and Strategy, Pearson Publication, Third Edition
- Francis Cherunilam, International Business, PHI Leaning Private Limited New Delhi, Fifth Edition .
- Justin Paul and Ramneek Kapoor, International Marketing Text and Cases, Tata Mcgraw Hill Education Private Limited New Delhi, Second Edition.
- Rakesh Mohan Joshi, International Marketing, Oxford University Press, Second Edition
- Philip R. Cateora, John L. Graham, International Marketing, Tata Mcgraw Hill, Twelfth Edition
- Rakesh Mohan Joshi, International Marketing Oxford University Press, First Edition
- Michael R. Czinkota, Iikka A Ronkainen, International Marketing, Cengage Learning Edition 2007
- Gerald Albaum, Edwin Duerr, Jesper Strandskov, International Marketing and Export Management, Pearson Publication , Fifth Edition

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: VI***

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SPECIALIZATION: MARKETING

ELECTIVE COURSE DETAILS (SEM - VI)

1) **Title of the Course: Media Planning & Management**
2) **Course Code :** SF-MS-VI-E(M)-MEDIA
3) **Course Objective:**

The Course will help the learner –

- To understand Media Planning, Strategy and Management with reference to current business scenario.
- To know the basic characteristics of all media to ensure most effective use of advertising budget.
- To provide an insight on Media Planning, Budgeting, Scheduling and Evaluating the Different Media Buys.

4) **Course Outcome (CO) :**

CO1 – Learner will understand the Media planning process, different media available like print media, Television, Outdoor, Radio, Online media and process of media buying

CO2 - Learner can identify media metrics, benchmarking metrics, Plan metrics

CO3 – Learner knows how to design a media budget.

5) **Category of Course :** Elective Course (Specialization : MARKETING)
6) **Semester :** VI
7) **Total Hours:** 60 hours
8) **Total Credits:** 3 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Overview of Media and Media Planning**	a) Overview of Media and Media Planning: • Meaning of Media & Features of Media, Meaning of Media Planning , Scope of Media planning , Media Planning Elements, Role of Media in Business, Media Planning Process, Impact of Marketing Objectives on Media Planning, Factors Influencing Media Planning Decisions, Role and Importance of Media in Consumer Buying Decision, Role of Media Planner, Challenges of Media Planning, Organization Structure of Media Company, Regulatory Framework and Legal Aspects in Media Planning b) Media Research: • Meaning, Role and Importance Sources of Media Research : Audit Bureau of Circulation, Press Audits, National Readership Survey/IRS, Businessmen's Readership Survey, TRP, National Television Study, ADMAR Satellite Cable Network Study, Reach and Coverage Study, ClB Listenership Survey
II	**Media Mix & Media Strategy**	a) Media Mix: Meaning, Need for Media Mix, Identifying Audience for Mass Media , Factors Affecting Media Mix Decision, Types of Media Mix Decisions: Broad Media Classes, Media Vehicles, Media Units, Deciding Ideal Media Mix b) Media Choices: Print Meaning- Factors Affecting Selection of Print Media Decisions , Types of Print Media, Advantages and Limitations Television- Meaning, Factors Affecting Selection of Television Media Decisions, Advantages and Limitations Radio- Meaning, Factors Affecting Selection of Radio Media Decision, Advantages and Limitations Out of Home (OOH)- Meaning, Types of OOH, Factors Affecting OOH Planning Decision, Advantages and Limitations c) Emerging Media: Online, Mobile, Gaming, In flight, In Store, Interactive Media d) Media Strategy: Meaning, Need for Media Strategy, Situation Analysis for Media Strategy and its Components • Steps in Formulating Media Strategies: Defining the Target Group, Market Prioritization, Media Weights, Media Mix, Media Scheduling.
III	**Media Budgeting, Buying & Scheduling**	a) Media Budget • Meaning, Factors to be considered while Framing a Budget: Advertising Task, Competitive Framework, Market Dominance,

		Market Coverage, Media Cost, Market Task, Pricing ,Frequency of Purchase • Importance of Media Budget. • Methods of Setting Media Budget - Status Quo, Inflation Adjusted, Advertising Sales, Case Rate & Advertising Margin Method, Share of Market, Yardstick Method, Effective Frequency & Reach Method & Margin Analysis ROI Based Approach, Experimental Approach, Break Even Planning. b) Media Buying: • Meaning, Role of Media Buyer, Objectives of Media Buying, Buying Process: Buying Brief, Environmental Analysis, Science and Art of Buying, Benchmarking Buying Plan Presentation Deal Management and Post Buy • Buying brief: Concept & Elements of Buying Brief, Art of Media Buying – Negotiation in Media Buying, Plan Presentation and Client Feedback • Criteria in Media Buying c) Media Scheduling • Meaning, Importance • Factors Affecting Scheduling: Sales Pattern, Purchase Cycle, Product Availability, Competitive Activity, Marketing Task, Budget Constraints, Target Group. • Scheduling Patterns – Continuity, Flighting, Pulsing • Scheduling Strategies for Creating Impact: Road Block , Day or Day part • Emphasis, Multiple Spotting, Teasers
IV	**Media Measurement, Evaluation**	a) Media Measurement: • Basic Metrics: Reach, Cumulative/Frequency Reach, Discrete & Cumulative distribution, Average Opportunity to See (AOTS), Effective frequency/Reach • Television Metrics: Dairy v/s Peoplemeter,TRP,/TVR, Program Reach & Time Spent, Stickiness Index, Ad Viewership • Radio Metrics: Arbitron Radio Rating • Print Metrics: Circulation, Average Issue Readership (AIR), Total or Claimed Reader, Sole or Solus reader. • OOH Metrics: Traffic Audit Bureau (TAB) b) Benchmarking Metrics: share, Profile, and Selectivity Index c) Plan Metrics: • Gross Rating Points (GRP), Gross Impressions (GI), Share of Voice (SOV).

		d) Evaluating Media Buys • Evaluating Television Media Buying: Dysfunctional Card Rate, Secondary and Effective Rate, Deal Composition, Cost Per Rating Point(CPRP), Reach Delivered by the Buy, Visibility Spots, Bonus Percentage, Upgrades and Spot Fixing, Sponsorships • Evaluating Print Media Buying: Discount on Rate Card, Negotiated Rate, Cost Per Thousand (CPT), Market Share Incentives, Readership v/s Circulation Track, Growth Incentives, Combination Rate Incentives, Full Page Discounts and Size Upgrades, Discount for Colour Ads, Date Flexibility Incentives, Positioning, Innovations. • Evaluating Other Media Buys: Radio Buys, Outdoor Buys, Cinema Buys, Internet Buys, and Mobile Buys

11) References:

- Arpita Menon , Media Planning and Buying, Tata McGraw Hill Education Private Limited , Second Edition 2010
- Jack Z Sissors and Roger B. Baron, Advertising Media Planning, McGraw Hill Education India Pvt. Limited, Seventh Edition.
- Larry Percy and Richard Elliott, Strategic Advertising Management , Oxford University Press, Second Edition
- Larry d. Kelly and Donald W.Jugeneimer, Advertising Media Planning , PHI learning Private Limited
- Dennis .F.Herrick, Media Management in Age of Giants, Surjeet Publications
- Charles Warner and Joseph Buchman, Media selling ,Surjeet Publication,3rd edition

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: VI***

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SEMESTER –VI

COURSE DETAILS

1) **Title of the Course: Operation Research**
2) **Course Code :** SF-MS-VI-C-OR
3) **Course Objective:**
   - To help Learners to understand operations research methodologies
   - To help Learners to solve various problems practically
   - To make Learners proficient in case analysis and interpretation
4) **Course Outcome (CO) :**

   CO1- Learner will be able to Formulate and solve mathematical model (linear programming problem) for a physical situation like production, distribution of goods and economics.

   CO2- Learner will be able to Use appropriate techniques to represent and analyze projects with a view to managing resources, minimizing costs, and coping with uncertainty.

   CO3- Learner will be able to solve numerical on Transportation Models and Assignment Models.
5) **Category of Course :** Core Course
6) **Semester :** VI
7) **Total Hours:** 60 hours
8) **Total Credits:** 4 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Operational Research and Linear Programming**	**Introduction To Operations Research** • Operations Research - Definition, Characteristics of OR, OR Techniques, Areas of Application, Limitations of OR. **Linear Programming Problems: Introduction and Formulation** • Introduction to Linear Programming • Applications of LP • Components of LP • Requirements for Formulation of LP Problem • Assumptions Underlying Linear Programming • Steps in Solving LP Problems • LPP Formulation (Decision Variables, Objective Function, Constraints, Non-Negativity Constraints) **Linear Programming Problems: Graphical Method** • Maximization & Minimization Type Problems. (Max. Z & Min. Z) • Two Decision Variables and Maximum Three Constraints Problem • Constraints can be "less than or equal to", "greater than or equal to" or a combination of both the types i.e. mixed constraints. • Concepts: Feasible Region of Solution, Unbounded Solution, Redundant Constraint, Infeasible Solution, Alternative Optima. **Linear Programming Problems: Simplex Method** • Only Maximization Type Problems. (Only Max. Z). No Minimization problems. • (No Min. Z) Numericals on Degeneracy in Maximization Simplex Problems. Two or Three Decision Variables and Maximum Three Constraints Problem. (Upto Maximum Two Iterations) • All Constraints to be "less than or equal to" Constraints. ("Greater than or Equal to" Constraints not included.) • Concepts : Slack Variables, Surplus Variables, Artificial Variables, Duality, Product Mix and Profit, Feasible and Infeasible Solution, Unique or Alternate • Optimal Solution, Degeneracy, Non Degenerate, Shadow Prices of Resources, Scarce and Abundant Resources, Utilized and Unutilized Capacity of Resources, • Percentage Utilization of Resources, Decision for Introduction of a New Product.

II	**Assignment and Transportation Models**	**Assignment Problem – Hungarian Method** • Maximization & Minimization Type Problems. • Balanced and Unbalanced Problems. • Prohibited Assignment Problems, Unique or Multiple Optimal Solutions. • Simple Formulation of Assignment Problems. • Maximum 5 x 5 Matrix. Up to Maximum Two Iterations after Row and Column • Minimization. **Transportation Problems** • Maximization & Minimization Type Problems. • Balanced and Unbalanced problems. • Prohibited Transportation Problems, Unique or Multiple Optimal Solutions. • Simple Formulation of Transportation Problems. • Initial Feasible Solution (IFS) by: • a. North West Corner Rule (NWCR) • b. Least Cost Method (LCM) • c. Vogel's Approximation Method (VAM) • Maximum 5 x 5 Transportation Matrix. • Finding Optimal Solution by Modified Distribution (MODI) Method. (u, v and Δ) • Maximum Two Iterations (i.e. Maximum Two Loops) after IFS.
III	**Network Analysis**	• Critical Path Method (CPM) • Concepts: Activity, Event, Network Diagram, Merge Event, Burst Event, • Concurrent and Burst Activity, • Construction of a Network Diagram. Node Relationship and Precedence , Relationship. • Principles of Constructing Network Diagram. • Use of Dummy Activity • Numerical Consisting of Maximum Ten (10) Activities. • Critical Path, Sub-critical Path, Critical and Non-critical Activities, Project • Completion Time. • Forward Pass and Backward Pass Methods. • Calculation of EST, EFT, LST, LFT, Head Event Slack, Tail Event Slack, Total Float, • Free Float, Independent Float and Interfering Float • b) Project Crashing • Meaning of Project Crashing.

		• Concepts: Normal Time, Normal Cost, Crash Time, Crash Cost of Activities. • Cost Slope of an Activity. • Costs involved in Project Crashing: Numericals with Direct, Indirect, Penalty,crash cost and Total Costs. • Time – Cost Trade off in Project Crashing. • Optimal (Minimum) Project Cost and Optimal Project Completion Time. • Process of Project Crashing. • Numerical Consisting of Maximum Ten (10) Activities. • Numerical based on Maximum Four (04) Iterations of Crashing • c) Program Evaluation and Review Technique (PERT) • Three Time Estimates of PERT: Optimistic Time (a), Most Likely Time (m) and • Pessimistic Time (b). • Expected Time (te) of an Activity Using Three Time Estimates. • Difference between CPM and PERT. • Numerical Consisting of Maximum Ten (10) Activities. • Construction of PERT Network using tevalues of all Activities. • Mean (Expected) Project Completion Time. • Standard Deviation and Variance of Activities. • Project Variance and Project Standard Deviation. • 'Prob. Z' Formula. • Standard Normal Probability Table. Calculation of Probability from the Probability Table using 'Z' Value and Simple Questions related to PERT Technique. • Meaning, Objectives, Importance, Scope, RORO/LASH
IV	**Job Sequencing and Theory of Games**	• Job Sequencing Problem • Processing Maximum 9 Jobs through Two Machines only. • Processing Maximum 6 Jobs through Three Machines only. • Calculations of Idle Time, Elapsed Time etc. • b) Theory of Games • Introduction • Terminology of Game Theory: Players, Strategies, Play, Payoff, Payoff matrix, • Maximin, Maximax, Saddle Point. • Types of Games. • Numericals based on: Two Person Zero Sum Games including strictly determinable and Fair Game , - Pure Strategy Games (Saddle Point available). Principles of Dominance method.

11) References:

- Dr. Mrs. Anjali Ghanekar, Essentials of Organisation Development, Everest Publishing House
- French,W.L. and Bell, C.H., Organisation Development, Prentice-Hall, New Delhi,1995.
- Harvey, D.F. and Brown, D.R., An Experimental Approach to Organization Development, Prentice-Hall, Englewood Cliffs,N.J.,1990
- Cummings, T. G. & Worley, C. G. (2009).Organization Development and Change (9th edition). Canada: South-Western Cengage Learning
- Thomas G. Cummings and Christopher G. Worley, Organization Development and Change, Thomson South-Western, 8th Edition 2004.
- Cummings, T. G., Theory of Organization Development and Change, South Western.
- Ramanarayan, S. and Rao, T.V., Organization Development: Accelerating Learning and Transformation, 2nd Edition, Sage India, 2011.
- Richard L, Organisation, Theory, Change and Design , India Edition(Cenage Learning)
- Garath R Jones, Mary Mathew , Organisation Theory, Design and Change: Sixth Edition, Pearson
- Wendell L French, Cecil H Bell, Jr, Veena Vohra ,Organisation Development , Sixth Edition, Pearson Education

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: VI***

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COURSE DETAILS

1) **Title of the Course: Customer Relationship Management**
2) **Course Code :** SF-MS-VI-C-CRM
3) **Course Objective:**

The Course will help the learner –

- To understand concept of Customer Relationship Management (CRM) and implementation of Customer Relationship Management.
- To get an insight into CRM marketing initiatives, customer service and designing CRM strategy.
- To understand new trends in CRM, challenges and opportunities for organizations.

4) **Course Outcome (CO) :**

CO1 – The learner will understand importance and role of CRM in organisation.

CO2 – Learner would acquire knowledge of different computer software in CRM.

CO3 – The learner will learn new trends, challenges and opportunities under CRM

5) **Category of Course :** Core Course
6) **Semester :** VI
7) **Total Hours:** 60 hours
8) **Total Credits:** 4 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Customer Relationship Management**	• Concept, Evolution of Customer Relationships: Customers as strangers, acquaintances, friends and partners • Objectives, Benefits of CRM to Customers and Organisations, Customer Profitability Segments, Components of CRM: Information, Process, Technology and People, Barriers to CRM • Relationship Marketing and CRM: Relationship Development Strategies: Organizational Pervasive Approach, Managing Customer Emotions, Brand Building through Relationship Marketing, Service Level Agreements, Relationship Challenges
II	**CRM Marketing Initiatives, Customer Service and Data Management**	• CRM Marketing Initiatives: Cross-Selling and Up-Selling, Customer Retention, Behaviour Prediction, Customer Profitability and Value Modeling, Channel Optimization, Personalization and Event-Based Marketing • CRM and Customer Service: Call Center and Customer Care: Call Routing, Contact Center Sales-Support, Web Based Self Service, Customer Satisfaction Measurement, Call-Scripting, Cyber Agents and Workforce Management • CRM and Data Management: Types of Data: Reference Data, Transactional Data, Warehouse Data and Business View Data, Identifying Data Quality Issues, Planning and Getting Information Quality, Using Tools to Manage Data, Types of Data Analysis: Online Analytical Processing (OLAP), Clickstream Analysis, Personalisation and Collaborative Filtering, Data Reporting
III	**CRM Strategy, Planning, Implementation and Evaluation**	• Understanding Customers: Customer Value, Customer Care, Company Profit Chain: Satisfaction, Loyalty, Retention and Profits • Objectives of CRM Strategy, The CRM Strategy Cycle: Acquisition, Retention and Win Back, Complexities of CRM Strategy • Planning and Implementation of CRM: Business to Business CRM, Sales and CRM, Sales Force Automation, Sales Process/ Activity Management, Sales Territory Management, Contact Management, Lead Management, Configuration Support, Knowledge Management CRM Implementation: Steps-Business Planning, Architecture and Design, Technology Selection, Development, Delivery and Measurement

		• CRM Evaluation: Basic Measures: Service Quality, Customer Satisfaction and Loyalty, Company 3E Measures: Efficiency, Effectiveness and Employee Change
IV	**CRM New Horizons**	• e-CRM: Concept, Different Levels of E- CRM, Privacy in E-CRM: • Software App for Customer Service: Activity Management, Agent Management, Case Assignment, Contract Management, Customer Self Service, Email Response Management, Escalation, Inbound Communication Management, Invoicing, Outbound Communication Management, Queuing and Routing, Scheduling • Social Networking and CRM • Mobile-CRM • CRM Trends, Challenges and Opportunities • Ethical Issues in CRM

11) References:

- Baran ,Roger J. & Robert J, Galka. 2014. *Customer Relationship Management: The Foundation of Contemporary Marketing Strategy*. Routledge Taylor & Francis Group.
- Anderson, Kristin and Carol, Kerr. 2002. *Customer Relationship Management*. Tata McGraw-Hill.
- Ed, Peele. *Customer Relationship Management*. Pearson Education.
- Bhasin Jaspreet, Kaur. 2012. *Customer Relationship Management*. Dreamtech Press.
- Judith W, Kincaid. 2006. *Customer Relationship Management Getting it Right*. Pearson Education.
- Jill, Dyche.2007. *The CTM Handbook: A Business Guide to Customer Relationship Management*. Pearson Education.
- Valarie A ,Zeithmal.et.all. 2010. *Services Marketing Integrating Customer Focus Across the Firm*. Tata McGraw Hill.
- Urvashi, Makkar and Harinder Kumar, Makkar. 2013. *Customer Relationship Management*. McGraw Hill Education.

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: VI***

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COURSE DETAILS

1) **Title of the Course: Entrepreneurship Management**
2) **Course Code** : SF-MS-VI-AB-EM
3) **Course Objective:**

The Course will help the learner –

- To understand basic concepts in the area of Entrepreneurship.
- To understand the role and importance of entrepreneurship for Economic development.
- In developing personal creativity and entrepreneurial initiative.
- Elaboration of business ideas.
- Understanding the stages of the entrepreneurial process and the resources needed for the successful development of entrepreneurial ventures.

4) **Course Outcome (CO)** :

CO1- The learner will be able to analyze the business environment in order to identify business opportunities

CO2-The learner will be able to evaluate the effectiveness of different entrepreneurial strategies

CO3- The learner will be able to specify the basic performance indicators of entrepreneurial activity and can market and manage small business ventures by interpreting their own business plan.

5) **Category of Course :** Skill /Ability Enhancement Course
6) **Semester :** VI
7) **Total Hours:** 60 Hours
8) **Total Credits:** 3 Credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: VI***

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10) Modules/Units :

MODULE NO.	MODULE TOPIC	CONTENTS COVERED
I	**The Entrepreneur**	• Entrepreneur: Meaning, Nature, origin and development of entrepreneurship in India, Need and Importance, Core elements, Principles, Essentials, Types, Functions, Concept of entrepreneurship management, Motives behind being an entrepreneur, Entrepreneurial Process • Theories of Entrepreneurship: Innovation Theory of Schumpeter, Need for Achievement Theory of McClelland, Risk Bearing Theory of knight, Hagen's Theory of Entrepreneurship, Economic Theory of Entrepreneurship • Entrepreneurial Values and Attitudes, Dominant characteristics of successful entrepreneurs, Internal and external factors for entrepreneurial motivation • Entrepreneurial Skills, Identifying business opportunities, Role of creativity in Entrepreneurship, the creative process, the Innovation process, types of innovation, sources of innovation, principles of innovation, Sources of Business Ideas.
II	**Business Planning**	Forms of Entrepreneurial structures: • Sole Proprietorship-meaning, merits and limitations. • Partnership-Meaning, Forms, merits and limitations. • Corporations-Meaning, merits and limitations. • Limited Liability partnerships and corporations. • Franchising-Meaning, types, merits and limitations. a) Critical Factors for starting a new enterprise: Personal, Environmental, Sociological factors. Problems of a New Venture- Financial, administrative, marketing, production and other problems. b) Business Plan: Meaning, Benefits, Developing a business plan, Environment scanning, Elements/Areas to be covered in a Business Plan, Project Report preparation, Contents of a Project Report.
III	**Key Areas of New Ventures**	• Marketing: New Product Development, Marketing Strategy for the new venture, Branding strategies, Distribution strategies, Pricing Strategies, Promotion strategies for new venture, Concept of Marketing Mix and Market segmentation, Marketing Plan • Operations: Size and location of Enterprise, Layout, Inventory Control, Quality Control.

		• Finance: Sources of long term and short term finance, Debt fund- Meaning, Merits and limitations, Equity Fund- Meaning, merits and limitations, Concept of Break Even analysis, Venture Capital- Meaning, Merits and Limitations, Criteria for Evaluating New Venture Proposals by Venture Capitalist • Human Resource: Personnel Function, Important Labor Laws: Industrial Disputes Act, Factories Act, Provident Fund Act, Employee State Insurance Act, Payment of Wages Act, Minimum Wages Act, Payment of Gratuity Act, other related Acts and Role of HRD in new ventures.
IV	**Evolving Concepts in Entrepreneurship**	• Social Entrepreneurship: Meaning, Social responsibility of an entrepreneur. • Barriers to entrepreneurship: Environmental, economic, non-economic, personal and entrepreneurial barriers. • Intrapreneurship: Meaning, Characteristics, Intrapreneur Activities, types of Corporate Entrepreneurs, Corporate V/s Intrapreneurial culture, Climate, Fostering Intrapreneurial culture, Promoting intrapreneurship- Pinchot's Spontaneous teams and Formal Venture teams, establishing intrepreneurial ventures. • Ethics and Entrepreneurship: Defining Ethics, Approaches to Managerial ethics, ethics and business decisions, Ethical practices and code of conduct, Ethical considerations in corporate entrepreneurship. • Institutional Support to Entrepreneurs: Importance, Incentives and facilities, Entrepreneurship Development Institute of India (EDI), NSIC, Small Industries Development Organization (SIDO), National Institute for Entrepreneurship and Small Business Development (NIESBUD), Others, Key features of National Policy on Skill Development and Entrepreneurship 2015.

11) References:

- S.L. Gupta and Dr. Arun Mittal, Entrepreneurship Development by International Books House ltd.
- Vasant Desai, Dynamics of Entrepreneurial Development
- Willaim D. Bygrave and Andrew Zacharakis, The Portable MBA in Entrepreneurship by, Fourth edition, John Wiley and Sons.
- S.S. Khanka, Entrepreneurship Development, Sultanchand and Sons ltd.
- C.B. Gupta and N.P. Shrinivasan, Entrepreneurship Development Sultan chand and sons
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- Badi R.V., Badi N.V. (2010), "Entrepreneurship", Vrinda Publications (P) Ltd., Delhi.
- Desai Vasant (2009), "The Dynamics of Entrepreneurial Development and Management Planning for Future Sustainable Growth", Himalaya Publishing House, India.
- Vasishth Neeru (2008), "Business Organization", Taxmann Allied Services (P.) Ltd.,

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: VI***

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COURSE DETAILS

1) **Title of the Course: International Business**
2) **Course Code :** SF-MS-VI-ID-INB
3) **Course Objective:**

The Course will help the learner with –

- Basic and broad knowledge in International business, its environment, strategies and management.
- Ability to apply concepts, principles and theories to simple business situations.

4) **Course Outcome (CO) :**

CO1 – Learners will possess knowledge of International Business.

CO2 – Learners will possess the knowledge of International Marketing.

CO3 – Learners will understand the concept of Export & Import its procedures and Documentation.

5) **Category of Course :** Multi-disciplinary/ Inter-disciplinary course
6) **Semester :** VI
7) **Total Hours:** 60 hours
8) **Total Credits:** 2 credits
9) **Evaluation Pattern** :
   a. **Total Marks:** 100 Marks (10 Point Grading System)
   b. **Passing Criteria:** 40% Marks (04 Grade Points)
   c. **Marking Scheme :** 60:40 Pattern
      - 60 Marks – Written Semester End Exam (Passing: 24 Marks)
      - 40 Marks – Internal Exam (Passing: 16 Marks)
   d. **Mode of Evaluation of Answer-book :** Online/Offline

10) **Modules / Units :**

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PROGRAMME CODE: SFP-MS ***Course Details For Semester: VI***

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MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to International Business**	Introduction to International Business- Importance, Nature and Scope of International Business, Drivers of International Business, Evolution of International Business, Strategies of Going International, Globalization, Multi-National Corporations- Nature, Goals of MNCs, India's Presence- Advantages and Disadvantages of MNCs International Business Environment: Economic, Political, Cultural and Legal Environments in International Business
II	**International Economic Institutions and Regional Groupings**	Institutional Support to International Business, Role of World Bank, IMF, ILO, UNCTAD, UNIDO and ADB in International Business, Implications for India Integration between Countries: Levels of Integration, Growth of Trading Blocs, Impact of Integration, Major Regional Trading Groups, The European Union, NAFTA, ASEAN, BRICS, SAARC, OPEC
III	**International Marketing & Introduction to Exports & Imports.**	International Marketing, Domestic and International Marketing, International Product Strategies, Pricing Issues and Decisions, Dumping, Promotion Issues and Policies, Export, Methods of Exporting, Registration Formalities for Exports, Export Licensing, Selection of Export Product, Identification of Market for Exports – Export Pricing Quotations, FOB & CIF. Imports, Negative list of Imports, Categories of Importers and Special Schemes for Importers, Import Documentation.
IV	**Preliminaries for Export Import and Documentation & Export Import Procedures and Foreign Trade Policy**	Aligned Documentation System – Commercial Invoice , Shipping Bill , Certificate of Origin, Consular Invoice, Mate's Receipt, Bill of Lading, GR Form, Transport Documents, Steps in Export Procedure, Export Contract, Export Finance, Legal Dimensions of Import Procedure, Customs Formalities for Imports, Warehousing of Imported Goods, Foreign Trade Policy Highlights (latest), Duty Drawback, Deemed Exports, Star Export Houses and EPCG Scheme.

11) References:

- Economic Survey, Govt. of India. Various issues
- Export-import Policy and Other Documents, Govt. of India
- Czinkota, Michael R, 8th Edition, Publisher Wiley, 2010

- Hill, Charles W. L., International Business, McGraw Hill, 2011, New York.
- Aswathappa K ,International Business, Tata McGraw Hill Education,

COURSE DETAILS

1) **Title of the Course: Project Work**
2) **Course Code :** SF-MS-VI-P-PRO
3) **Course Objective:**

The Course will help the learner –

- To understand the concept of research and Internship.
- To study collection of data, processing of data, analysis of data and interpretation of data.

4) **Course Outcome (CO) :**

CO1 – The learner will prepare the project on research or Internship.

CO2 – The learner will acquire the knowledge about the research methodology.

CO3 – It will help the learner in analysis of data and interpret the findings and conclusion.

5) **Category of Course :** Projects/Additional Course
6) **Semester :** VI
7) **Total Hours:** 60 hours

BACHELOR OF MANAGEMENT STUDIES: B.M.S.

PROGRAMME CODE: SFP-MS ***Course Details For Semester: VI***

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8) Total Credits: 3 credits

9) Evaluation Pattern :

a. Total Marks: 100 Marks (10 Point Grading System)

b. Passing Criteria: 40% Marks (04 Grade Points)

c. Marking Scheme : 60:40 Pattern

- **60 Marks – Project Book & External Viva (Passing: 24 Marks)**
- **40 Marks - Project Book & Internal Viva (Passing: 16 Marks)**

10) Modules / Units :

11)

MODULE NO.	TOPIC	CONTENTS COVERED
I	**General guidelines for preparation of project work based on Research Methodology**	• Chapter No. 1: Introduction In this chapter Selection and relevance of the problem, historical background of the problem, brief profile of the study area, definition/s of related aspects, characteristics, different concepts pertaining to the problem etc. can be incorporated by the learner. • Chapter No. 2: Research Methodology This chapter will include Objectives, Hypothesis, Scope of the study, limitations of the study, significance of the study, Selection of the problem, Sample size, Data collection, Tabulation of data, Techniques and tools to be used, etc. can be incorporated by the learner. • Chapter No. 3: Literature Review This chapter will provide information about studies done on the respective issue. This would specify how the study undertaken is relevant and contribute for value addition in information/ knowledge/ application of study area which ultimately helps the learner to undertake further study on same issue. • Chapter No. 4: Data Analysis, Interpretation and Presentation This chapter is the core part of the study. The analysis pertaining to collected data will be done by the learner. The application of selected tools or techniques will be used to arrive at findings. In this, table of information's, presentation of graphs etc. can be provided with interpretation by the learner. • Chapter No. 5: Conclusions and Suggestions

		In this chapter of project work, findings of work will be covered and suggestion will be enlisted to validate the objectives and hypotheses.
II	**Guidelines for Internship based project work**	• Executive Summary: A bird's eye view of your entire presentation has to be precisely offered under this category. • Introduction on the Company: A Concise representation of company/ organization defining its scope, products/ services and its SWOT analysis. • Statement and Objectives: The mission and vision of the organization need to be stated enshrining its broad strategies. • Your Role in the Organisation during the internship: The key aspects handled, the department under which you were deployed and brief summary report duly acknowledged by the reporting head. • Challenges: The challenges confronted while churning out theoretical knowledge into practical world. • Conclusion: A brief overview of your experience and suggestions to bridge the gap between theory and practice.

COURSE DETAILS

1. **Title of the Course:** Modern Operating System

2. **Course Code: For Theory: BITMJ101**
   For Practical: BITMJP101
3. **Course Objective:**
   a. To understand the basic Operating System concepts and founding the services and advantages of it.
   b. Importance of virtualization and cloud computing in today's IT industries.
   c. Learning the features of different Operating System like Linux, Windows, and Android etc.
   d. Understand how Operating system manage the File and Directory system.
   e. Gaining the knowledge about Scheduling algorithm.
4. **Category of Course:** Major Course
5. **Semester:** I
6. **Total Hours:** 60
7. **Total Credits:** 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules: -**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical / Tutorial	Theory	Practical / Tutorial	Total
BITMJ101	Modern Operating Systems	4	2	2	2	4

Module	Details	Hours
I	**Introduction:** What is an operating system? History of operating system, computer hardware, different operating systems, operating system concepts, system calls, operating system structure. **Processes and Threads:** Processes, threads, interprocess communication, scheduling, IPC problems.	**12**
II	**Memory Management:** No memory abstraction, memory abstraction: address spaces, virtual memory, page replacement algorithms, design issues for paging systems, implementation issues, segmentation. **File Systems:** Files, directories, file system implementation, file-system management and optimization, MS-DOS file system, UNIX V7 file system, CD ROM file system.	**12**

III	**Input-Output:** Principles of I/O hardware, Principles of I/O software, I/O software layers, disks, clocks, user interfaces: keyboard, mouse, monitor, thin clients, power management, **Deadlocks:** Resources, introduction to deadlocks, the ostrich algorithm, deadlock detection and recovery, deadlock avoidance, deadlock prevention, issues.	**12**
IV	**Virtualization and Cloud:** History, requirements for virtualization, type 1 and 2 hypervisors, techniques for efficient virtualization, hypervisor microkernels, memory virtualization, I/O virtualization, Virtual appliances, virtual machines on multicore CPUs, Clouds. **Multiple Processor Systems** Multiprocessors, multicomputers, distributed systems.	**12**
V	**Case Study on LINUX and ANDROID:** History of Unix and Linux, Linux Overview, Processes in Linux, Memory management in Linux, I/O in Linux, Linux file system, security in Linux. Android **Case Study on Windows:** History of windows through Windows 10, programming windows, system structure, processes and threads in windows, memory management, caching in windows, I/O in windows, Windows NT file system, Windows power management, Security in windows.	**12**
	Total	**60**

Practical List :-

1. Installation of virtual machine software.
2. Installation of Linux operating system (RedHat / Ubuntu) on virtual machine.
3. Installation of Windows operating system on virtial machine.
4. Linux commands: Working with Directories: pwd, cd, absolute and relative paths, ls, mkdir, rmdir, file, touch, rm, cp. mv, rename, head, tail, cat, tac, more, less, strings, chmod
5.Linux commands: Working with files: ps, top, kill, pkill, bg, fg, grep, locate, find, locate.
6. date, cal, uptime, w, whoami, finger, uname, man, df, du, free, whereis, which. d. Compression: tar, gzip.
7. Windows (DOS) Commands – 1 a. Date, time, prompt, md, cd, rd, path. b. Chkdsk, copy, xcopy, format, fidsk, cls, defrag, del, move.
8. Windows (DOS) Commands – 2 a. Diskcomp, diskcopy, diskpart, doskey, echo b. Edit, fc, find, rename, set, type, ver
9. Working with Windows Desktop and utilities a. Notepad b. Wordpad c. Paint d. Taskbar e. Adjusting display resolution f. Using the browsers g. Configuring simple networking h. Creating users and shares
10. Working with Linux Desktop and utilities a. The vi editor. b. Graphics c. Terminal h

9. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** : Offline

10. Paper Pattern:

a. **Internal Assessment:**

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. **Semester End Theory Examination :**

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

c. **Semester End Practical Examination:**

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	45 Marks	05 Marks	50 Marks

11. Course Outcome:

Students will be able to:

CO1:- Illustrate the fundamentals of Operating System and its features.

CO2:- Explain the different types and services provided by an Operating System.

CO3:- Comprehend the concepts of Virtualization and Cloud computing.

CO4:-Describe the different scheduling algorithm.

CO5:-Discuss the properties of different Operating System like Linux Windows, Android etc.

CO 6:-Understand and Execute the Linux Commands in brief.

12. **References:**

1. Modern Operating Systems Andrew S. Tanenbaum, Herbert Bos Pearson 4th edition, 2014
2. Operating Systems –Internals and Design Principles Willaim Stallings Pearson 8th edition, 2009
3. Operating System Concepts Abraham Silberschatz, Peter B. Galvineg Gagne, Wiley, 8th edition
4. Operating Systems Godbole and Kahate McGraw Hill 3rd edition

COURSE STRUCTURE

1. **Title of the Course :** Discrete Mathematics
2. **Semester** : I
3. **Course Code: For Theory :** BITMJ102

4. Course Objective:

1. Mathematical reasoning: Students are expected to use mathematical reasoning in order to read, comprehend, and construct mathematical arguments. Students will learn basic concepts of mathematical logic and proof.

2. Combinatorial analysis: Students will count or enumerate objects and perform combinatorial analysis.

3. Discrete structures: Students will learn the basic concepts of sets, permutations, relations, graphs, trees and finite state machines. Students will represent discrete objects and relationships using abstract mathematical structures.

4. Algorithmic thinking: Students will verify whether an algorithm works well and perform analysis in terms of memory and time.

5. Applications and modeling: Discrete mathematics has been used in numerous applications. Students will formulate and model problems with the concepts and techniques of discrete mathematics.

5. **Category of Course** : Major Mandatory
6. **Total Hours**: 60
7. **Total Credits**: 02 Credits (02 Credits for Theory)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITMJ102	Discrete Mathematics and probability	4	0	2	0	2

Module	Detailed Content	Hours
1	**Introduction:** Variables, the Language of Sets, the Language of Relations and Function Set Theory: Definitions and the Element Method of Proof, Properties of Sets, Venn diagram, Cartesian product, the principle of inclusion exclusion, the principle of inclusion exclusion using Venn diagram Disproof, Algebraic Proofs, Boolean Algebras, and Russell's Paradox and the Halting Problem. **The Logic of Compound Statements**: Logical Form and Logical Equivalence, Conditional Statements, Valid and Invalid Arguments	12
2	**Quantified Statements**: Predicates and Quantified Statements, Statements with Multiple Quantifiers, Arguments with Quantified Statements **Elementary Number Theory and Methods of Proof**: Introduction to Direct Proofs, Rational Numbers, Divisibility, Division into Cases and the Quotient-Remainder Theorem, Floor and Ceiling, Indirect Argument: Contradiction and Contraposition, Two Classical Theorems, Applications in algorithms.	12
3	**Sequences, Mathematical Induction, and Recursion:** Sequences, Mathematical Induction, Strong Mathematical Induction and the Well- Ordering Principle for the Integers, Correctness of algorithms, defining sequences recursively, solving recurrence relations by iteration, Second order linear homogenous recurrence relations with constant coefficients. General Recursive definitions and structural induction. **Functions**: Functions Defined on General Sets, One-to-One and Onto, Inverse Functions, Composition of Functions,	12

	Cardinality with Applications to Computability	
4	**Relations**: Relations on Sets, Reflexivity, Symmetry, and Transitivity, Equivalence Relations, Partial Order Relations **Graphs and Trees**: Definitions and Basic Properties, Trails, Paths, and Circuits, Matrix Representations of Graphs, Isomorphism's of Graphs, Trees, Rooted Trees, Isomorphism's of Graphs, Spanning trees and shortest paths.	12
5	**Counting and Probability**: Introduction, Possibility Trees and the Multiplication Rule, Possibility Trees and the **Multiplication Rule, Counting Elements of Disjoint Sets**: The Addition Rule, The Pigeonhole Principle, Counting Subsets of a Set: Combinations, r- Combinations with Repetition Allowed, Probability Axioms and, Conditional Probability, Bayes 'Formula, and Independent Events.	12
	Total	60

9. Evaluation Pattern:

- **Total Marks** : 150 Marks (10 Point Grading)
- **Passing Criteria** : 40 % (4 Grade Points)
- **Marking Scheme** : 60:40 Pattern
  - 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
  - 40 Marks - Internal Assessment (Passing = 16 Marks)
- **Mode of Evaluation of Answer-books** : Online/Offline

10. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class test of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignments after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination:

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	45 Marks	05 Marks	50 Marks

11. Course Outcome:

Students will be able to:

CO1. Write an argument using logical notation and determine if the argument is or is not valid.

CO2. Demonstrate the ability to write and evaluate a proof or outline the basic structure of and give examples of each proof technique described.

CO3. Understand the basic principles of sets and operations in sets.

CO4. Prove basic set equalities.

CO5. Apply counting principles to determine probabilities.

CO6. Determine when a function is 1-1 and "onto".

CO7. Demonstrate different traversal methods for trees and graphs.

12. References:

1. Discrete Mathematics with Applications BY Sussana S. Epp Cengage Learning 4th 2010

2. Discrete Mathematics, Schaum's Outlines Series BY Seymour Lipschutz, Marc Lipson Tata MCGraw Hill 2007

3. Discrete Mathematics and its Applications BY Kenneth H. Rosen Tata MCGraw Hill

4. Discrete mathematical structures BY B Kolman RC Busby, S Ross PHI

5. Discrete structures BY Liu Tata MCGraw Hill

COURSE STRUCTURE

1. **Title of the Course :** Introduction to Internet
2. **Semester** : I
3. **Course Code: For Theory :** BITOE103
4. **Course Objective:**

   This course is an introduction to the Internet covering the elementary concepts of networked computer systems and introducing you to various communication tools for finding and using the information and resources available on the Internet and for communicating on the Internet.

   a. Discuss elementary Internet concepts and history.
   b. Make a successful Internet connection.
   c. Demonstrate simple principles of Internet Protocol (IP) addressing.
   d. Use and customize a web browser.
   e. Use e-mail to send and receive messages.
   f. Create a website and publish a simple web page.
   g. Use File Transfer Protocol (ftp) to perform file downloading and uploading.
   h. Use Internet to read and post messages to newsgroups.
   i. Use Web search tools.
   j. Demonstrate Internet research tools.

5. **Category of Course**: Open Elective
6. **Total Hours**: 60
7. **Total Credits**: 2
8. **Modules:**

Modules	Details	Hours
I	**Understanding the Internet :** Defines essential terms, presents the seven basic Internet services, and reflects on how the Internet is changing the world. **Getting Connected to the Internet :** Explains the purpose and function of an Internet Service Provider (ISP), compares the advantages and disadvantages of the different transport mediums, helps you select or update your Web browser, and teaches advanced surfing techniques that will help you get more out of the Web.	12
II	**Communicating Over the Internet :** Internet Etiquette-covers the courtesy guidelines and rules of the road that you follow to be a good citizen on the Internet. How to use Electronic mail , Newsgroups, Chat Rooms & Streaming on the Internet.	12

III	**Finding Things on the Internet :** Searching for Information - how to find things on the Internet. Commonly Found Internet File Types, Downloading from the Internet-the process of downloading different kinds of files from the Internet. Bibliographic Style for Citing Internet Resources -how to cite Internet resources in APA, MLA, or CMS style.	12
IV	**Designing Web Pages-**introduces you to different ways you can create Web pages. It provides you with design guidelines and principles for creating Web pages. **How HTML works-**explains the concept of markup that will power your Web pages. Putting images and tables on Web Pages. Image mapping ,client side ,server side ,creation of table ,form ,	12
V	**Using Multimedia on the Internet :** How multimedia works over the web, recording audio and putting sound on web pages. **Social Issues and the future of Internet :** Some important issues related to the Internet's impact on our lives and tools for keeping up with technological changes and their societal impact.	12

9. Evaluation Pattern:

- **Total Marks** : 100 Marks (10 Point Grading)
- **Passing Criteria** : 40 % (4 Grade Points)
- **Marking Scheme** : 60:40 Pattern
  - 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
  - 40 Marks - Internal Assessment (Passing = 16 Marks)
- **Mode of Evaluation of Answer-books** : Offline

10 . Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class test of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignments after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination:

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

11. Course Outcome:

After completion of this course, Learner will be able to

CO1: Develop a basic understanding of technologies and protocols used on the Internet, and how to effectively use Internet tools technologies including current web-based applications, e-mail, and social networking tools.

CO2: Send and receive e-mails and chats effectively.

CO4: Search for particular information on browser using searching tools.

CO5: Learn to create simple web pages with multimedia contents like images, audio and videos.

CO6: Learn about Internet Etiquettes in the society.

12. References:

1. Deitel, Deitel, Goldberg, "Internet & World Wide Web How to Program", Third Edition, Pearson Education, 2006.
2. Raj Kamal, “Internet and Web Technologies”, Tata McGraw-Hill.
3. New Perspectives on the Internet, Comprehensive, Sixth Edition, Schneider and Evans, 2007, ISBN: 1-4188-6071-9.
4. Rohit Khurana, “Computer Fundamentals & Internet Basics”, Paperback, 1 January 2010.

COURSE STRUCTURE

1. **Title of the Course :** Structural Programming
2. **Semester** : I
3. **Course Code: For Theory :** BITVSEC104
   For Practical:BITVSECP104

4. **Course Objective:**

   a. To learn the fundamental programming concepts and methodologies which are essential to building good C programs.
   b. To practice the fundamental programming methodologies in the C programming language via laboratory experiences. Microsoft Visual Studio is the programming environment that will used.
   c. To code, document, test, and implement a well-structured, robust computer program using the C programming language.
   d. Students will be able to develop logics which will help them to create programs, applications in C. Also by learning the basic programming constructs they can easily switch over to any other language in future
   e. To write reusable modules (collections of functions).
   f. The course is designed to provide complete knowledge of C language.

5. **Category of Course** : Vocational Skill Enhancement Course
6. **Total Hours**: 60
7. **Total Credits**: 04Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITVSEC104	Structural Programming	4	2	2	2	4

Module	Detailed Content	Hours
1	**Introduction:** Types of Programming languages, History, features and application. Simple program logic, program development cycle, pseudocode statements and flowchart symbols, sentinel value to end a program, programming and user environments, evolution of programming models., desirable program characteristics.**Fundamentals:** Structure of	12

	a program. Compilation and Execution of a Program, Character Set, identifiers and keywords, data types, constants, variables and arrays, declarations, expressions, statements, Variable definition, symbolic constant.	
2	**Operators and Expressions:** Arithmetic operators, unary operators, relational and logical operators, assignment operators, assignment operators, the conditional operator, library functions.**Data Input and output:** Single character input and output, entering input data, scanf function, printf function, gets and puts functions, interactive programming.	12
3	**Conditional Statements and Loops:** Decision Making Within A Program, Conditions, Relational Operators, Logical Connectives, If Statement, If-Else Statement, Loops: While Loop, Do While, For Loop. Nested Loops, Infinite Loops, Switch Statement.**Functions:** Overview, defining a function, accessing a function, passing arguments to a function, specifying argument data types, function prototypes, recursion, modular programming and functions, standard library of c functions, prototype of a function: foo1lal parameter list, return type, function call, block structure, passing arguments to a function: call by reference, call by value.	12
4	**Program structure:** Storage classes, automatic variables, external variables, static variables, multifile programs, more library functions, **Preprocessor:** Features, #define and #include, Directives and Macros **Arrays:** Definition, processing, passing arrays to functions, multidimensional arrays, arrays and string.	12
5	**Strings and Structures** : strcmp, strcat, strlen, strcpy, strchr, strrev, strcmpi, strlwr, strupr **Structures**:Introduction to Structures Structure Variables, Initialization, Structure Assignment, Nested Structure, Structures and Functions, Structures and Arrays: Arrays of Structures, Structures Containing Arrays, pointer definition.	12
	Total	60

Sr. No.	List of Practical
1	Write a program to find the addition, subtraction, multiplication and division of two numbers
2	Write a program to swap two numbers without using third variable.

3	Write a program to find the area of rectangle, square and circle.
4	Write a program to check whether the number is even or odd.
5	Write a program to find the factorial of a number.
6	Write a program to check whether the entered number is prime or not.
7	Write a program to find the sum of squares of digits of a number.
8	Write a programs to print the Fibonacci series.
9	Write a program to find whether a given number is palindrome or not.
10	Write a program to find the factorial of a number using recursive function..
11	Write a program to find the largest value that is stored in the array.
12	Write a program to demonstrate the use of pointers.
13	Programs on structures.

9. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** : Offline

10. Paper Pattern:

a. **Internal Assessment:**

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. **Semester End Theory Examination :**

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10

3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

c. **Semester End Practical Examination:**

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	45 Marks	05 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, students should be able to develop application
CO1: To describe the advantages of a high level language like C/C++, the programming process and the compilation process
CO2: To describe and use software tools in the programming process (IDE)
CO3: To apply good programming principles to the design and implementation of C programs
CO4: To design, implement, debug and test programs using the fundamental elements of C.
CO5: To demonstrate an understanding of primitive data types, values, operators and expressions in C

12. References:

1. Programming with C Byron Gottfried Tata McGRAW Hill 2nd 1996
2. Programming Logic and Design Joyce Farell Cengage Learning 8th 2014
3. "C" Programming" Brian W. Kernighan and Denis M. Ritchie. PHI 2nd
4. Let us C Yashwant P. Kanetkar, BPB publication
5. C for beginners Madhusudan Mothe X-Team Series 1st 2008
6. 21st Century C Ben Klemens OReilly 1st 2012

COURSE STRUCTURE

1. **Title of the Course :** Database Management System
2. **Semester** : I
3. **Course Code: For Theory:** BITAEC105
4. **Course Objective:**

   a. To present an introduction to database management systems, with an emphasis on how to organize, maintain and retrieve - efficiently, and effectively - information from a DBMS.

   b. To understand the different issues involved in the design and implementation of a database system.

   c. To study the physical and logical database designs, database modeling, relational, hierarchical, and network models.

   d. To understand and use data manipulation language to query, update, and manage a database.

   e. To develop an understanding of essential DBMS concepts such as: database security, integrity and concurrency.

   f. To design and build a simple database system and demonstrate competence with the fundamental tasks involved with modeling, designing, and implementing a DBMS.

5. **Category of Course** : Ability Enhancement
6. **Total Hours**: 60
7. **Total Credits**: 02 Credits (Theory)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITAEC106	Database Management System	4	0	2	0	2

Module	Detailed Content	Hours
1	**Introduction to Databases**:-What is database system, purpose of database system, view of data, relational databases, database architecture and different types of databases. **Data Models: -** The importance of data models, Basic building blocks, Business rules, The evolution of data models, Degrees	12

	of data abstraction.	
2	**Database design and ER Model:-**overview, ER-Model, Constraints, ER-Diagrams, ERD Issues, Enhanced Entity Relationship (EER) modelling, Specialization and Generalization, weak entity sets, Codd's rules, Relational Schemas. **Relational database model: -** Logical view of data, keys, integrity rules. **Relational Database design: -** features of good relational database design, atomic domain and Normalization (1NF, 2NF, 3NF, BCNF).	12
3	**Relational Algebra and Calculus:-** **Relational algebra:** introduction, Selection and projection, set operations, renaming, Joins, Division, syntax, semantics. Operators, grouping and ungrouping, relational comparison. **Calculus:** Tuple relational calculus, Domain relational Calculus, calculus vs. algebra.	12
4	**Constraints, Views and SQL** **Constraints**:-What are constraints, types, Integrity constraints. **Views:-** Introduction to views, data independence, security, updates on views, comparison between tables and views **SQL:**-data definition, aggregate function, Null Values, nested sub queries, Joined relations. Triggers.	12
5	**Transaction management and Concurrency control:** What is transaction, ACID properties, Serializability and concurrency control, Lock based concurrency control (2PL, Deadlocks), Time stamping methods, optimistic methods and Database recovery management.	12
	Total	60

9. Evaluation Pattern:

a. **Total Marks** : 100 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)

d. **Mode of Evaluation of Answer-books** : Offline

10. Paper Pattern:

a. **Internal Assessment:**

- Assessment consists of a class test of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination:

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

11. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Describe the fundamental elements of relational database management systems. Improve the database design by normalization.

CO2: Explain the basic concepts of relational data model, entity-relationship model, relational database design, relational algebra and SQL.

CO3: Design ER-models to represent simple database application scenarios

CO4: Convert the ER-model to relational tables, populate relational database and formulate SQL queries on data.

CO5: Analyze, design and develop a real database application using DBMS.

12. References:

1. Database System and Concepts By Abraham Silberschatz and Henry Korth and S. Sudarshan , 6th Edition, McGraw-Hill, 2011
2. Database System- Design, Implementation and Management by Peter Rob and Carlos Coronel , 7th Edition , Cengage Learning , 2007
3. Database Management Systems by Raghu Ramakrishnan and Johannes Gehrke, 3rd Edition, McGraw Hill, 2003
4. Fundaments of Database System by Ramez Elmasri and Shamkant B. Navathe, 7th Edition, Pearson Education India, 2010

COURSE STRUCTURE

1. **Title of the Course :** Environmental Science
2. **Semester** : I
3. **Course Code: For Theory:** BITVEC107
4. **Course Objective:**
   a. To make students aware about environment and various issues related to it.
   b. The course will provide brief introduction of various topic as pollution, sustainable development, environment and economic etc.
   c. Developing an attitude of concern for the environment.
   d. Motivating public to participate in environment protection and environment improvement.
   e. Acquiring skills to help the concerned individuals in identifying and solving environmental problems.
   f. Striving to attain harmony with Nature.
5. **Category of Course**: Value Education Course
6. **Total Hours**: 60
7. **Total Credits**: 02 Credits
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITVEC107	Environmental Science	4	-	2	-	2

Module	Detailed Content	Hours
1	**Introduction to environmental studies:** Multidisciplinary nature of environmental studies; Scope and importance; Concept of sustainability and sustainable development. **Ecosystems :** What is an ecosystem? Structure and function of ecosystem; Energy flow in an ecosystem: food chains, food webs and ecological	12

	succession. Case studies of the following ecosystems: a) Forest ecosystem b) Grassland ecosystem c) Desert ecosystem d) Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)	
2	**Natural Resources : Renewable and Non-renewable Resources:** a) Land resources and land-use change; Land degradation, soil erosion and desertification. b) Deforestation: Causes and impacts due to mining, dam building on environment, forests, biodiversity and tribal populations. c) Water: Use and over-exploitation of surface and ground water, floods, droughts, conflicts over water (international & interstate). d) Energy resources: Renewable and non renewable energy sources, use of alternate energy sources, growing energy needs, case studies. **Biodiversity and Conservation :** a) Levels of biological diversity : genetic, species and ecosystem diversity; Biogeographic zones of India; Biodiversity patterns and global biodiversity hot spots b) India as a mega biodiversity nation; Endangered and endemic species of India c) Threats to biodiversity: Habitat loss, poaching of wildlife, man-wildlife conflicts, biological invasions; Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity. d) Ecosystem and biodiversity services: Ecological, economic, social, ethical, aesthetic and Informational value.	12
3	**Environmental Pollution :** a) Environmental pollution : types, causes, effects and controls; Air, water, soil and noise pollution b) Nuclear hazards and human health risks c) Solid waste management: Control measures of urban and industrial waste. d) Pollution case studies.	12
4	**Environmental Policies & Practices:** a) Climate change, global warming, ozone layer depletion, acid rain	12

	and impacts on human communities and agriculture b) Environment Laws: Environment Protection Act; Air (Prevention & Control of Pollution) Act; Water (Prevention and control of Pollution) Act; Wildlife Protection Act; Forest Conservation Act. International agreements: Montreal and Kyoto protocols and Convention on Biological Diversity (CBD). c) Nature reserves, tribal populations and rights, and human wildlife conflicts in Indian context.	
5	**Human Communities and the Environment :** a) Human population growth: Impacts on environment, human health and welfare. b) Resettlement and rehabilitation of project affected persons; case studies. c) Disaster management: floods, earthquake, cyclones and landslides. d) Environmental movements: Chipko, Silent valley, Bishnois of Rajasthan. e) Environmental ethics: Role of Indian and other religions and cultures in environmental conservation. f) Environmental communication and public awareness, case studies (e.g., CNG vehicles in Delhi). **Field work :** a) Visit to an area to document environmental assets: river/ forest/ flora/fauna, etc. b) Visit to a local polluted site-Urban/Rural/Industrial/Agricultural. c) Study of common plants, insects, birds and basic principles of identification. d) Study of simple ecosystems---pond, river, Delhi Ridge, etc.	12
	Total	60

9. Evaluation Pattern:

a. **Total Marks** : 100

Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)

d. **Mode of Evaluation of Answer-books** : Online/Offline

10. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination :

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

11. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Understand the eco-system and need to protect it.

CO2: Understand various danger to environment and how to protect it.

CO3: Appreciate the ethical, cross-cultural, and historical context of environmental issues and the links between human and natural systems.

CO4: Understand core concepts and methods from ecological and physical sciences and their application in environmental problem-solving.

CO5: Reflect critically on their roles, responsibilities, and identities as citizens, consumers and environmental actors in a complex, interconnected world.

12. References:

1. This Fissured Land: An Ecological History of India by Gadgil, M., & Guha, R. Univ. of California Press 1993.
2. Principles of Conservation Biology by Groom, Martha J., Gary K. Meffe, and Carl Ronald Carroll.Sunderland: Sinauer Associates, 2006.
3. Fundamentals of Ecology by Odum, E.P., Odum, H.T. & Andrews, J. Philadelphia:

Saunders 1971.
4. Environmental and Pollution Science by Pepper, I.L., Gerba, C.P. & Brusseau, M.L. Academic Press 2011.
5. Environment by Raven, P.H., Hassenzahl, D.M. & Berg, L.R. 2012. 8th edition. John Wiley & Sons.
6. Ecology, Environmental Science and Conservation by Singh, J.S., Singh, S.P. and Gupta, S.R. S. Chand Publishing, New Delhi. 2014.

COURSE STRUCTURE

1. Title of the Course: Vedic Mathematics

2. Semester: I

3. Course Code: BITIKS107

4. Course Objectives:

- To enable the learners to explore the power of Vedic Maths.
- To make learners strong in Numerical Maths.
- To enable learners to recognize and understand simple techniques of Arithmetic Calculations.
- To train learners to use the ideas of Vedic Maths in daily calculations and make those calculations with accuracy and speed.

5. Category of Course: Indian Knowledge System

6. Total Hours: 60

7. Total Credits: 02 Credits (02 Credits for Theory)

8. Evaluation Pattern:

- Total Marks : 100 Marks (10 Point Grading)
- Passing Criteria : 40 % (4 Grade Points)
- Marking Scheme : 60:40 Pattern
- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- Mode of Evaluation of Answer-books : Offline

9.Modules:

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
	Vedic Mathematics	4	-	2	-	2

Module	Detail Syllabus	Hours
Unit 1.	**INTRODUCTION:** History of Vedic maths, why Vedic maths, salient features of Vedic maths, Vedic maths formulas, 16 sutras and 13 sub sutras, terms and operations, Beejank, Vinculum Operations, High speed addition by using the concept of completing the whole and superfast subtraction by Nikhilam Sutram from basis 100,1000,10,000…and with any sub base like 200, 300 ,400 ,500…, Subtraction using Vinculum. UNIT	**12**
Unit 2.	**SUTRAS OF MULTIPLICATION:** Multiplication by Nikhilam Sutra, multiplication of numbers nearest to the bases 10,100,1000,10000, and multiplication of numbers near sub bases 20,30,40,50,60,70,80,90,500,5000…. fast multiplication by 11,12,13….,19, Multiplication with multiples of 111 and 1111, multiplication of numbers consisting of all 9s by Eknuyena and Nikhilam Sutra, multiplication of Numbers ending with 9, Multiplication by Anatyodarshkeyapi, Multiplication by Urdhav triyaghbhyam sutram, (two, three and four digits), Formation of any Two Digit table	**12**
Unit 3.	**SUTRAS OF SQUARES,SQUARE ROOTS,CUBE AND CUBE ROOTS :** Meaning of Ekadhiken Sutram and its applications in finding squaring of numbers ending in 5, squaring by Anurupeyana Sutra, squaring by Yavdunamthavadunikrityavargamchayojyet sutra, squaring by Dwandvayoga sutra (General method of squaring), Verification by Beejank Method, squaring numbers nearest 50 and any other subbase, square roots of perfect squares (upto 5 digits) by Viloknam Sutra, general method of square roots, cubes by Anurupeyana sutra, Cube Roots of Exact Cubes (upto 6digits).	**12**
Unit 4.	**SUTRAS OF FACTORISATION AND DIVISION:** HCF AND LCM, Divisibility test, Division by Nikhilam Navatascaramam Dasatah Sutra, division by Paravartya Yojayet, division by Anurupeyana, Division by Dwazank Sutra (Straight division), Conversion of vulgar fractions 1/19,1/29,1/39,1/49…..into decimals by Ekadhiken Purven Sutra, Recurring Decimals of fractions 1/13,1/23,5/33,9/11….by Anurupyen, Auxiliary fractions and its application in finding out recurring decimals of Vulgar fractions, Ratio and proportions Percentage, Profit and Loss, Simple interest, Compound Interest.	**12**
Unit 5.	**SUTRAS FOR GEOMETRY:** Triples, triples addition, double angle, quadrant angels, rotations, application of triples: Triple Subtraction, Triple Geometry, Angle between two lines, Half Angle, Coordinate Geometry (two dimension): Length of perpendicular from a point onto a line, Circle problems, Equation of a straight line through two given points by Urdhavtriagbhyam Sutra, Triple Trigonometry, Bodhayan Sutra as Pythagoras theorem, Mensuration(Measurement of Volume and Surface area of Cuboid, Cylinder, Cone, Sphere)	**12**

11. Paper Pattern:

a. Internal Assessment:

● Assessment consists of a class test of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.

● Students have to submit assignments after completion of each module which will carry 15 marks and 5 marks are for attendance

b. Semester End Theory Examination:

Question No.	Description	Marks
1.	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3.	Answer any two Questions (Descriptive based on module 2)	10
4.	Answer any two Questions (Descriptive based on module 3)	10
5.	Answer any two Questions (Descriptive based on module 4)	10
6.	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

12. Course Outcomes:

PO 1: To enhance computational skills in mathematics
PO 2: Develop Analytical thinking through Vedic maths.
PO 3: Enable further research in Indian Ancient mathematics.
PO 4: Conduct seminar on the subject and bringing together scholars in Vedic Mathematics.
PO 5: Develop postal and online study courses on Indian ancient mathematics.
PO 6: Instil love and remove the fear of mathematics.
PO 7: Promote Vedic culture.
PO 8: Crack entrance of competitive exams.
PO 9: Develop the understanding of objectives and features of Vedic Geometry.
PO 10: Understand and apply Triples in coordinate geometry of two dimension.

13. Text Book:

S. B. Tirthaji, Vedic Mathematics, Motilal Banarsidass Private Limited, Revised Edition, 1992

14. Reference Books:

1 K. R. Williams, Vedic Mathematics Teacher's Manual, Inspiration Books, Revised Edition, 2009
2 M. Tyra, Magical Book On Quicker Maths, ESC Publications, 5th Edition, 2018

COURSE STRUCTURE

1. **Title of the Course :** Advanced Scripting Language
2. **Semester** : II
3. **Course Code: For Theory :** BITMJ201
   For Practical: BITMJP201
4. **Course Objective:**

   a. Have understanding of server side scripting with PHP language.
   b. Gain knowledge of client side scripting, validation of forms.
   c. Students will be able to easy design and development of web pages.
   d. Students will be able to write a server side PHP, form data sent from client, process it and store it on database.
   e. Students will be able to write a client side script and server side script called PHP
   f. Create applications by using the concepts of JavaScript and PHP.
   g. To study designing web sites and deploying web sites on web servers

5. **Category of Course** : Core Course
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITMJ201 BITMJP201	Advanced Scripting Language	4	2	2	2	4

Module	Detailed Content	Hours
1	**Internet:** What is Internet, Browsers – internet explorer, Netscape navigator, opera, Firefox, chrome, Mozilla. search engine, web saver – apache, IIS, proxy server, HTTP protocol	12
2	**HTML5 Page layout and navigation:** Creating navigational aids: planning site organization, creating text based navigation bar, creating graphics based navigation bar, creating graphical navigation bar, creating image map, redirecting to another URL, creating division based layouts: HTML5 semantic tags, creating divisions, creating HTML5 semantic layout, positioning and formatting divisions. HTML5 Tables, Forms and Media:	12

	Creating tables: creating simple table, specifying the size of the table, specifying the width of the column, merging table cells, using tables for page layout, formatting tables: applying table borders, applying background and foreground fills, changing cell padding, spacing and alignment, creating user forms: creating basic form, using check boxes and option buttons, creating lists, additional input types in HTML5, Incorporating sound and video: audio and video in HTML5, HTML multimedia basics, embedding video clips, incorporating audio on web page.	
3	**Java Script**: Introduction, Client-Side JavaScript, Server-Side JavaScript, JavaScript Objects, JavaScript Security, Operators: Assignment Operators, Comparison Operators, Arithmetic Operators, % (Modulus), ++(Increment), --(Decrement), -(Unary Negation), Logical Operators, Short-Circuit Evaluation, String Operators, Special Operators, ?: (Conditional operator), , (Comma operator), delete, new, this, void Statements: Break, comment, continue, delete, do...while, export, for, for...in, function, if...else, import, labelled, return, switch, var, while, with. Core JavaScript (Properties and Methods of Each) : Array, Boolean, Date, Function, Math, Number, Object, String, regExp **Document and its associated objects0:** document, Link,Area, Anchor, Image, Applet, Layer Events and Event Handlers : General Information about Events, Defining Event Handlers, event, onAbort, onBlur, onChange, onClick, onDblClick, onDragDrop, onError, onFocus, onKeyDown, onKeyPress, onKeyUp, onLoad, onMouseDown, onMouseMove, onMouseOut, onMouseOver, onMouseUp, onMove, onReset, onResize, onSelect, onSubmit, onUnload	12
4	**PHP:** Why PHP and MySQL? Server-side scripting, PHP syntax and variables, comments, types, control structures, branching, looping, termination, functions, passing information with PHP, GET, POST, formatting form variables, super global arrays, strings and string functions, regular expressions, arrays, number handling, basic PHP errors/problems.	12
5	**Advanced PHP and MySQL :** PHP/MySQL Functions, Integrating web forms and databases, Displaying queries in tables, Building Forms from queries, String and Regular Expressions, Sessions, Cookies and HTTP	12

	Total	60

Sr. No	List of Practical
1.	Use of Basic Tags
a.	Design a web page using different text formatting tags.
b.	Design a web page with links to different pages and allow navigation between web pages.
c.	Design a web page demonstrating all Style sheet types
2.	Image maps, Tables, Forms and Media
a.	Design a web page with Imagemaps.
b.	Design a web page demonstrating different semantics
c.	Design a web page with a form that uses all types of controls.
e.	Design a web page embedding with multimedia features.
3.	Java Script
a.	Using JavaScript design, a web page that prints factorial/Fibonacci series/any given series.
b.	Design a form and validate all the controls placed on the form using Java Script.
c.	Write a JavaScript program to display all the prime numbers between 1 and 100.
a.	Write a JavaScript program to accept a number from the user and display the sum of its digits.
d.	Write a program in JavaScript to accept a sentence from the user and display the number of words in it. (Do not use split () function).
e.	Write a java script program to design simple calculator.
4.	Control and looping statements and Java Script references
a.	Design a web page demonstrating different conditional statements.
b.	Design a web page demonstrating different looping statements.
c.	Design a web page demonstrating different Core JavaScript references (Array, Boolean, Date, Function, Math, Number, Object, String, regExp).

5.	Basic PHP I
a.	Write a PHP Program to accept a number from the user and print it factorial.
b.	Write a PHP program to accept a number from the user and print whether it is prime or not.
6.	Basic PHP II
a.	Write a PHP code to find the greater of 2 numbers. Accept the no. from the user.
7.	String Functions and arrays
a.	Write a PHP program to demonstrate different string functions.
b.	Write a PHP program to create one dimensional array.
8.	PHP and Database
a.	Write a PHP code to create: · Create a database College · Create a table Department (Dname, Dno, Number_Of_faculty)
b.	Design a PHP page for authenticating a user.
9.	Sessions
a.	Write a program to demonstrate use of sessions
10.	Cookies
a.	Write a program to demonstrate use of cookies

9. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** : Offline

10. Paper Pattern:

a. **Internal Assessment:**

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will

carry 15 marks and 5 marks are for attendance.

b. **Semester End Theory Examination :**

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

c. **Semester End Practical Examination:**

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	45 Marks	05 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, students should be able to develop application

CO1: Design web pages.

CO2: Format and validate web pages.

CO3: Students will be able to easy design and development of web pages.

CO4: Design web sites and deploy it on web servers.

CO5: Students will be able to write a client side script and server side script called PHP.

12. References:

1. HTML5 Step by Step Faithe Wempen Microsoft Press 2011
2. JavaScript 2.0: The Complete Reference Thomas Powell and Fritz Schneider Tata McGraw Hill 2nd
3. PHP 6 and MySQL Bible Steve Suehring, Tim Converse, Joyce Park Wiley 2009
4. PHP 5.1 for Beginners Ivan Bayross Sharanam Shah, SPD 2013
5. PHP Project for Beginners SharanamShah, Vaishali Shah SPD 2015
6. Murach's PHP and MySQL Joel Murach Ray Harris SPD 2011

COURSE STRUCTURE

1. **Title of the Course :** Numerical Methods and Statistics
2. **Semester** : II
3. **Course Code: For Theory :** BITMJ202
4. **Course Objective:**
   a. The main objective of this course is to understand and implement various concepts of numerical analysis and statistics to solve real life problems.
   b. Analysis of Statistical Data: Frequency distribution; Frequency curve and histogram; Measure of central tendency and dispersion.
   c. Random Variables and probability distributions: Basic concepts of probability and its properties; Additive and multiplicative theorem of probability; Conditional probability and independent events; Random variable, Notion of sample space; distribution functions; Mathematical expectation, Binomial, Poisson, Rectangular, Exponential and Normal distributions. Random Number Generation: Basic concepts in random number generation.
   d. Method for generating random numbers and their efficiency test; Methods for generating random numbers for probability distributions.
5. **Category of Course** : MAJOR MANDETORY
6. **Total Hours**: 60
7. **Total Credits**: 02 Credit
8. **Modules**:

Cours eCode	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITMJ202	Numerical Methods and Statistics	4	0	2	0	2

Module	Detailed Content	Hours
1	**Mathematical Modeling and Engineering Problem Solving**: A Simple Mathematical Model, Conservation Laws and Engineering **Problems Approximations and Round-Off Errors:**Significant Figures,Accuracy and Precision, Error Definitions, Round-Off Errors	12
2	**Solutions of Algebraic and Transcendental Equations:** The Bisection Method, The Newton-Raphson Method, The Regula-falsi method, The Secant Method. **Interpolation:** Forward Difference, Backward Difference, Newton's Forward Difference Interpolation, Newton's Backward Difference Interpolation, Lagrange's Interpolation	12

3	**Solution of simultaneous algebraic equations (linear) using Iterative methods:**Gauss-Jordan Method, Gauss-SeidelMethod. **Numerical differentiation and Integration:** Numerical differentiation, Numerical integration using Trapezoidal Rule, Simpson's 1/3rd and 3/8th rules. **Numerical solution of 1st and 2nd order differential equations:** Taylor series, Euler's Method, Modified Euler's Method, Runge-Kutta Method for 1st and 2nd Order Differential Equations.	12
4	**Least-Squares Regression:** Linear Regression, Polynomial Regression, Multiple Linear Regression, General Linear Least Squares, Nonlinear Regression. **Linear Programming**: Linear optimization problem, Formulation and Graphical solution, Basic solution and feasible solution.	12
5	**Random variables:** Discrete and Continuous random variables,Probability density function, Probability distribution of random variables, Expected value, Variance. **Distributions**: Discrete distributions: Uniform, Binomial, Poisson, Bernoulli, Continuous distributions: uniform distributions, exponential, (derivation of mean and variance only and state other properties and discuss their applications) Normal distribution state all the properties and its applications	12
	Total	60

9. Evaluation Pattern:

a. **Total Marks** : 100 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)

d. **Mode of Evaluation of Answer-books** : Offline

10. Paper Pattern:

e. Internal Assessment:

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

f. Semester End Theory Examination:

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

9. Course Outcome:

Students will be able to:

CO1: Understand the various approaches dealing the data using theory of probability.

CO2: Analyse the different samples of data at different level of significance using various hypothesis testing.

CO3: Develop a framework for estimating and predicting the different sample of data for handling the uncertainties.

CO4: Understand error, source of error and its effect on any numerical computation and also analyzing the efficiency of any numerical algorithm.

10. References:

1. Introductory Methods of Numerical Methods S. S. Shastri PHI Vol – 2.
2. Numerical Methods for Engineers Steven C. Chapra, Raymond P. Canale Tata Mc Graw Hill 6^{th} Edition, 2010.
3. Numerical Analysis Richard L. Burden, J. Douglas Faires Cengage Learning 9^{th} edition, 2011.
4. Fundamentals of Mathematical Statistics S. C. Gupta, V. K. Kapoor.
5. Elements of Applied Mathematics P.N.Wartikar and J.N.Wartikar A. V. Griha, Pune Volume 1 and 2.

COURSE STRUCTURE

1. **Title of the Course:** Digital Electronics
2. **Semester**: II
3. **Course Code: For Theory:** BITMN203

4. Course Objective:

a. To learn Boolean algebra and simplification of Boolean functions.
b. To learn to design and analyze different combinational circuits.
c. To study the basics of synchronous sequential logic, analyze and design sequential circuits.
d. To learn about basic memory devices and programmable logic devices to build simple digital systems.

5. **Category of Course**: Minor Mandatory
6. **Total Hours**: 60
7. **Total Credits**: 02 Credits

8. Modules:

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITMN203	Digital Electronics	4	0	2	0	2

Module	Detailed Content	Hours
1	**Number System:** Analog System, digital system, numbering system, Binary number system, Octal number system, Hexadecimal number system, conversion from one number system to another, floating point numbers, weighted codes binary coded decimal, non-weighted codes Excess – 3 code, Gray code, Alphanumeric codes – ASCII Code, EBCDIC, ISCII Code, Hollerith Code, Morse Code, Teletypewriter (TTY), Error detection and correction, Universal Product Code, Code conversion. **Binary Arithmetic:** Binary addition, Binary subtraction, Negative number representation, Subtraction using 1's complement and 2's complement, Binary multiplication and division, Arithmetic in octal number system, Arithmetic in hexadecimal number system, BCD and Excess – 3 arithmetic.	12
2	**Boolean Algebra and Logic Gates:** Introduction, Logic (AND OR NOT), Boolean theorems, Boolean Laws, De Morgan's	12

	Theorem, Perfect Induction, Reduction of Logic expression using Boolean Algebra, Deriving Boolean expression from given circuit, exclusive OR and Exclusive NOR gates, Universal Logic gates, Implementation of other gates using universal gates, Input bubbled logic, Assertion level. **Minterm, Maxterm and Karnaugh Maps:** Introduction, minterms and sum of minterm form, maxterm and Product of maxterm form, Reduction technique using Karnaugh maps – 2/3/4/5/6 variable K-maps, grouping of variables in K-maps, K-maps for product of sum form, minimize Boolean expression using K-map and obtain K-map from Boolean expression.	
3	**Combinational Logic Circuits:** Introduction, Multi-input, multi-output Combinational circuits, Code converters design and implementations **Arithmetic Circuits:** Introduction, Adder, BCD Adder, Excess-3 Adder, Binary Subtractor, BCD Subtractor, Multiplier, Comparator.	12
4	**Multiplexer, Demultiplexer, ALU, Encoder and Decoder:** Introduction, Multiplexer, Demultiplexer, Decoder, ALU, Encoders. **Sequential Circuits:** Flip-Flop: Introduction, Terminologies used, S-R flip-flop, D flip-fop, JK flip-flop, Race-around condition, Master – slave JK flip-flop, T flip-flop, conversion from one type of flip-flop to another, Application of flip-flops.	12
5	**Counters:** Introduction, Asynchronous counter, Terms related to counters, IC7493 (4-bit binary counter), Synchronous counter, Bushing, Type T Design, Type JK Design, Presettable counter, IC 7490, IC 7492 Synchronous counter ICs, Analysis of counter circuits. **Shift Register:** Introduction, parallel and shift registers, serial shifting, serial–in serial–out, serial–in parallel–out, parallel–in parallel–out, Ring counter, Johnson counter, Applications of shift registers, Pseudo-random binary sequence generator, IC7495, Seven Segment displays, analysis of shift counters.	12
	Total	60

9. Evaluation Pattern:

a. **Total Marks:** 150 Marks (10 Point Grading)

b. **Passing Criteria**: 40 % (4 Grade Points)

c. **Marking Scheme:** 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books:** Online/Offline

10. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination:

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each.

11. Course Outcome:

On completion of the course, the students will be able to:

CO1: Simplify complex Boolean functions.
CO2: Implement digital circuits using combinational logic ICs and PLDs.
CO3: Understand the characteristics of various Flip-Flops.
CO4: Design digital circuits with combinational and sequential components.
CO5: Analyse digital system designs.

12. References:

1. Modern Digital Electronics by R. P. Jain, 4th Edition, Tata McGraw Hill, 2009.
2. Digital Principles and Applications by Malvino and Leach, 8th Edition, Tata McGraw Hill, 2014.
3. Digital Electronics: Principles, Devices and Applications by Anil K. Maini, Wiley, 2007.
4. Make Electronics by Charles Platt, 2nd Edition, Shroff/O'Reilly, 2015.

COURSE DETAILS

1. Title of the Course: E- Commerce

2. Semester: II

3. Course Code: BITOE204

4. Course Objectives:

- To familiarize the student with the basic concept of e-commerce
- To provide him/her with the knowledge of planning, scheduling and controlling a successful e-business.

5. Category of Course: Open Elective

6. Total Hours: 60

7. Total Credits: 02 Credits

8. Evaluation Pattern:

- Total Marks : 100 Marks (10 Point Grading)
- Passing Criteria : 40 % (4 Grade Points)
- Marking Scheme : 60:40 Pattern
- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- Mode of Evaluation of Answer-books : Offline

9.Modules:

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITOE204	E-Commerce	4	-	2	-	2

Module	Detail Syllabus	Hours
Unit 1.	**INTRODUCTION:** Introduction to E-Commerce, History of E-Commerce, Commerce vs. E-Commerce, Traditional Business vs. Direct Selling, Types of E-Commerce: Business-to-Business, Business-toConsumer, Consumer-to-Business, Consumer-to-Consumer.	**12**
Unit 2.	**ELECTRONIC PAYMENT SYSTEMS:** Overview of Electronic Payment Technology, Credit Card, Debit Card, Smart Card, E-Money, Electronic Fund Transfer, Electronic Data Interchange.	**12**
Unit 3.	**INFRASTRUCTURE FOR E-COMMERCE:** The Internet, development of Internet, TCP/IP, Router, Firewall, The World Wide Web, web browser, web server, HTTP, HTML, Web architecture, Client / server technology, web server, Application Server, Database Server	**12**
Unit 4.	**NET COMMERCE AND LEGAL AND SECURITY ISSUES IN E-COMMERCE SUPPLY CHAIN MANAGEMENT:** Basic Component, Impact of Globalization on the Supply Chain, Customer Relations Management (CRM): Process and technology Aspects to CRM, Issues, Legal and Security Issues in E-Commerce	**12**
Unit 5.	**ETHICS:** Introduction to Ethics, Overview of Ethical Issues, Privacy & its Protection, Emerging Legal Issues, Encryption & Security	**12**

11. Paper Pattern:

a. Internal Assessment:

● Assessment consists of a class test of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.

● Students have to submit assignments after completion of each module which will carry 15 marks and 5 marks are for attendance

b. Semester End Theory Examination:

Question No.	Description	Marks
1.	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3.	Answer any two Questions (Descriptive based on module 2)	10
4.	Answer any two Questions (Descriptive based on module 3)	10
5.	Answer any two Questions (Descriptive based on module 4)	10
6.	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

12. Course Outcomes:

PO 1: Acquire a good knowledge of e-commerce, both the technical and business aspects

PO 2: Understand the principles and practices of e-

commerce and its related technologies.

13. Reference Books:

1. Bajaj & Nag, E-Business (TMH: New Delhi)
2. David Whiteley, E-Commerce: Strategy, Technologies and Applications (McGraw Hill Education)
3. Chaffey, E-Business and E-Commerce Management: Strategy, implementation and Practice Pearson Education India.
4. Rayport, Jeffrey F and Jaworksi, Bernard J, "Introduction to E-Commerce", 2003, Tata McGraw Hill, New Delhi.
5. Turban, Efraim, and David King, "Electronic Commerce: A Managerial Perspective", 2010, Pearson Education Asia, Delhi.
6. Laudon, Kenneth C and Carol Guercio Traver: E-Commerce business. Technology, 2011, Pearson Education, Delhi.

COURSE STRUCTURE

1. **Title of the Course:** Object Oriented Programming using C++
2. **Semester**: II
3. **Course Code: For Theory:** BITVSEC205

   For Practical: BITVSECP205
4. **Course Objective:**

   a. The objectives of the course are to have students identify and practice the object-oriented programming concepts and techniques, practice the use of C++ classes and class libraries, arrays, inheritance and file I/O stream concepts.

   b. Creating simple programs using classes and objects in C++.

   c. Implement Object Oriented Programming Concepts in C++.

   d. Develop applications using stream I/O and file I/O.

   e. Implement Object Oriented Programs using templates and exceptional handling concepts.

5. **Category of Course:** Vocational Skill Enhancement Course
6. **Total Hours:** 60
7. **Total Credits:** 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITVSEC205	Object Oriented Programming using C++	4	2	2	2	4

Module	Detailed Content	Hours
I	**Object Oriented Methodology**: Introduction, Advantages and Disadvantages of Procedure Oriented Languages, what is Object Oriented? What is Object Oriented Development? Object Oriented Themes, Benefits and Application of	12

	OOPS. **Principles of OOPS:** OOPS Paradigm, Basic Concepts of OOPS: Objects, Classes, Data Abstraction and Data Encapsulation, Inheritance, Polymorphism, Dynamic Binding, Message Passing	
II	**Classes and Objects:** Simple classes (Class specification, class members accessing), Defining member functions, passing object as an argument, Returning object from functions, friend classes, Pointer to object, Array of pointer to object. **Constructors and Destructors:** Introduction, Default Constructor, Parameterized Constructor and examples, Destructors	12
III	**Polymorphism:** Concept of function overloading, overloaded operators, overloading unary and binary operators, overloading comparison operator, overloading arithmetic assignment operator, Data Conversion between objects and basic types, **Virtual Functions:** Introduction and need, Pure Virtual Functions, Static Functions, this Pointer, abstract classes, virtual destructors.	12
IV	**Program development using Inheritance:** Introduction, understanding inheritance, Advantages provided by inheritance, choosing the access specifier, Derived class declaration, derived class constructors, class hierarchies, multiple inheritance, multilevel inheritance, containership, hybrid inheritance. **Exception Handling:** Introduction, Exception Handling Mechanism, Concept of throw & catch with example	12
V	**Manipulating Strings:** Introduction to Strings, Creating and manipulating String Objects, Relational operations on Strings, Characteristics of Strings, Swapping strings, Comparing Strings. **Templates:** Introduction, Function Template and examples, Class Template and examples. **Working with Files:** Introduction, File Operations, Various File Modes, File Pointer and their Manipulation	12
	Total	60

Sr. No.	List of Practical
1.	a. Design an employee class for reading and displaying the employee information, the getInfo() and displayInfo() methods will be used repectively. Where getInfo() will be private method. b. Design the class student containing getData() and displayData() as two of its methods which will be used for reading and displaying the student information respectively.Where getData() will be private method. c. Design the class Demo which will contain the following methods: readNo() ,factorial() for calculating the factorial of a number, reverseNo() will reverse the given number, isPalindrome() will check the given number is palindrome,

	isArmstrong() which will calculate the given number is armStrong or not.Where readNo() will be private method.
2.	a. Write a friend function for adding the two complex numbers, using a single class. b. Write a friend function for adding the two different distances and display its sum, using two classes. c. Write a friend function for adding the two matrix from two different classes and display its sum.
3.	a. Design a class Complex for adding the two complex numbers and also show the use of constructor. b. Design a class Geometry containing the methods area() and volume() and also overload the area() function . c. Design a class StaticDemo to show the implementation of static variable and static function.
4.	a. Overload the operator unary(-) for demonstrating operator overloading. b. Overload the operator + for adding the timings of two clocks, And also pass objects as an argument. c. Overload the + for concatenating the two strings. For e.g “c” + “++” = c++
5.	a. Design a class for single level inheritance using public and private type derivation. b. Design a class for multiple inheritance. c. Implement the hierarchical inheritance.
6.	a. Implement the concept of method overriding. b. Show the use of virtual function c. Show the implementation of abstract class.
7.	a. String operations for string length , string concatenation b. String operations for string reverse, string comparison, c. Console formatting functions.
8.	a. Show the implementation of exception handling b. Show the implementation for exception handling for strings c. Show the implementation of exception handling for using the pointers.

9.	a. Design a class FileDemo open a file in read mode and display the total number of words and lines in the file. b. Design a class to handle multiple files and file operations c. Design a editor for appending and editing the files
10.	a. Show the implementation of template class library for swap function. b. Design the template class library for sorting ascending to descending and vice-versa c. Design the template class library for concatenating two strings

9. Evaluation Pattern:

a. **Total Marks** : 100 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)

d. **Mode of Evaluation of Answer-books** : Offline

10. Paper Pattern:

a. **Internal Assessment:**

- Assessment consists of a class test of 20 marks. The class test is to be conductedwhen approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which willcarry 15 marks and 5 marks are for attendance.

b. **Semester End Theory Examination:**

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10

5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	45 Marks	05 Marks	50 Marks

11. Course Outcome:

Students will be able to:

CO1. Articulate the principles of object-oriented problem solving and programming.

CO2. Outline the essential features and elements of the C++ programming language.

CO3. Apply the concepts of class, method, constructor, instance, data abstraction, function abstraction, inheritance, overriding, overloading, and polymorphism.

CO4. Analyze, write, debug, and test basic C++ codes using the approaches introduced in the course.

CO5. Analyze problems and implement simple C++ applications using an object-oriented software engineering approach.

12. References:

1. “Object Oriented Programming with C++” by Balagurusamy, 6e Paperback – May 20, 2013

2. “Object Oriented Programming in C++” by Robert Lafore, Paperback – 20 August 1999

3. “Object-Oriented Programming in C++” by Rajesh K Shukla, Paperback – 1 January 2008

4. “C++: The Complete Reference” by Herbert Schildt , 4th Edition Paperback – 1 July 2017

5. “Object Oriented Analysis and Design” by Timothy Budd, 3rd Edition TMH-2012

COURSE DETAILS

1. **Title of the Course:** Communication Skill

2. **Course Code: For Theory:** BITAEC206

3. **Course Objective:**
   a. Understand how they use their energy to work effectively.
   b. Learn how to manage themselves better, especially when facing work situations which cause them stress.
   c. Be more aware of the impact they have on other people.
   d. Be more skillful at understanding how and why other people behave and react as they do.

4. **Category of Course:** Ability Enhancement Course

5. **Semester:** II

6. **Total Hours:** 60

7. **Total Credits:** 02 Credits

8. **Modules: -**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical / Tutorial	Theory	Practical / Tutorial	Total
BITAEC206	Communication Skill	4	-	2	-	2

Module	Details	Hours
I	**The Seven Cs of Effective Communication:** Completeness, Conciseness, Consideration, Concreteness, Clarity, Courtesy, Correctness. **Understanding Business Communication:** Nature and Scope of Communication, Non-verbal Communication, Cross-cultural communication, Technology-enabled Business	**12**

II	**Writing Business Messages and Documents:** Business writing, Business Correspondence, Instructions Business Reports and Proposals, Career building and Resume writing. **Developing Oral Communication Skills for Business:** Effective Listening, Business Presentations and Public Speaking,	**12**
III	**Developing Oral Communication Skills for Business:** Meetings and Conferences, Group Discussions and Team Presentations, Team Briefing. **Understanding Specific Communication Needs:** Communication across Functional Areas	**12**
IV	**Understanding Specific Communication Needs:** Corporate Communication, Persuasive Strategies in Business Communication, Ethics in Business Communication, Business Communication Aids	**12**
V	**Presentation Process:** Planning the presentations, executing the presentations, Impressing the audience by performing, Planning stage: Brainstorming, mind maps / concept maps, executing stage: chunking theory, creating outlines, Use of templates. Adding graphics to your presentation: Visual communication, Impress stage: use of font, colour, layout, Importance of practice and performance.	**12**
	Total	**60**

9. Evaluation Pattern:

a. **Total Marks:** 100 Marks (10 Point Grading)

b. **Passing Criteria**: 40 % (4 Grade Points)

c. **Marking Scheme:** 60:40 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)

d. **Mode of Evaluation of Answer-books:** Online/Offline

10. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination:

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

11. Course Outcome:

After studying this course, the learners will be able to

CO1: understand and apply knowledge of human communication and language processes as they occur across various contexts, e.g., interpersonal, intrapersonal, small group, organizational, media, gender, family, intercultural communication, technologically mediated communication, etc. from multiple perspectives.

CO2: understand and evaluate key theoretical approaches used in the interdisciplinary field of communication. I.e., students will be able to explain major theoretical frameworks, constructs, and concepts for the study of communication and language, summarize the work of central thinkers associated with particular approaches, and begin to evaluate the strengths and weaknesses of their approaches.

CO3: understand the research methods associated with the study of human communication, and apply at least one of those approaches to the analysis and evaluation of human communication.

CO4: find, use, and evaluate primary academic writing associated with the communication discipline.

12. References:

1. Business Communication Edited by Meenakshi Raman and Prakash Singh Oxford University Press Second.
2. Professional Communication Aruna Koneru Tata McGraw Hill
3. Strategies for improving your business communication Prof. M. S. Rao Shroff publishers and distributors 2016.
4. Business Communication Dr. Rishipal and Dr. Jyoti Sheoran SPD 2014.
5. Communication Skills Dr. Nageshwar Rao Dr. Rajendra P. Das Himalaya Publishing House.

COURSE DETAILS

1. **Title of the Course:** Green Computing
2. **Course Code: For Theory:** BITVEC207
3. **Course Objective:**
   a. To understand how to reduce the use of hazardous materials, maximize energy efficiency during the product life time.
   b. Importance of recycling, biodegradability of defunct products and factory waste. Changing the way of work with GREEN in mind.
4. **Category of Course**: Value Education
5. **Semester:** II
6. **Total Hours:** 60
7. **Total Credits:** 02 Credits
8. **Modules: -**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITVEC207	Green Computing	4	-	2	-	2

Module	Details	Hours
I	**Overview and Issues:** Problems: Toxins, Power Consumption, Equipment Disposal, Company's Carbon Footprint: Measuring, Details, reasons to bother, Plan for the Future, Cost Savings: Hardware, Power. **Initiatives and Standards:** Global Initiatives: United Nations, Basel Action Network, Basel Convention, North America: The United States, Canada,Australia, Europe, WEEE Directive, RoHS, National Adoption, Asia: Japan, China, Korea.	**12**

II	**Minimizing Power Usage:** Power Problems, Monitoring Power Usage, Servers, Low-Cost Options, Reducing Power Use, Data De-Duplication, Virtualization, Management, Bigger Drives, Involving the Utility Company, Low-Power Computers, PCs, Linux, Components, Servers, Computer Settings, Storage, Monitors, Power Supplies, Wireless Devices, Software. **Cooling:** Cooling Costs, Power Cost, Causes of Cost, Calculating Cooling Needs, Reducing Cooling Costs, Economizers, On-Demand Cooling, HP's Solution, Optimizing Airflow, Hot Aisle/Cold Aisle, Raised Floors, Cable Management, Vapour Seal, Prevent Recirculation of Equipment Exhaust, Supply Air Directly to Heat Sources, Fans, Humidity, Adding Cooling, Fluid Considerations, System Design, Datacentre Design, Centralized Control, Design for Your Needs, Put Everything Together.	**12**
III	**Changing the Way of Work:** Old Behaviours, starting at the Top, Process Reengineering with Green in Mind, Analysing the Global Impact of Local Actions, Steps: Water, Recycling, Energy, Pollutants, Teleworkers and Outsourcing, Telecommuting, Outsourcing, how to Outsource. **Going Paperless:** Paper Problems, The Environment, Costs: Paper and Office, Practicality, Storage, Destruction, Going Paperless, Organizational Realities, Changing Over, Paperless Billing, Handheld Computers vs. the Clipboard, Unified Communications, Intranets, What to Include, Building an Intranet, Microsoft Office SharePoint Server 2007, Electronic Data Interchange (EDI), Nuts and Bolts, Value Added Networks, Advantages, Obstacles.	**12**
I**V**	**Recycling:** Problems, China, Africa, Materials, Means of Disposal, Recycling,Refurbishing, Make the Decision, Life Cycle, from beginning to end, Life, Cost, Green Design, Recycling Companies, Finding the Best One,Checklist, Certifications, Hard Drive Recycling, Consequences,cleaning a Hard Drive, Pros and cons of each method, CDs and DVDs,good and bad about CD and DVDs disposal, Change the mind-set,David vs. America Online **Hardware Considerations:** Certification Programs, EPEAT, RoHS, Energy Star, Computers, Monitors, Printers, Scanners, All-in-Ones, Thin Clients, Servers, Blade Servers, Consolidation, Products, Hardware Considerations, Planned Obsolescence, Packaging, Toxins, Other Factors, Remote Desktop,	

V	**Greening Your Information Systems:** Initial Improvement Calculations, Selecting Metrics, Tracking Progress, Change Business Processes, Customer Interaction, PaperReduction, Green Supply Chain, Improve Technology Infrastructure,Reduce PCs and Servers, Shared Services, Hardware Costs, Cooling. **Staying Green:** Organizational Check-ups, Chief Green Officer, Evolution, Sell the CEO, SMART Goals, Equipment Check-ups, Gather Data, Tracking the data, Baseline Data, Benchmarking, Analyse Data, Conduct Audits, Certifications, Benefits, Realities, Helpful Organizations.	
	Total	**60**

9. Evaluation Pattern:

a. **Total Marks** : 100 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)

d. **Mode of Evaluation of Answer-books:** Offline

10. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination:

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

11. Course Outcome:

CO1: Practice of environmentally sustainable production practices, energy efficient computers.

CO2: Understand the importance of energy efficiency, power consumption and other way is making green software to thrive the industry and make innovatory products.

CO3: Comprehend the concepts of Recycling like water recycling.

12. References:

1. Green IT Toby Velte, Anthony Velte, Robert Elsenpeter McGrawHill 2008.
2. Green Data Center: Steps for the Journey AlvinGalea, Michael Schaefer, Mike Ebbers Shroff Publishers and Distributers 2011.
3. Green Computing and Green IT Best Practice Jason Harris Emereo.
4. Green Computing Tools and Techniques for Saving Energy, Money And Resources Bud E. Smith CRC Press 2014.

Bachelor of Science in

Information Technology

[B. Sc. I.T]

Semester – III, IV

Semester - III

Semester – III				
Course Code	**Course Type**	**Course Title**	**Credits**	**Marks**
BITMJ301	**Major Mandatory**	**Python**	**3**	**100**
BITMJP301	**Major Mandatory Practical**	**Python Practical**	**1**	**50**
BITMJ302	**Major Mandatory**	**Data Structure**	**3**	**100**
BITMJP302	**Major Mandatory Practical**	**Data Structure Practical**	**1**	**50**
BITMN303	**Major Mandatory**	**Microprocessor Architecture**	**3**	**100**
BITMNP303	**Minor Mandatory Practical**	**Microprocessor Architecture Practical**	**1**	**50**
BITOE304	**OE**	**Applied Math's**	**2**	**100**
BITVSC305	**VSC**	**Digital Computer Networks**	**2**	**100**
BITAEC306	**AEC**	**Wordpress For Web Development**	**2**	**100**
	FP,CC	**NSS/NCC/CULTURAL/SPORTS/YOGA**	**2+2**	**50**
		Total Credits	**22**	**800**

COURSE STRUCTURE

1. **Title of the Course :** Python Programming
2. **Semester** : III
3. **Course Code: For Theory: BITMJ301**
   For Practical: BITMJP301
4. **Course Objective:**

The learning objectives of this course are:

- To understand why Python is a useful scripting language for developers.
- To learn oops concept and various modules available in python.
- To learn basic concept in python such as function, sequence, module, files and directories.
- Understand how to build GUI application using widgets with database connectivity.

5. **Category of Course** : Major Mandatory
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (03 Credits for Theory & 01 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITSB304	Python Programming	4	2	3	1	4

Module	Detailed Content	Hours
1	**Introduction:** The Python Programming Language, History, features, Installing Python, Running Python program, Debugging : Syntax Errors, Runtime Errors, Semantic Errors, Experimental Debugging, Formal and Natural Languages, The Difference Between Brackets, Braces, and Parentheses, **Variables and Expressions** Values and Types, Variables, Variable Names and Keywords, Type conversion, Operators and Operands, Expressions, Interactive Mode and Script Mode, Order of Operations. **Conditional Statements:** if, if-else, nested if –else **Looping**: for, while, nested loops **Control statements:** Terminating loops, skipping specific conditions.	12
2	**Functions:** Function Calls, Type Conversion Functions, Math	12

	Functions, Composition, Adding New Functions, Definitions and Uses, Flow of Execution, Parameters and Arguments, Variables and Parameters Are Local, Stack Diagrams, Fruitful Functions and Void Functions, Why Functions? Importing with from, Return Values, Incremental Development, Composition, Boolean Functions, More Recursion, Leap of Faith, Checking Types **Strings:** A String Is a Sequence, Traversal with a for Loop, String Slices, Strings Are Immutable, Searching, Looping and Counting, String Methods, The in Operator, String Comparison, String Operations.	
3	**Lists:** Values and Accessing Elements, Lists are mutable, traversing a List, Deleting elements from List, Built-in List Operators, Concatenation, Repetition, `In` Operator, Built-in List functions and methods **Tuples and Dictionaries:** Tuples, Accessing values in Tuples, Tuple Assignment, Tuples as return values, Variable-length argument tuples, Basic tuples operations, Concatenation, Repetition, `in` Operator, Iteration, Built-in Tuple Functions Creating a Dictionary, Accessing Values in a dictionary, Updating Dictionary, Deleting Elements from Dictionary, Properties of Dictionary keys, Operations in Dictionary, Built-In Dictionary Functions, Built-in Dictionary Methods **Files:** Text Files, The File Object Attributes, Directories, **Exceptions:** Built-in Exceptions, Handling Exceptions, Exception with Arguments, User-defined Exceptions	12
4	**Regular Expressions –** Concept of regular expression, various types of regular expressions, using match function. **Classes and Objects:** Overview of OOP (Object Oriented Programming), Class Definition, Creating Objects, Instances as Arguments, Instances as return values, Built-in Class Attributes, Inheritance, Method Overriding, Data Encapsulation, Data Hiding **Multithreaded Programming:** Thread Module, creating a thread, synchronizing threads, multithreaded priority queue **Modules:** Importing module, Creating and exploring modules, Math module, Random module, Time module	12
5	**Creating the GUI Form and Adding Widgets:** **Widgets:** Button, Canvas, Checkbutton, Entry, Frame, Label, Listbox, Menubutton, Menu, Message, Radiobutton, Scale, Scrollbar, text,Toplevel, Spinbox, PanedWindow, LabelFrame, tkMessagebox.Handling Standard attributes and Properties of Widgets. **Layout Management:** Designing GUI applications with proper Layout Management features. **Look and Feel Customization**: Enhancing Look and Feel of GUI using different appearances of widgets. **Storing Data in Our MySQL Database via Our GUI :** Connecting to a MySQL database from Python, Configuring the MySQL connection, Designing the Python GUI database,	12

	Using the INSERT command, Using the UPDATE command, Using the DELETE command, Storing and retrieving data from MySQL database.	
	Total	60

Sr. No.	List of Practical
1	**Write the program for the following:** a. Create a program that asks the user to enter their name and their age. Printout a message addressed to them that tells them the year that they will turn 100 years old. b. Enter the number from the user and depending on whether the number is even or odd, print out an appropriate message to the user. c. Write a program to generate the Fibonacci series. d. Write a function that reverses the user defined value. e. Write a function to check the input value is Armstrong and also write the function for Palindrome. f. Write a recursive function to print the factorial for a given number.

2	**Write the program for the following:**
	a. Write a function that takes a character (i.e. a string of length 1) and returns True
	if it is a vowel, False otherwise.
	b. Define a function that computes the *length* of a given list or string.
	c. Define a *procedure* `histogram()` that takes a list of integers and prints a histogram to the screen. For example, `histogram([4, 9, 7])` should print the
	following:
	`****`
	`*********`
	`*******`

3	**Write the program for the following:** a. A *pangram* is a sentence that contains all the letters of the English alphabet at least once, for example: *The quick brown fox jumps over the lazy dog*. Your task here is to write a function to check a sentence to see if it is a pangram or not. b. Take a list, say for example this one: `a = [1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89]` and write a program that prints out all the elements of the list that are less than 5.
4	**Write the program for the following:** a. Write a program that takes two lists and returns True if they have at least one common member. b. Write a Python program to print a specified list after removing the 0th, 2nd, 4th and 5th elements.

	c. Write a Python program to clone or copy a list
5	**Write the program for the following:** a. Write a Python script to sort (ascending and descending) a dictionary by value. b. Write a Python script to concatenate following dictionaries to create a new one. Sample Dictionary : dic1={1:10, 2:20} dic2={3:30, 4:40} dic3={5:50,6:60} Expected Result : {1: 10, 2: 20, 3: 30, 4: 40, 5: 50, 6: 60} c. Write a Python program to sum all the items in a dictionary.
6	**Write the program for the following:** a. Write a Python program to read an entire text file. b. Write a Python program to append text to a file and display the text. c. Write a Python program to read last n lines of a file.
7	**Write the program for the following:** a. Design a class that store the information of student and display the same b. Implement the concept of inheritance using python c. Create a class called `Numbers`, which has a single class attribute called `MULTIPLIER`, and a constructor which takes the parameters `x` and `y` (these should all be numbers). i. Write a method called `add` which returns the sum of the attributes `x` and `y`. ii. Write a class method called multiply, which takes a single number parameter a and returns the product of a and MULTIPLIER. iii. Write a static method called subtract, which takes two number parameters, b and c, and returns b - c. iv. Write a method called value which returns a tuple containing the values of x and y. Make this method into a property, and write a setter and a deleter for manipulating the values of `x` and `y`.
8	**Write the program for the following:** Open a new file in IDLE ("New Window" in the "File" menu) and save it as geometry.py in the directory where you keep the files you create for this course.Then copy the functions you wrote for calculating volumes and areas in the "Control Flow and Functions" exercise into this file and save it. Now open a new file and save it in the same directory. You should now be able to import your own module like this: `import geometry` Try and add `print dir(geometry)` to the file and run it. Now write a function pointyShapeVolume(x, y, squareBase) that calculates the volume of a square pyramid if squareBase is True and of a right circular cone if squareBase is False. x is the length of an edge on a square if squareBase is True and the radius of a circle when squareBase is False. y is the height of the object.First use squareBase to distinguish the cases. Use the

	circleArea and squareArea from the geometry module to calculate the base areas. b. Write a program to implement exception handling.
9	**Write the program for the following:** a. Try to configure the widget with various options like: bg="red", family="times", size=18 b. Try to change the widget type and configuration options to experiment with other widget types like Message, Button, Entry, Checkbutton, Radiobutton, Scale etc.
10	**Design the database applications for the following:** Design a simple database application that stores the records and retrieve the same. b. Design a database application to search the specified record from the database. c. Design a database application to that allows the user to add, delete and modify the records

9. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** :Offline

10. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination:

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10

4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	40(30+10) Marks	10 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, Learner should be able to:

CO1: Explain basic principles of Python programming language

CO2: Implement oops concept and various modules available in python.

CO3: Implement basic concept in python program such as function, sequence, module, files and directories.

CO4: Do to build GUI application using widgets with database connectivity.

12. References:

1. Think Python Allen Downey O'Reilly 1st 2012
2. An Introduction to Computer Science using Python 3 Jason Montojo, Jennifer Campbell, Paul Gries SPD 1st 2014.
3. Python GUI Programming Cookbook Burkhard A. Meier Packt 2015
4. Fundaments of Database System by Ramez Elmasri and Shamkant B. Navathe, 7th Edition, Pearson Education India, 2010
5. Object-oriented Programming in Python Michael H. Goldwasser, David Letscher Pearson Prentice Hall 1st 2008.

COURSE STRUCTURE

1. **Title of the Course :** Data structure
2. **Semester** : III
3. **Course Code: For Theory:** BITMJ302
   For Practical: BITMJP302
4. **Course Objective:**
   a. To impart the basic concepts of data structures and algorithms
   b. To understand concepts about searching and sorting techniques
   c. To Understand basic concepts about stacks,queues,lists,trees and graphs
   d. To understanding about writing algorithms and step by step approach in solving problems with the help of fundamental data structures
5. **Category of Course** : Core Subject
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (03Credits for Theory & 01Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITMJ302	Data structure	4	2	3	1	4

Module	Detailed Content	Hours
1	**Introduction:** Data and Information, Data Structure, Classification of Data Structures, Primitive Data Types, Abstract Data Types, Data structure vs. File Organization, Operations on Data Structure ,Algorithm, Importance of Algorithm Analysis, Complexity of an Algorithm, Asymptotic Analysis and Notations, Big O Notation, Big Omega Notation, Big Theta Notation, Rate of Growth and Big O Notation. **Array**: Introduction, One Dimensional Array, Memory Representation of One Dimensional Array, Traversing, Insertion, Deletion, Searching, Sorting, Merging of Arrays, Multidimensional Arrays, Memory Representation of Two Dimensional Arrays, General Multidimensional Arrays, Sparse	12

	Arrays, Sparse Matrix, Memory Representation of Special kind of Matrices, Advantages and Limitations of Arrays.	
2	**Linked List:** Linked List, One-way Linked List, Traversal of Linked List, Searching, Memory Allocation and De-allocation, Insertion in Linked List, Deletion from Linked List, Copying a List into Other List, Merging Two Linked Lists, Splitting a List into Two Lists, Reversing One way linked List, Circular Linked List, Applications of Circular Linked List, Two way Linked List, Traversing a Two way Linked List, Searching in a Two way linked List, Insertion of an element in Two way Linked List, Deleting a node from Two way Linked List, Header Linked List, Applications of the Linked list, Representation of Polynomials, Storage of Sparse Arrays, Implementing other Data Structures.	12
3	**Stack:** Introduction, Operations on the Stack Memory Representation of Stack, Array Representation of Stack, Applications of Stack, Evaluation of Arithmetic Expression, Matching Parenthesis, infix and postfix operations, Recursion. **Queue:** Introduction, Queue, Operations on the Queue, Memory Representation of Queue, Array representation of queue, Linked List Representation of Queue, Circular Queue, Some special kinds of queues, Deque, Priority Queue, Application of Priority Queue, Applications of Queues	12
4	**Sorting and Searching Techniques**: Bubble, Selection, Insertion, Merge Sort. Searching: Sequential, Binary, Indexed Sequential Searches, Binary Search. **Tree:** Tree, Binary Tree, Properties of Binary Tree, Memory Representation of Binary Tree, Operations Performed on Binary Tree, Reconstruction of Binary Tree from its Traversals, Huffman Algorithm, Binary Search Tree, Operations on Binary Search Tree, Heap, Memory Representation of Heap, Operation on Heap, Heap Sort. **Advanced Tree Structures:** Red Black Tree, Operations Performed on Red Black Tree, AVL Tree, Operations performed on AVL Tree, 2- 3 Tree, B-Tree.	12
5	**Hashing Techniques:** Hash function, Address calculation techniques, Common hashing functions Collision resolution, Linear probing, Quadratic, Double hashing, Bucket hashing, Deletion and rehashing **Graph:** Introduction, Graph, Graph Terminology, Memory Representation of Graph, Adjacency Matrix Representation of Graph, Adjacency List or Linked Representation of Graph, Operations Performed on Graph, Graph Traversal, Applications	12

	of the Graph, Reachability, Shortest Path Problems, Spanning Trees.	
	Total	60

Sr. No.	List of Practical
1	**Implement the following:** a. Write a program to store the elements in 1-D array and perform the operations like searching, sorting and reversing the elements. [Menu Driven] b. Read the two arrays from the user and merge them and display the elements in sorted order.[Menu Driven] c. Write a program to perform the Matrix addition, Multiplication and Transpose Operation. [Menu Driven]
2	**Implement the following for Linked List:** a. Write a program to create a single linked list and display the node elements in reverse order. b. Write a program to search the elements in the linked list and display the same c. Write a program to create double linked list and sort the elements in the linked list.
3	**Implement the following for Stack:** a. Write a program to implement the concept of Stack with Push, Pop, Display and Exit operations. b. Write a program to convert an infix expression to postfix and prefix conversion.
4	**Implement the following for Queue:** a. Write a program to implement the concept of Queue with Insert, Delete, Display and Exit operations. b. Write a program to implement the concept of Circular Queue c. Write a program to implement the concept of Deque.
5	**Implement the following sorting techniques**: a. Write a program to implement bubble sort. b. Write a program to implement selection sort. c. Write a program to implement insertion sort.
6	**Implement the following data structure techniques:** a. Write a program to implement merge sort. b. Write a program to search the element using sequential search. c. Write a program to search the element using binary search.
7	**Implement the following data structure techniques:** a. Write a program to create the tree and display the elements. b. Write a program to construct the binary tree. c. Write a program for inorder, postorder and preorder traversal of tree

8	**Implement the following data structure techniques:** a. Write a program to insert the element into maximum heap. b. Write a program to insert the element into minimum heap
9	**Implement the following data structure techniques:** a. Write a program to implement the collision technique. b. Write a program to implement the concept of linear probing
10	**Implement the following data structure techniques:** a. Write a program to generate the adjacency matrix. b. Write a program for shortest path diagram.

9. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** : Offline

10. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination:

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	40 Marks	10 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Ability to analyze algorithms and algorithm correctness

CO2: Ability to summarize searching and sorting techniques

CO3: Ability to describe stack, queue and linked list operation.

CO4: Ability to have knowledge of tree and graphs concepts.

12. References:

1. A Simplified Approach to Data Structures Lalit Goyal, Vishal Goyal, Pawan Kumar SPD 1st 2014
2. An Introduction to Data Structure with Applications Jean – Paul Tremblay and Paul Sorenson Tata MacGraw Hill 2nd 2007
3. Data Structure and Algorithm Maria Rukadikar SPD 1st 2017
4. Schaum's Outlines Data structure Seymour Lipschutz Tata McGraw Hill 2nd 2005
5. Data structure – A Pseudo code Approach with C AM Tanenbaum, Y Langsam and MJ Augustein Prentice Hall India 2nd 2006
6. Data structure and Algorithm Analysis in C Weiss, Mark Allen Addison Wesley 1st 2006

COURSE STRUCTURE

1. **Title of the Course:** Microprocessor Architecture & Programming
2. **Semester**: III
3. **Course Code: For Theory:** BITMN303
   For Practical: BITMNP303
4. **Course Objective:**
   - **a.** To study the Standard Intel Architecture 8085.
   - **b.** To gain proficiency in Assembler language.
   - **c.** To gain experience in programming peripheral and I/O devices.
   - **d.** To acquire the background for understanding next-generation CPUs.
   - **e.** To learn concepts associated with interfacing a microprocessor to memory and to I/O devices.
   - **f.** To learn how to control components of a microprocessor-based system through the use of interrupts.
   - **g.** To study about current generation processors.
5. **Category of Course**: Minor Mandatory
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (03 Credits for Theory & 01 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITMN303	Microprocessor Architecture & Programming	4	2	3	1	4

Module	Detailed Content	Hours
1	**Microprocessor, microcomputers, and Assembly Language**: Microprocessor, Microprocessor Instruction Set and Computer Languages, From Large Computers to Single-Chip Microcontrollers, Applications. **Microprocessor Architecture and Microcomputer System:** Microprocessor Architecture and its operation's, Memory, I/O Devices, Microcomputer System, Logic Devices and Interfacing, Microprocessor-Based System Application. **8085 Microprocessor Architecture and Memory Interface**: Introduction, 8085 Microprocessor unit, 8085-Based Microcomputer, Memory Interfacing, Interfacing the 8155 Memory Segment, Illustrative Example: Designing Memory for	12

	the MCTS Project, Testing and Troubleshooting Memory Interfacing Circuit, 8085-Based Single-Board microcomputer	
2	**Interfacing of I/O Devices:** Basic Interfacing concepts, Interfacing Output Displays, Interfacing Input Devices, Memory Mapped I/O, Testing and Troubleshooting I/O Interfacing Circuits **Introduction to 8085 Assembly Language Programming:**The 8085 Programming Model, Instruction Classification, Instruction, Data and Storage, writing assembling and Execution of a simple program, Overview of 8085 Instruction Set, Writing and Assembling Program. **Introduction to 8085 Instructions:** Data Transfer Operations, Arithmetic Operations, Logic Operation, Branch Operation, Writing Assembly Languages Programs, Debugging a Program.	12
3	**Programming Techniques with Additional Instructions**: **Programming Techniques:** Looping, Counting and Indexing, Additional Data Transfer and 16-Bit Arithmetic Instructions, Arithmetic Instruction Related to Memory, Logic Operations: Rotate, Logics Operations: Compare, Dynamic Debugging. **Counters and Time Delays:** Counters and Time Delays, Illustrative Program: Hexadecimal Counter, Illustrative Program: zero-to-nine (Modulo Ten) Counter, Generating Pulse Waveforms, Debugging Counter and Time-Delay Programs. **Stacks and Sub-Routines:** Stack, Subroutine, Restart, Conditional Call, Return Instructions, Advanced Subroutine concepts.	12
4	**Code Conversion, BCD Arithmetic, and 16-Bit Data Operations:** BCD-to-Binary Conversion, Binary-to-BCD Conversion, BCD to Seven-Segment-LED Code Conversion, Binary-to-ASCII and ASCII to Binary Code Conversion, BCD Addition, BCD Subtraction, Introduction to Advanced Instructions and Applications, Multiplication, Subtraction with Carry. **Software Development System and Assemblers:** Microprocessors-Based Software Development system, Programming Tools, Assemblers and Cross-Assemblers,Writing Program Using Cross Assemblers. **Interrupts:** The 8085 Interrupt, 8085 Vectored Interrupts, Restart as S/W Instructions, Additional I/O Concepts and processes.	12
5	**The Pentium and Pentium Pro microprocessors:** Introduction, Special Pentium registers, Memory management,	12

	Pentium instructions, Pentium Pro microprocessor, Special Pentium Pro features. **Core 2 and later Microprocessors:** Introduction, Pentium II software changes, Pentium IV and Core 2, i3, i5 and i7. **SUN SPARC Microprocessor:** Architecture, Register file, data types and instruction format.	
	Total	60

Sr. No.	List of Practical
1.	**Perform the following Operations related to memory locations.** a. Store the data byte 32H into memory location 4000H. b. Exchange the contents of memory locations 2000H and 4000H.
2.	**Simple assembly language programs** a. Subtract the contents of memory location 4001H from the memory location 2000H and place the result in memory location 4002H. b. Subtract two 8-bit numbers. c. Add the 16-bit number in memory locations 4000H and 4001H to the 16-bit number in memory locations 4002H and 4003H. The most significant eight bits of the two numbers to be added are in memory locations 4001H and 4003H. Store the result in memory locations 4004H and 4005H with the most significant byte in memory location 4005H. d. Add the contents of memory locations 40001H and 4001H and place the result in the memory locations 4002Hand 4003H. e. Subtract the 16-bit number in memory locations 4002H and 4003H from the 16-bit number in memory locations 4000H and 4001H. The most significant eight bits of the two numbers are in memory locations 4001H and 4003H. Store the result in memory locations 4004H and 4005H with the most significant byte in memory location 4005H. f. Find the l's complement of the number stored at memory location 4400H and store the complemented number at memory location 4300H. g. Find the 2's complement of the number stored at memory location 4200H and store the complemented number at memory location 4300H.
3.	**Packing and unpacking operations** a. Pack the two unpacked BCD numbers stored in memory locations 4200H and 4201H and store result in memory location 4300H. Assume the least significant digit is stored at 4200H. b. Two-digit BCD number is stored in memory location 4200H. Unpack the BCD number and store the two digits in memory locations 4300H and 4301H such that memory location 4300H will have lower BCD digit.
4.	**Register Operations** a. Write a program to shift 8-bit data four bits right. Assume that data is in register C.

	b. Program to shift a 16-bit data 1 bit left. Assume data is in the HL register pair. c. Write a set of instructions to alter the contents of flag register in 8085. d. Write a program to count number of l's in the contents of D register and store the count in the B register.
5.	**Multiple memory locations** a. Calculate the sum of series of numbers. The length of the series is in memory location 4200H and the series begins from memory location 4201H. a) Consider the sum to be 8-bit number. So, ignore carries. Store the sum at memory location 4300H. b) Consider the sum to be 16-bit number. Store the sum at memory locations 4300H and 4301H. b. Multiply two 8-bit numbers stored in memory locations 2200H and 2201H by repetitive addition and store the result in memory locations 2300H and 2301H. c. Divide 16-bit number stored in memory locations 2200H and 2201H by the 8-bit number stored at memory location 2202H. Store the quotient in memory locations 2300H and 2301H and remainder in memory locations 2302H and 2303H. d. Find the number of negative elements (most significant bit 1) in a block of data. The length of the block is in memory location 2200H and the block itself begins in memory location 2201H. Store the number of negative elements in memory location 2300H. e. Find the largest number in a block of data. The length of the block is in memory location 2200H and the block itself starts from memory location 2201H. Store the maximum number in memory location 2300H. Assume that the numbers in the block are all 8-bit unsigned binary numbers.
6.	**Calculations with respect to memory locations** a. Write a program to sort given 10 numbers from memory location 2200H in the ascending order. b. Calculate the sum of series of even numbers from the list of numbers. The length of the list is in memory location 2200H and the series itself begins from memory location 2201H. Assume the sum to be 8-bit number so you can ignore carries and store the sum at memory location 2Sample problem. c. Calculate the sum of series of odd numbers from the list of numbers. The length of the list is in memory location 2200H and the series itself begins from memory location 2201H. Assume the sum to be 16-bit. Store the sum at memory locations 2300H and 2301H. d. Find the square of the given numbers from memory location 6100H and store the result from memory location 7000H. e. Search the given byte in the list of 50 numbers stored in the consecutive memory locations and store the address of memory location in the memory locations 2200H and 2201H. Assume byte is in the C register and starting

	address of the list is 2000H. If byte is not found store 00 at 2200H and 2201H. f. Two decimal numbers six digits each, are stored in BCD package form. Each number occupies a sequence of byte in the memory. The starting address of first number is 6000H Write an assembly language program that adds these two numbers and stores the sum in the same format starting from memory location 6200H. g. Add 2 arrays having ten 8-bit numbers each and generate a third array of result. It is necessary to add the first element of array 1 with the first element of array-2 and so on. The starting addresses of array l, array2 and array3 are 2200H, 2300H and 2400H respectively.
7.	**Assembly programs on memory locations** a. Write an assembly language program to separate even numbers from the given list of 50 numbers and store them in another list starting from 2300H. Assume starting address of 50 number list is 2200H. b. Write assembly language program with proper comments for the following: A block of data consisting of 256 bytes is stored in memory starting at 3000H. This block is to be shifted (relocated) in memory from 3050H onwards. Do not shift the block or part of the block anywhere else in the memory. c. Add even parity to a string of 7-bit ASCII characters. The length of the string is in memory location 2040H and the string itself begins in memory location 2041H. Place even parity in the most significant bit of each character. d. A list of 50 numbers is stored in memory, starting at 6000H. Find number of negative, zero and positive numbers from this list and store these results in memory locations 7000H, 7001H, and 7002H respectively. e. Write an assembly language program to generate Fibonacci number. f. Program to calculate the factorial of a number between 0 to 8.
8.	**String operations in assembly programs** a. Write an 8085-assembly language program to insert a string of four characters from the tenth location in the given array of 50 characters. b. Write an 8085-assembly language program to delete a string of 4 characters from the tenth location in the given array of 50 characters. c. Multiply the 8-bit unsigned number in memory location 2200H by the 8-bit unsigned number in memory location 2201H. Store the 8 least significant bits of the result in memory location 2300H and the 8 most significant bits in memory location 2301H. d. Divide the 16-bit unsigned number in memory locations 2200H and 2201H (most significant bits in 2201H) by the B-bit unsigned number in memory

	location 2300H store the quotient in memory location 2400H and remainder in 2401H. e. DAA instruction is not present. Write a sub routine which will perform the same task as DAA.
9.	**Calculations on memory locations** a. To test RAM by writing '1' and reading it back and later writing '0' (zero) and reading it back. RAM addresses to be checked are 40FFH to 40FFH. In case of any error, it is indicated by writing 01H at port 10. b. Arrange an array of 8-bit unsigned no in descending order. c. Transfer ten bytes of data from one memory to another memory block. Source memory block starts from memory location 2200H whereas destination memory block starts from memory location 2300H. d. Write a program to find the Square Root of an 8-bit binary number. The binary number is stored in memory location 4200H and store the square root in 4201H. e. Write a simple program to Split a HEX data into two nibbles and store it in memory.
10.	**Operations on BCD numbers** a. Add two 4-digit BCD numbers in HL and DE register pairs and store result in memory locations 2300H and 2301H. Ignore carry after 16 bits. b. Subtract the BCD number stored in E register from the number stored in D register. c. Write an assembly language program to multiply 2 BCD numbers.

9. Evaluation Pattern:

a. Total Marks : 150 Marks (10 Point Grading)

b. Passing Criteria : 40 % (4 Grade Points)

c. Marking Scheme : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. Mode of Evaluation of Answer-books: Online/Offline

10. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination:

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each.

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	40 Marks	10 Marks	50 Marks

11. Course Outcome:

After studying this course, the student would gain enough knowledge on:

CO1: The Standard Architecture of Intel Microprocessor 8085.

CO2: Instruction set of Intel 8085 microprocessor and proficiency in assembly languageprogramming.

CO3: Concepts associated with interfacing a microprocessor to memory and to I/O devicesand to learn the programming of peripheral I/O devices.

CO4: Control components of a microprocessor-based system through the use of interrupts.

CO5: Background knowledge for understanding next-generation CPUs.

12. References:

1. Microprocessors Architecture, Programming and Applications with the 8085 By Ramesh Gaonkar, 5th Edition, PENRAM, 2012.
2. Computer System Architecture by M. Morris Mano and Rajib Mall, 3rd Edition,Pearson Education, 2017
3. Structured Computer Organization by Andrew S. Tanenbaum, 6th Edition, McGrawHill, 2003.

COURSE STRUCTURE

1. **Title of the Course:** Applied Mathematics
2. **Semester**: III
3. **Course Code: For Theory:** BITOE304
4. **Course Objective:**

The course is aimed to develop the basic Mathematical skills of learners that are imperative for effective understanding of information technology subjects. The topics introduced will serve as basic tools for specialized studies in many fields of engineering and technology.

a. Matrices: To provide knowledge of matrices which is applied for solving system of linear equations and useful in various fields of technology.

b. Complex numbers: This course enables the learner to learn the concept of imaginary numbers and gives awareness about algebra of complex numbers which helps in understanding of area of subjects like electrical circuits and complex analysis etc.

c. Differential Equation: This course enables the learners to understand the concept of Differential equation and its applications.

5. **Category of Course**: Open Elective
6. **Total Hours**: 60
7. **Total Credits**: 02 Credits (02 Credits for Theory)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITCC302	Applied Mathematics	4	-	2	-	2

Module	Detailed Content	Hours
1	**Matrices:** Inverse by Adjoint Method, Properties of matrices, Elementary Transformation, Rank of Matrix, Echelon or Normal Matrix, Inverse by Reduction Method, Linear equations, Linear dependence and independence of vectors, Linear transformation, Characteristics Roots and Characteristics Vectors, Properties of characteristic vectors, Caley-Hamilton Theorem, Similarity of matrices, Reduction of matrix to a diagonal matrix.	12

	Complex Numbers: Complex number, Equality of complex numbers, Graphical representation of complex number (Argand's Diagram), Polar form of complex numbers, Polar form of x+iy for different signs of x & y, Exponential form of complex numbers, Mathematical operation with complex numbers and their representation on Argand's Diagram	
2	**Equation of first order & first degree:** Separation of variables, Equations homogeneous in x and y, Non-homogeneous linear equations, Exact differential Equation, Integrating Factor, Linear Equation and equation reducible to this form, Method of substitution. **Differential equation of first order & Degree higher than first:** Introduction, Solvable for p (or the method of factors), Solve for y, Solve for x, Clairaut's form of the equation, Methods of Substitution, Method of Substitution.	12
3	**Laplace Transform:** Introduction, Definition, Standard Formulae, Theorems on Important Properties of Laplace Transformation: First Shifting Theorem, Second Shifting Theorem, The Convolution Theorem, Laplace Transform of an Integral, Laplace Transform of Derivatives. Laplace Transformation of Special Function: Periodic Functions, Heaviside Unit Step Function, Dirac-delta Function (Unit Impulse Function). **Inverse Laplace Transform:** Shifting Theorem, Partial fraction Methods, Use of Convolution Theorem, Solution of Ordinary Linear Differential Equations with Constant Coefficients, Solution of Simultaneous Ordinary Differential Equations.	12

4	**Multiple Integrals:** Double Integral, Change of the order of the integration, Double integral in polar co-ordinates, Triple integrals. **Applications of Integration:** Area, Volumes of solids.	12
5	**Beta and Gamma Functions:** Definitions, Properties and Problems. Duplication formula. **Error Functions**	12
	Total	60

9. Evaluation Pattern:

a. **Total Marks:** 100 Marks (10 Point Grading)

b. **Passing Criteria**: 40 % (4 Grade Points)

c. **Marking Scheme:** 60:40 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)

d. **Mode of Evaluation of Answer-books:** Online/Offline

10. Paper Pattern:

a. **Internal Assessment:**

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. **Semester End Theory Examination:**

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each.

11. Course Outcome:

On successful completion of this course, the Learner should be able to:

CO1: Apply the knowledge of matrices to solve the problems in field of Image processing, Computer Graphics, Network Security etc.

COURSE STRUCTURE

1. **Title of the Course:** Digital Computer Networks
2. **Semester**: III
3. **Course Code: For Theory:** BITVSC305
4. **Course Objective:**

This course aims

a. To understand the basics of Networks such as topology, protocols, OSI model its significance and its usage.

b. To understand the services of data link layer with error detection and correction methods.

c. To have understanding of Network layer functioning, sub netting also understand about IPV4/IPV6 protocols.

d. To understand an importance of transport and application layer in digital communication.

5. **Category of Course**: Vocational
6. **Total Hours**: 60
7. **Total Credits**: 02 Credits (02 Credits)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITVSC305	Digital computer Networks	2	-	2	-	2

Module	Detailed Content	Hours
1	**Overview of Networks and Data communication:** Introduction to Data Communications, Computer Networking, Protocols and Standards, what is the Internet; Types of Network, Network Topology, Protocol hierarchies, and Design issues of layers, Interfaces and services; Layered protocol model: The OSI model, TCP/IP model; Network standards and policies, Uses of computer network, Network hardware, Network software. **Physical layer :** Data and signals, periodic analog signals, digital signals, transmission impairment, data rate limits, performance; Data Encoding and Transmission: Introduction, Digital data transmission over digital signal, Digital data transmission over analog signal, Analog data transmission over digital signal, Analog data transmission over analog signal.	12

2	**Introduction to the Data Link Layer:** Link layer addressing, Data Link Layer Design Issues, Error detection and correction, block coding, cyclic codes, checksum, forward error correction,	12
3	**Data Link Control:** DLC services, data link layer protocols, HDLC, Point-to-point protocol. **Media Access Control:** Random access, controlled access, channelization, Wired LANs – Ethernet Protocol, standard ethernet, fast ethernet, gigabit ethernet, 10 gigabit ethernet **Wireless LANs:** Introduction, Bluetooth, Cellular telephony, Satellite networks. **Connecting devices and Virtual LANs.**	12
4	**Network Layer:** Design Issues, Connection Oriented and Connectionless networks, Interconnecting Devices, IP Protocol and Sub netting, Routing, IPv4 & IPv6 protocols.	12
5	**Transport Layer:** The transport layer protocols and its services, Transport service primitives: Connection establishment, Connection release; Flow control: Multiplexing and DE multiplexing; TCP, UDP. **Application layer:** The Domain Name System, DHCP, Electronic Mail, WorldWide Web, Content delivery, Principles of Network applications, HTTP, Client Server Model .	12
	Total	60

9. Evaluation Pattern:

a. **Total Marks:** 100 Marks (10 Point Grading)

b. **Passing Criteria**: 40 % (4 Grade Points)

c. **Marking Scheme:** 60:40 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)

d. **Mode of Evaluation of Answer-books:** Offline

10. Paper Pattern:

a. **Internal Assessment:**

- Assessment consists of a class tests of 20 marks. The class test is to be conductedwhen approx. 40% syllabus is completed. Test will be of one hour.

- Students have to submit assignment after completion of each module which willcarry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination:

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each.

11. Course Outcome:

On successful completion of this course, the Learner should be able to:

CO1: Explain the basics of Networks concepts.

CO2: Identify services of data link layer with error detection and correction methods.

CO3: Identify of functions of network layer also understand about IPV4/IPV6 protocols.

CO4: Explain an importance of transport and application layer in digital communication.

12. References:

1. Introduction to Data communication and Networking by Behrouz Forouzan, 5th Edition,Tata McGraw Hill, 2013.
2. Computer networks by Andrew S. Tanenbaum, 5th Edition, Pearson, 2013.
3. Data and computer communication by William Stallings, 10th Edition, Pearson, 2014.
4. TCP/IP Protocol suit by Behrouz Forouzan, 4th Edition, Tata McGraw Hill, 2010.Computer Network by Natalia Olifer & Victor Olifer, 1st Edition, Wiley-India edition,

COURSE STRUCTURE

1. **Title of the Course :** WORDPRESS FOR WEB DEVELOPMENT
2. **Semester** : III
3. **Course Code: For Theory:** BITAEC306
4. **Course Objective:**
   1. To comprehend the content management system and appraise it with respect to traditional webdevelopment
   2. To familiarize with the WordPress dashboard and its features
   3. To introduce the WordPress elements to build an effective website
   4. To develop the ability to logically plan and design web pages using WordPress
5. **Category of Course** : Ability Enhancement
6. **Total Hours**: 30
7. **Total Credits**: 02 Credits (Theory)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITAEC306	WORDPRESS FOR WEB DEVELOPMENT	-	2	-	2	2

Module	Detailed Content	Hours
1	**Content Management System (CMS)**: Introduction , Components of CMS, Features, Advantages, Disadvantages **Introduction to WordPress**: Features, Advantages, WordPress.com and Wordpress.org **WordPress Installation**: System Requirements for WordPress, Download WordPress, Create Store Database, Setup Wizard	6

2	**Exploring the WordPress Dashboard Features**: Top Admin Bar, Screen Options, Welcome to WordPress, At a Glance, Activity, Quick Draft, WordPress News, Admin Sidebar Menu **WordPress Settings**: General, Reading, Writing, Discussion, Media, Permalink, Plugin **WordPress Posts**: Add a new Post, Preview, Publish a new post,Edit existing post, Delete existing post	6
3	**WordPress Categories**: Create Categories, Assign Posts toCategories, Components of Adding Categories, Editing and Deleting Category **WordPress Media Library**: Uploading Files to the MediaLibrary, Deleting Media Files, Editing Images and Media Metadata Management	6
4	**WordPress Pages**: Add a New Page, WYSIWYG Editor, Publishing a New Page in WordPress, Edit Existing Page, DeleteExisting Page **WordPress Tags**: Add Tags to WordPress posts, Edit Tags,Delete Tags **WordPress Links**: Add Links, Edit and Delete Links	6
5	**WordPress Comments**: Add Comments, Edit Comments,Moderate Comments **WordPress Plugins**: View, Install and Customize Plugins **Appearance**: WordPress Themes, Customize Themes, WidgetManagement, Site Background **User Management**: User Roles, Add Users, Edit and Delete Users	6
	Total	30

9. Evaluation Pattern:

Semester End Practical Examination:

Exam Duration (in Hours)	Practical Exam	Viva	Journal	Total
2 Hours 30 min per batch	30 Marks	10 Marks	10 Marks	50 Marks

10. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Perform local installation of WordPress and integrate it with the server environment.

CO2: Design web pages using structure content elements in WordPress

CO3: Organize and present content using WordPress

CO4: Create custom plugins to enhance functionality of the website

CO5: Apply WordPress Themes and Widgets to modify the appearance of websites

12. References:

1. Database System and Concepts By Abraham Silberschatz and Henry Korth and S. Sudarshan , 6th Edition, McGraw-Hill, 2011
2. Database System- Design, Implementation and Management by Peter Rob and Carlos Coronel , 7th Edition , Cengage Learning , 2007
3. Database Management Systems by Raghu Ramakrishnan and Johannes Gehrke, 3rd Edition, McGraw Hill, 2003
4. Fundaments of Database System by Ramez Elmasri and Shamkant B. Navathe, 7th Edition, Pearson Education India, 2010

COURSE STRUCTURE

1. **Title of the Course :** Introduction to Embedded Systems
2. **Semester** : IV
3. **Course Code: For Theory:** BITCC401
   For Practical: BITPCC401
4. **Course Objective:**
   a. This course is structured to combine lectures, for the students to gain an in-depth understanding of fundamental concepts on embedded systems.
   b. To provide in-depth knowledge about embedded processor, its hardware.
   c. To explain programming concepts and embedded programming in C
   d. To explain real time operating systems.
5. **Category of Course** : Core Course
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITCC 401	Introduction to Embedded System	5	3	2	2	4

Module	Detailed Content	Hours
1	Introduction: Embedded Systems and general purpose computer systems, history, classifications, applications and purpose of embedded systems Core of embedded systems: microprocessors and microcontrollers, RISC and CISC controllers, Big endian and Little endian processors, Application specific ICs, Programmable logic devices, COTS, sensors and actuators, communication interface, embedded firmware, other system components. Characteristics and quality attributes of embedded systems: Characteristics, operational and non-operational quality attributes.	12
2	Embedded Systems – Application and Domain Specific: Application specific – washing machine, domain specific - automotive. Embedded Hardware: Memory map, i/o map,	12

	interrupt map, processor family, external peripherals, memory – RAM , ROM, types of RAM and ROM, memory testing, CRC ,Flash memory. Peripherals: Control and Status Registers, Device Driver, Timer Driver - Watchdog Timers.	
3	The 8051 Microcontrollers: Microcontrollers and Embedded processors, Overview of 8051 family.8051 Microcontroller hardware, Input/output pins, Ports, and Circuits, External Memory. 8051 Programming in C: Data Types and time delay in 8051 C, I/O Programming, Logic operations, Data conversion Programs.	12
4	Designing Embedded System with 8051 Microcontroller: Factors to be considered in selecting a controller, why 8051 Microcontroller, Designing with 8051. Programming embedded systems: structure of embedded program, infinite loop, compiling, linking and debugging.	12
5	Real Time Operating System (RTOS): Operating system basics, types of operating systems, Real-Time Characteristics, Design and Development: Embedded system development Environment – IDE, disassembler/ de-compiler, simulator, emulator and debugging, embedded product development life-cycle, trends in embedded industry. Introduction to Arduino, Arduino IDE, Operating the Arduino IDE, loading a simple program. Arduino Programming.	12
	Total	60

Sr. No.	**List of Practical**
1	Write a 8051 program to Blink LED [00/FF].
2	Write a 8051 program to Blink Led [AA & 55].
3	Write a 8051 program to find ASCII Value.
4	Write a 8051 Binary Increment Program.
5	Write a 8051 C program Left Shift Right Shift Led.
6	Write a 8051 program for Rotating stepper Motor clockwise Direction .
7	Write a 8051 program for Rotating stepper Motor anticlockwise direction.
8	Write a program to communicate with Serial communication, displaying output on the virtual terminal.

9	Write a program to rotate Stepper Motor using proteous.
10	Write a program Square wave using Oscilloscope in Keil v 5 / proteous .
11	Write a program Sign wave using Oscilloscope in Keil v 5 / proteous.
12	Write a program Triangular wave using Oscilloscope in Keil v 5 / proteous.
13	Write a program to display Numbers on 7 segment Led.
14	Write a program to process Elevator Control /Lift Control in Proteous.
15	Write a program to display Traffic Signal Control.
16	Writing a program to blink the onboard LED using Arduino.

9. **Evaluation Pattern:**
   a. **Total Marks** : 150 Marks (10 Point Grading)
   b. **Passing Criteria** : 40 % (4 Grade Points)
   c. **Marking Scheme** : 60:40:50 Pattern
      - 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
      - 40 Marks - Internal Assessment (Passing = 16 Marks)
      - 50 Marks - Practical Assessment (Passing = 20 Marks)
   d. **Mode of Evaluation of Answer-books** : Online/Offline

10. **Paper Pattern:**
   a. **Internal Assessment:**
      - Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
      - Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

   b. **Semester End Theory Examination :**

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10

5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

c. **Semester End Practical Examination:**

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	45 Marks	05 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Understand the hardware and software components as well as their development cycles.

CO2: Understand the deployment of embedded processors and supporting devices. 8051 programming in C designing of embedded system with8051.

12. References:

1. Programming Embedded Systems in C and C++ Michael Barr O'Reilly First 1999
2. Introduction to embedded systems Shibu K V Tata Mcgraw-Hill First 2012
3. The 8051 Microcontroller and Embedded Systems Muhammad Ali Mazidi Pearson Second 2011
4. Embedded Systems Rajkamal Tata Mcgraw-Hill
5. Arduino for Dummies, by John Nussey (2013),

COURSE STRUCTURE

1. **Title of the Course:** Statistical Techniques & Testing of Hypothesis
2. **Semester**: IV
3. **Course Code: For Theory:** BITCC402
   For Practical: BITCCP402
4. **Course Objective:**

   This course aims
   a. To equip the students with a working knowledge of probability, statistics and modelling in the presence of uncertainties.
   b. To understand the concept of hypothesis and significance tests.
   c. To help the students to develop an intuition and an interest for random phenomena.
   d. To introduce both theoretical issues and applications that may be useful in real life.
5. **Category of Course**: Core
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITCC402	Statistical Techniques & Testing of Hypothesis	5	3	2	2	4

Module	Detailed Content	Hours
1	**Measures of Central Tendency & Measures of Dispersion:** Frequency Distribution, Histogram, Stem and leaf diagram, Ogives, Frequency Polygon, Mean, Median, Mode, Empirical relation between Mean, Median & Mode, Quartiles, Deciles, and Percentiles; Dispersion, Range, Box whisker plot, Mean Deviation, Quartile Deviation, Standard Deviation, Variance, Semi- Interquartile Range, 10–90 Percentile Range, Empirical relations between Measures of Dispersion, Absolute and Relative Dispersion; Coefficient of Variation, Standard Scores.	12
2	**Moments, Skewness, and Kurtosis:** Moments, Moments for Grouped Data, Relations between Moments, Charlie's Check and Sheppard's Corrections, Moments in Dimensionless Form, Population Moments, Skewness, Types of Skewness, Kurtosis, Types of Kurtosis.	12

	Introduction to Probability: Random experiment, Sample space, Events, Axiomatic Probability, Algebra of events, Conditional Probability, Multiplication theorem of Probability, Independent events, Baye's Theorem. **Elementary Sampling Theory:** Sampling Theory, Random Samples and Random Numbers, Sampling with and without Replacement, Sampling Distributions, Sampling Distribution of Means, Sampling Distribution of Proportions, Sampling Distributions of Differences and Sums, Standard Errors.	
3	**Statistical Estimation Theory:** Estimation of Parameters, Unbiased Estimates, Efficient Estimates, Point Estimates and Interval Estimates; Their Reliability, Confidence-Interval Estimates of Population Parameters, Probable Error. **Statistical Decision Theory:** Statistical Decisions, Statistical Hypotheses, Tests of Hypotheses and Significance, or Decision Rules, Type I and Type II Errors, Level of Significance, Tests Involving Normal Distributions, Two-Tailed and One-Tailed Tests, Special Tests, Operating-Characteristic Curves; Power of a Test, p-Values for Hypotheses Tests, Control Charts, Tests Involving Sample Differences, Tests Involving Binomial Distributions.	12
4	**Small Sampling Theory:** Small Samples, Student t Distribution, Confidence Intervals, Tests of Hypotheses and Significance, Chi- Square Distribution, Confidence Intervals for Sigma, Degrees of Freedom, F Distribution. **The Chi-Square Test:** Observed and Theoretical Frequencies, Definition of chi-square, Significance Tests, Chi-Square Test for Goodness of Fit, Contingency Tables, Yates' Correction for Continuity, Simple Formulas for Computing chi-square, Coefficient of Contingency, Correlation of Attributes, Additive Property of chi- square.	12
5	**Curve Fitting and the Method of Least Squares:** Relationship between Variables, Curve Fitting, Equations of Approximating Curves, Freehand Method of Curve Fitting, Straight Line Method, Method of Least Squares, Least-Squares Line, Nonlinear Relationships, Least-Squares Parabola, Regression, Applications to Time Series, Problems Involving More Than Two Variables. **Correlation Theory:** Correlation and Regression, Linear Correlation, Measures of Correlation, Least-Squares Regression Lines, Standard Error of	12

	Estimate, Explained and Unexplained Variation, Coefficient of Correlation, Product-Moment Formula, Short Computational Formulas, Regression Lines and Linear Correlation Coefficient, Correlation of Time Series, Correlation of Attributes, Sampling Theory of Correlation, Sampling Theory of Regression.	
	Total	60

Sr. No.	List of Practical
1.	Using R execute the basic commands, array, list and frames.
2.	Create a Matrix using R and Perform the operations addition, inverse, transpose and multiplication operations.
3.	Using R Execute the statistical functions: mean, median, mode, quartiles, range, inter quartile range histogram.
4.	Using R Execute the statistical functions: mean, median, mode, quartiles, range, inter quartile range histogram.
5.	Using R import the data from Excel / .CSV file and Calculate the standard deviation, variance, co-variance.
6.	Using R import the data from Excel / .CSV file and draw the skewness.
7.	Import the data from Excel / .CSV and perform the hypothetical testing.
8.	Import the data from Excel / .CSV and perform the Chi-squared Test.
9.	Using R perform the binomial and normal distribution on the data.
10.	Perform the Linear Regression using R.
11.	Compute the Least squares means using R.
12.	Compute the Linear Least Square Regression

9. Evaluation Pattern:

a. **Total Marks:** 150 Marks (10 Point Grading)

b. **Passing Criteria**: 40 % (4 Grade Points)

c. **Marking Scheme:** 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books:** Online/Offline

10. Paper Pattern:

a. **Internal Assessment:**

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. **Semester End Theory Examination:**

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each.

c. **Semester End Practical Examination:**

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	45 Marks	05 Marks	50 Marks

11. Course Outcome:

On successful completion of this course, the Learner should be able to:

CO1: Distinguish between quantitative and categorical data.

CO2: Apply different statistical measures on data.

CO3: Identify, formulate and solve problems on Statistics and Hypothesis.

CO4: Classify different types of Probability and their fundamental applications.

12. References:

1. Fundamental of Mathematical Statistics by S.C. Gupta & V.K. Kapoor, 11th Revised Edition, Sultan Chand and Sons, 2011.
2. Mathematical Statistics by J.N. Kapur & H.C. Saxena, 12th Revised Edition, S. Chand, 2005.
3. Introduction to Probability & Statistics by J.Susan Milton & Jesse C. Arnold, 4th Edition, Tata McGraw Hill, 2007.
4. Probability and Stochastic Processes: A Friendly Introduction for Electrical and Computer Engineers by Yates, R. D., & Goodman, D. J., 3rd Edition, Wiley, 2014.
5. Schaum's Outlines Probability, Random Variables & Random Process 3rd Edition Tata McGraw Hill, 2014.
6. Hands-On Programming with R: Write Your Own Functions and Simulations by Garrett Gorlemund, 1st Edition, O'Reilly, 2017.
7. R for Everyone: Advanced Analytics and Graphics by Jared P. Lander, 2nd Edition, O'Reilly, 2017.

COURSE STRUCTURE

1. **Title of the Course :** Software Engineering and Testing
2. **Semester** : IV
3. **Course Code: For Theory:** BITCC403
   For Practical: BITCCP403
4. **Course Objective:**
   a. The study of the fundaments of software engineering principles and practices, including project management, configurations management, requirements definition, system analysis, design, testing and deployment.
   b. Knowledge of basic SW engineering methods and practices, and their appropriate application and also describe software engineering layered technology and Process frame work.
   c. A general understanding of software process models such as the waterfall and evolutionary models.
   d. Understanding of software requirements and the SRS documents.
   e. Understanding of the role of project management including planning, scheduling, risk management, etc.
   f. Describe data models, object models, context models and behavioral models.
   g. Understanding of different software architectural styles.
   h. Understanding of approaches to verification and validation including static analysis, and reviews.
   i. Understanding of software testing approaches such as unit testing and integration testing.
   j. Understanding on quality control and how to ensure good quality software.

5. **Category of Course**: Core Course
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/	Theory	Practical/	Total

			Tutorial		Tutorial	
BITCC 403	Software Engineering and Testing	5	3	2	2	4

Module	Detailed Content	Hours
1	**Introduction:** What is software engineering? Software Development Life Cycle, Requirements Analysis, Software Design, Coding, Testing, Maintenance etc. **Software Requirements:** Functional and Non-functional requirements, User Requirements, System Requirements, Interface Specification, Documentation of the software requirements. **Software Processes:** Process and Project, Component Software Processes. **Software Development Process Models.** • Waterfall Model. • Prototyping. • Iterative Development. • Rational Unified Process. • The RAD Model • Time boxing Model. **Agile software development**: Agile methods, Plan-driven and agile development, Extreme programming, Agile project management, Scaling agile methods.	12
2	**Socio-technical system:** Essential characteristics of socio technical systems, Emergent System Properties, Systems Engineering, Components of system such as organization, people and computers, Dealing Legacy Systems. **Critical system:** Types of critical system, A simple safety critical system, Dependability of a system, Availability and Reliability, Safety and Security of Software systems. **Requirements Engineering Processes:** Feasibility study, Requirements elicitation and analysis, Requirements Validations, Requirements Management. **System Models:** Models and its types, Context Models, Behavioural Models, Data Models, Object Models, Structured Methods.	12
3	**Architectural Design:** Architectural Design Decisions, System Organisation, Modular Decomposition Styles, Control Styles, Reference Architectures.	12

	User Interface Design: Need of UI design, Design issues, The UI design Process, User analysis, User Interface Prototyping, Interface Evaluation. **Project Management:** Software Project Management, Management activities, Project Planning, Project Scheduling, Risk Management. **Quality Management:** Process and Product Quality, Quality assurance and Standards, Quality Planning, Quality Control, Software Measurement and Metrics.	
4	**Software Measurement:** Size-Oriented Metrics, Function-Oriented Metrics, Extended Function Point Metrics. **Software Cost Estimation:** Software Productivity, Estimation Techniques, Algorithmic Cost Modelling, Project Duration and Staffing. **Process Improvement:** Process and product quality, Process Classification, Process Measurement, Process Analysis and Modeling, Process Change, The CMMI Process Improvement Framework.	12
5	**Verification and Validation:** Planning Verification and Validation, Software Inspections, Review Process, Automated Static Analysis. **Software Testing:** What is Testing? Testing principles, Fundamental Test Process, Test levels – Unit Testing, Integration testing, System Testing, Component Testing, Test types: Black Box testing and White Box Testing Techniques, Maintenance testing. **Test Design Techniques –** Identifying test conditions and designing test cases, Test planning, monitoring and control, Test Automation. Types of test tools.	12
	Total	60

Sr. No.	List of Practical
1	Study and implementation of class diagrams.
2	Study and implementation of Use Case Diagrams.
3	Study and implementation of Entity Relationship Diagrams.
4	Study and implementation of Sequence Diagrams.

5	Study and implementation of State Transition Diagrams.
6	Study and implementation of Data Flow Diagrams.
7	Study and implementation of Collaboration Diagrams.
8	Study and implementation of Activity Diagrams.
9	Study and implementation of Component & Deployment Diagrams.
10	Prepare a small project and submit SRS, design, coding and test plan.
11	The program reads an arbitrary number of temperatures (as integer numbers) within the range - 60°C … +60°C and prints their mean value. Design test cases for testing the program with the black-box strategy.

12	Let us study the following program:
	x=0; read(y);
	while (y > 100) { x=x+y; read(y); }
	if (y < 200) print(x) else print(y);
	a) Construct a control-flow graph for the program.
	b) Design test cases for reaching complete branch coverage over the program. Use as few test cases as possible.

9. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books:** Online/Offline

10. Paper Pattern:

a. **Internal Assessment:**

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. **Semester End Theory Examination:**

Question No.	Description	Marks

1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

c. **Semester End Practical Examination:**

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	45 Marks	05 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.

CO2: Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.

CO3: Communicate effectively with a range of audiences.

CO4: Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.

CO5: Develop and conduct appropriate experimentation, analyse and interpret data, and use engineering judgment and architectural diagrams to draw conclusions.

CO6: Work as an individual and as part of a multidisciplinary team to develop and deliver quality software.

C07: Demonstrate an ability to use the techniques and tools necessary for software engineering & testing practice.

12. References:

1. Software Engineering by Ian Somerville, 9th Edition, Pearson Education.
2. Software Engineering by Pankaj Jalote , Narosa Publication.
3. Software engineering, a practitioner's approach by Roger Pressman, 7th Edition, Tata McGraw Hill.
4. Software Engineering principles and practice by WS Jawadekar, Tata Mcgraw-hill.
5. Software Testing Foundations by Hans Schaefer, Andreas Spillner, Tilo Linz, 2nd Edition Shroff Publishers and Distributors.
6. Foundations of Software Testing by Dorothy Graham, Erik van Veenendaal, Isabel

Evans, Rex Black.

COURSE STRUCTURE

1. **Title of the Course :** Java Programming
2. **Semester** : IV
3. **Subject Code: For Theory:** BITSB404
   For Practical: BITSBP404
4. **Course Objective:**

   a. Understanding how to implement object-oriented designs with Java.
   b. The use of Java in a variety of technologies and on different platforms
   c. To design and program stand-alone Java applications.
   d. To learn how to design a graphical user interface (GUI) with Java AWT.
   e. To understand how to use Java APIs for program development.
   f. To learn how to use exception handling in Java applications.
   g. To learn Java generics and how to use the Java Collections API.
   h. Understand how to design applications with threads in Java.
   i. To learn how to read and write files in Java.

5. **Category of Course** : Skill Based
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITSB 404	Java Programming	5	3	2	2	4

Module	Detailed Content	Hours
1	**Introduction:** History, architecture and its components, Java Class File, Java Runtime Environment, The Java Virtual Machine, JVM Components, The Java API, java platform, java development kit, Type Annotations, Method Parameter Reflection, setting the path environment variable, Java Compiler And Interpreter, java programs, java applications, main(), public, static, void, string[] args, statements, white space, case sensitivity, identifiers, keywords, comments, braces and code blocks, variables, variable name **Data types:** primitive data types, Object Reference Types,	12

	Strings, Auto boxing, operators and properties of operators, Arithmetic operators, assignment operators, increment and decrement operator, relational operator, logical operator, bitwise operator, conditional operator.	
2	**Control Flow Statements:** The If…Else If…Else Statement, The Switch…Case Statement. **Iterations:** The While Loop, The Do … While Loop, The For Loop, The Foreach Loop, Labeled Statements, The Break And Continue Statements, The Return Statement **Classes:** Types of Classes, Scope Rules, Access Modifier, Instantiating Objects From A Class, Initializing The Class Object And Its Attributes, Class Methods, Accessing A Method, Method Returning A Value, Method's Arguments, Method Overloading,Variable Arguments [Varargs], Constructors, this Instance, super Instance, Characteristics Of Members Of A Class, constants, this instance, static fields of a class, static methods of a class, garbage collection.	12
3	**Inheritance:** Derived Class Objects, Inheritance and Access Control, Default Base Class Constructors, this and super keywords. Abstract Classes And Interfaces, Abstract Classes, Abstract Methods, Interfaces, What Is An Interface? How Is An Interface Different From An Abstract Class?, Multiple Inheritance, Default Implementation, Adding New Functionality, Method Implementation, Classes V/s Interfaces, Defining An Interface, Implementing Interfaces. **Packages:** Creating Packages, Default Package, Importing Packages, Using A Package.	12
4	**Enumerations, Arrays:** Two Dimensional Arrays, Multi-Dimensional Arrays, Vectors, Adding Elements To A Vector, Accessing Vector Elements, Searching For Elements In A Vector, Working With The Size of The Vector. **Multithreading:** the thread control methods, thread life cycle, the main thread, creating a thread, extending the thread class. **Exceptions:** Catching Java Exceptions, Catching Run-Time Exceptions, Handling Multiple Exceptions, The finally Clause, The throws Clause **Byte streams:** reading console input, writing console output, reading file, writing file, writing binary data.	12
5	**Event Handling:** Delegation Event Model, Events, Event classes, Event listener interfaces, Using delegation event model, adapter classes and inner classes. **Abstract Window Toolkit:** Window Fundamentals, Component, Container, Panel, Window, Frame, Canvas. Components – Labels, Buttons, Check Boxes, Radio Buttons, Choice Menus, Text Fields, Text, Scrolling List, Scrollbars, Panels, Frames **Layouts:** Flow Layout, Grid Layout, Border Layout, Card Layout.	12
	Total	60

Sr. No.	List of Practical
1	Write a Java program that takes a number as input and prints its multiplication table upto 10.
2	Write a Java program to reverse a string.
3	Find the smallest and largest element from the array
4	Designed a class that demonstrates the use of constructor and destructor.
5	Write a java program to implement multiple inheritance
6	Create a package, Add the necessary classes and import the package in java class.
7	Write a java program to implement the vectors.
8	Write a java program to implement multithreading
9	Write a java program to open a file and display the contents in the console window.
10	Design a AWT program to print the factorial for an input value.
11	Design a calculator based on AWT application.

9. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** : Online/Offline

10. Paper Pattern:

a. **Internal Assessment:**

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. **Semester End Theory Examination :**

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10

2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

c. **Semester End Practical Examination:**

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	45 Marks	05 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Use an integrated development environment to write, compile, run, and test simple Object-oriented Java programs

CO2: Use the Java programming language for various programming technologies.

CO3: Develop software in the Java programming language, (application)

CO4: knowledge of the structure and model of the Java programming language, (knowledge).

CO5: propose the use of certain technologies by implementing them in the Java programming language to solve the given problem (synthesis).

12. References:

1. Core Java 8 for Beginners By Vaishali Shah, Sharnam Shah, 1th Edition, SPD,2015
2. Java: The Complete Reference By Herbert Schildt, 9th , McGraw Hill, Edtition, 2014
3. Core Java, Volume I: Fundamentals, By Hortsman, 9rd Edition, Pearson, 2019

COURSE STRUCTURE

1. **Title of the Course :** Analytical Reasoning
2. **Semester** : IV
3. **Course Code: For Theory:** BITAE405
4. **Course Objective:**
   a. To demonstrate capacities for quantitative and analytic reasoning.
   b. Use analytical thinking skills to evaluate information critically.
   c. Apply multiple modes of inquiry, including quantitative and qualitative analysis, to formulate, describe, evaluate, and solve problems.
   d. Use a wide range of disparate information and knowledge to draw inferences, test hypotheses, and make decisions.
5. **Category of Course** : Ability Enhancement
6. **Total Hours**: 60
7. **Total Credits**: 02 Credits (for Theory)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITAE405	Analytical Reasoning	5	-	2	-	2

Module	Detailed Content	Hours
1	**Numerical Ability** Some of the core concepts in maths and quant subjects are: • Percentages and its applications • Ratio and its applications • Algebra • Numbers and its applications • Geometry and its applications	12
2	**Data Interpretation Section** Problems related to organized and unorganized data are quite common in this section. Core topics are as follows: • Table • Bar • Pie Charts	12

	• Line graphs etc.	
3	**3. Critical Reasoning (and its numerous applications)** • Evaluation of Arguments • Recognition of Assumption • Cause and Effect • Deduction • Inference etc.	12
4	**4. Analytical Reasoning Section** • Blood Relations • Direction Sense • Matrix based Puzzles • Ranking Arrangements • Data Structures • Series • Coding-Decoding • Clocks and Calendars etc.	12
5	**5. Reading Comprehension** Questions will be based on the short easy to understand passages. **6. Verbal Ability** • Grammar • Vocabulary • Para jumbles • Sentence Correction • Spot the Error • Sentence Formation • Sentence Equivalence • Fill in the Blanks - Grammar Based etc**.**	12
	Total	60

9. Evaluation Pattern:

a. **Total Marks** : 100 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)

d. **Mode of Evaluation of Answer-books** : Online/Offline

10. **Paper Pattern:**

a. **Internal Assessment:**

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. **Semester End Theory Examination :**

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each.

11. **Course Outcome:**

Upon successful completion of this course, students should be able to:

CO1: Students will identify the ideas, theories, or methods relevant to various topics, tasks, or problems.

CO2: Students will select appropriate relevant information, resources, or technologies necessary to address various topics, tasks, or problems.

CO3: Students will apply an appropriate method, strategy, or plan of action to perform a task, resolve a problem, or draw a logical conclusion.

CO4: Students will analyse information, resources, technologies, or data.

12. **References:**

1. A Modern Approach to Verbal & Non-Verbal Reasoning Book by R.S. Aggarwal.
2. Logical and Analytical Reasoning (Useful for All Competitive Exams) Book by A K Gupta
3. Analytical Reasoning by Raymond Murphy.

COURSE STRUCTURE

1. **Title of the Course :** Computer Graphics and Animation
2. **Semester** : IV
3. **Course Code: For Theory:** BITEL406
   For Practical: BITELP406
4. **Course Objective:**
   a. The main objective of the course is to introduce students with fundamental concepts and theory of computer graphics.
   b. It presents the important drawing algorithm, polygon fitting, clipping and 2D transformation curves and an introduction to 3D transformation.
   c. It provides the basics of Open application programming interface which allows students to develop programming skills in CG.
5. **Category of Course** : Elective Course
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITEL406	Computer Graphics and Animation	5	3	2	2	4

Module	Detailed Content	Hours
1	**Introduction to Computer Graphics:** Overview of Computer Graphics, Computer Graphics Application and Software, Description of some graphics devices, Input Devices for Operator Interaction, Active and Passive Graphics Devices, Display Technologies, Storage Tube Graphics Displays, Calligraphic Refresh Graphics Displays, Raster Refresh (Raster-Scan) Graphics Displays, Cathode Ray Tube Basics, Color CRT Raster Scan Basics, Video Basics, The Video Controller, Random-Scan Display Processor, LCD displays. **Scan conversion** – Digital Differential Analyzer (DDA) algorithm, Bresenhams' Line drawing algorithm**.** Bresenhams'	12

	method of Circle drawing, Midpoint Circle Algorithm, Midpoint Ellipse Algorithm, Mid-point criteria, Problems of Aliasing, end-point ordering and clipping lines, Scan Converting Circles, Clipping Lines algorithms– Cyrus-Beck, Cohen-Sutherland and Liang-Barsky, Clipping Polygons, problem with multiple components**.**	
2	**Two-Dimensional Transformations:** Transformations and Matrices, Transformation Conventions, 2D Transformations, Homogeneous Coordinates and Matrix Representation of 2D Transformations, Translations and Homogeneous Coordinates, Rotation, Reflection, Scaling, Combined Transformation, Transformation of Points, Transformation of The Unit Square, Solid Body Transformations, Rotation About an Arbitrary Point, Reflection through an Arbitrary Line, A Geometric Interpretation of Homogeneous Coordinates, The Window-to-Viewport Transformations. **Three-Dimensional Transformations:** Three-Dimensional Scaling, Three-Dimensional Shearing, Three-dimensional Rotation, Three-Dimensional Reflection, Three-dimensional Translation, Multiple Transformation, Rotation about an Arbitrary Axis in Space, Reflection through an Arbitrary Plane, Matrix Representation of 3D Transformations, Composition of 3D Transformations, Affine and Perspective Geometry, Perspective Transformations, Techniques for Generating Perspective Views, Vanishing Points, the Perspective Geometry and camera models, Orthographic Projections, Axonometric Projections, Oblique Projections, View volumes for projections..	12
3	**Viewing in 3D:** Stages in 3D viewing, Canonical View Volume (CVV), Specifying an Arbitrary 3D View, Examples of 3D Viewing, The Mathematics of Planar Geometric Projections, Combined transformation matrices for projections and viewing, Coordinate Systems and matrices, camera model and viewing pyramid. **Light:** Radiometry, Transport, Equation, Photometry **Color:** Colorimetry, Color Spaces, Chromatic Adaptation, Color Appearance	12
4	**Visible-Surface Determination:** Techniques for efficient Visible-Surface Algorithms, Categories of algorithms, Back face removal, The z-Buffer Algorithm, Scan-line method, Painter's algorithms (depth sorting), Area sub-division method, BSP trees, Visible-Surface Ray Tracing, comparison of the methods. **Plane Curves and Surfaces:** Curve Representation, Nonparametric Curves, Parametric Curves, Parametric	12

	Representation of a Circle, Parametric Representation of an Ellipse, Parametric Representation of a Parabola, Parametric Representation of a Hyperbola, Representation of Space Curves, Cubic Splines, , Bezier Curves, B-spline Curves, B-spline Curve Fit, B-spline Curve Subdivision, Parametric Cubic Curves, Quadric Surfaces. Bezier Surfaces	
5	**Computer Animation**: Principles of Animation, Key framing, Deformations, Character Animation, Physics-Based Animation, Procedural Techniques, Groups of Objects. **Image Manipulation and Storage:** What is an Image? Digital image file formats, Image compression standard – JPEG, Image Processing - Digital image enhancement, contrast stretching, Histogram Equalization, smoothing and median Filtering.	12
	Total	60

Sr. No.	List of Practical
1	**Solve the following:** a. Study and enlist the basic functions used for graphics in C / C++ / Python language. Give an example for each of them. b. Draw a co-ordinate axis at the center of the screen
2	**Solve the following:** a. Divide your screen into four region, draw circle, rectangle, ellipse and half ellipse in each region with appropriate message. b. Draw a simple hut on the screen.
3	**Draw the following basic shapes in the center of the screen :** i. Circle ii. Rectangle iii. Square iv. Concentric Circles v. Ellipse vi. Line
4	**Solve the following:** a. Develop the program for DDA Line drawing algorithm. b. Develop the program for Bresenham's Line drawing algorithm.
5	**Solve the following:** a. Develop the program for the mid-point circle drawing algorithm. b. Develop the program for the mid-point ellipse drawing algorithm.
6	**Solve the following:** a. Write a program to implement 2D scaling. b. Write a program to perform 2D translation
7	**Solve the following:** a. Perform 2D Rotation on a given object. b. Program to create a house like figure and perform the following operations. i. Scaling about the origin followed by translation. ii. Scaling with reference to an arbitrary point. iii. Reflect about the line y = mx + c.

8	**Solve the following:** a. Write a program to implement Cohen-Sutherland clipping. b. Write a program to implement Liang - Barsky Line Clipping Algorithm
9	**Solve the following:** a. Write a program to fill a circle using Flood Fill Algorithm. b. Write a program to fill a circle using Boundary Fill Algorithm
10	**Solve the following:** a. Develop a simple text screen saver using graphics functions. b. Perform smiling face animation using graphic functions. c. Draw the moving car on the screen

9. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** : Online/Offline

10. Paper Pattern:

a. **Internal Assessment:**

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. **Semester End Theory Examination :**

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

c. **Semester End Practical Examination:**

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	45 Marks	05 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Understand the basics of computer graphics, different graphics systems and applications of computer graphics

CO2: Discuss various algorithms for scan conversion and filling of basic objects and their comparative analysis.

CO3: Use of geometric transformations on graphics objects and their application in composite form.

CO4: Extract scene with different clipping methods and its transformation to graphics display device

12. References:

1. Computer Graphics - Principles and Practice J. D. Foley, A. Van Dam, S. K. Feiner and J. F. Hughes Pearson Education Second Edition
2. Steve Marschner, Peter Shirley Fundamentals of Computer Graphics CRC press Fourth Edition 2016
3. Computer, Baker Pearson Education Second Graphics Hearn
4. Principles of Interactive Computer Graphics William M. Newman and Robert F. Sproull Tata McGraw Hill Second

COURSE STRUCTURE

1. **Title of the Course:** Introduction to R and R Studio
2. **Semester**: IV
3. **Course Code: For Theory:** BITEL407
   For Practical: BITELP407
4. **Course Objective:**
   a. In this course learner will learn how to program in R and how to use R for effective data analysis.
   b. In this course learner will learn how to install and configure software necessary for a statistical programming environment and describe generic programming language concepts as they are implemented in a high-level statistical language.
   c. The course covers practical issues in computing which includes programming in R, reading data into R, accessing R packages, writing R functions, debugging, profiling R code, and organizing and commenting R code.
5. **Category of Course**: Elective
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITEL407	Introduction to R and R Studio	5	3	2	2	4

Module	Detailed Content	Hours
1	**Introduction and Preliminaries:** The R environment, related software and documentation, R and statistics, R and Windows system, Using R interactively, an introductory session, getting help with functions and features, R commands, case sensitivity, recall and correction of previous commands, executing commands from or diverting output to a file, Data permanency and removing objects. **Simple manipulation, numbers and vectors:** Vectors and assignment, vector arithmetic, generating regular sequences, Logical vectors, missing values, character vectors, Index vectors, selecting and modifying subsets of a data set, Other types of objects	12
2	**Objects, their modes and attributes:**	12

	Intrinsic attributes, mode and length, Changing the length of an object, getting and setting attributes, The class of an object. **Ordered and Unordered factors:** The function tapply() and ragged arrays, Ordered factors.	
3	**Arrays and matrices:** Arrays, Array indexing, subsections of an array, Index matrices, The array() function, outer product of 2 arrays, generalized transpose of an array, Matrix facilities, forming partitioned matrices, cbind() and rbind(), The concatenation function, c(), with arrays, Frequency tables from factors. **Lists and data frames:** Lists, constructing and modifying lists, Data frames.	12
4	**Reading data from files:** The read.table() function, The scan() function, Accessing built-in datasets, Editing data. **Probability distribution:** R as a set of statistical tables, Examining the distribution of a set of data. **Grouping, loops and conditional execution:** Grouped expression, Control statements.	12
5	**Writing your own functions:** Simple examples, defining new binary operators, named arguments and defaults, the '…' argument, Assignments within functions, more advanced examples, Scope, Customizing the environment, Classes, generic functions and object orientation. **Graphical procedures:** High-level plotting commands, Low-level plotting commands, interacting with graphics, Using graphic parameters, Graphic parameters list, Device drivers, dynamic graphics.	12
	Total	60

Sr. No.	**List of Practical**
1.	Using R execute the basic commands.
2.	Using R, write a program to understand basic commands on various vector operations.
3.	Using R, write a program for understanding modes and attributes of objects.
4.	Using R, write a program using tapply() function, ragged array, ordered factor.
5.	Using R, create a Matrix using R and Perform the operations addition, inverse, transpose and multiplication operations.
6.	Using R execute the basic commands of list and data frame.
7.	Using R, write a program to read data from a file through various functions.
8.	Using R, write a program to create statistical table and examining the set of data.

9.	Using R, write a program to create a customised environment, class and custom function.
10.	Using R, write a program to understand various graphic plotting commands.

9. Evaluation Pattern:

a. **Total Marks:** 150 Marks (10 Point Grading)

b. **Passing Criteria**: 40 % (4 Grade Points)

c. **Marking Scheme:** 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books:** Online/Offline

10. Paper Pattern:

a. **Internal Assessment:**

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. **Semester End Theory Examination:**

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each.

c. **Semester End Practical Examination:**

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	45 Marks	05 Marks	50 Marks

11. Course Outcome:

On successful completion of this course, the Learner should be able to:

CO1: Understand basic concepts such as data type and index and use them in their work.

CO2: Demonstrate use of basic functions.

CO3: Conceptualize and create loops to solve different types of problems.
CO4: Create their own customized functions.
CO5: Construct tables and figures for descriptive statistics.
CO6: Learn to understand new data sets and functions.

12. **References:**

1. An introduction to R by W.N. Venables, D.M. Smith and the R core team, 2021.
2. Hands on Programming with R: Write Your Own Functions and Simulations by Garrett Gorlemund, 1st Edition, O'Reilly, 2017.
3. R for Everyone: Advanced Analytics and Graphics by Jared P. Lander, 2nd Edition, O'Reilly, 2017.

LEARNING OUTCOME BASED CURRICULUM FRAMEWORK

[LOCF]

Sanskar Sarjan Education Society's

DTSS COLLEGE OF COMMERCE

[**AUTONOMOUS**]

PROGRAMME CODE: BIT0021

Bachelor of Science in

Information Technology

[B. Sc. I.T.]

w. e. f. 2023-24

Semester - V				
Course Code	**Course Type**	**Course Title**	**Credits**	**Marks**
BITCC501	**Core Subject**	**Research In Computing**	**2**	**100**
BITCC502	**Core Subject**	**Linux System Administration**	**2**	**100**
BITCC503	**Core Subject**	**Internet of Things**	**2**	**100**
BITSB504	**Skill Based**	**ASP.Net with C#**	**2**	**100**
BITAE505	**Ability Enhancement**	**Enterprise Java**	**2**	**100**
BITEL506 **BITEL507**	**Elective**	**1. Advanced Geographical Information System** **2. Artificial Intelligent**	**2**	**100**
BITCCP501	**Core Subject Practical**	**Research In Computing Practical**	**2**	**50**
BITCCP502	**Core Subject**	**Linux System Administration Practical**	**2**	**50**
BITCCP503	**Core Subject**	**Internet of Things Practical**	**2**	**50**
BITSBP504	**Skill Based**	**ASP.Net with C# Practical**	**2**	**50**
BITAEP505	**Ability Enhancement**	**Enterprise Java Practical**	**2**	**50**
BITELP506 **BITELP507**	**Elective**	**Elective Practical**	**2**	**50**
		Total Credits	**24**	**900**

Semester - VI				
Course Code	**Course Type**	**Course Title**	**Credits**	**Marks**
BITCC601	**Core Subject**	**Software Project Management**	**2**	**100**
BITCC602	**Core Subject**	**Business Intelligence**	**2**	**100**
BITCC603	**Core Subject**	**Robotics Process Automation**	**2**	**100**
BITSB604	**Skill Based**	**Mobile Application Development**	**2**	**100**
BITAE605	**Ability Enhancement**	**Security in Computing**	**2**	**100**
BITEL606 **BITEL607**	**Elective**	1. **Data Science** 2. **Soft Computing**	**2**	**100**
BITCCP601	**Core Subject Practical**	**Project Implementation**	**2**	**100**
BITCCP602	**Core Subject**	**Business Intelligence Practical**	**2**	**50**
BITCCP603	**Core Subject**	**Robotics Process Automation Practical**	**2**	**50**
BITSBP604	**Skill Based**	**Mobile Application Development Practical**	**2**	**50**
BITAEP605	**Ability Enhancement**	**Security in Computing Practical**	**2**	**50**
BITELP606 **BITELP607**	**Elective**	**Elective Practical**	**2**	**50**
		Total Credits	**24**	**950**

Bachelor of Science in Information Technology

[B. Sc. I.T]

Semester - V

COURSE STRUCTURE

1. **Title of the Course :** Research in Computing
2. **Semester** : V
3. **Subject Code: For Theory:** BITCC501
   For Practical: BITCCP501
4. **Course Objective:**
   - **a.** To be able to conduct business research with an understanding of all the latest theories.
   - **b.** To develop the ability to explore research techniques used for solving any real world or innovate problem.
5. **Category of Course** : Elective
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITEL601	Research in Computing	5	3	2	2	4

Module	Detailed Content	Hours
1	**Introduction**: Role of Business Research, Information Systems and Knowledge Management, Theory Building, Organization ethics and Issues	12
2	**Beginning Stages of Research Process**: Problem definition, Qualitative research tools, Secondary data research	12
3	**Research Methods and Data Collection:** Survey research, communicating with respondents, Observation methods, Experimental research	12
4	**Measurement Concepts, Sampling and Field work:** Levels of Scale measurement, attitude measurement, questionnaire design, sampling designs and procedures, determination of sample size	12
5	**Data Analysis and Presentation:** Editing and Coding, Basic Data Analysis, Univariate Statistical Analysis and Bivariate Statistical analysis and differences between two variables. Multivariate Statistical Analysis	12
	Total	60

Sr. No.	List of Practical
1	Import data from different data sources (from Excel, csv, mysql, sql server, oracle to R/Python/Excel)
2	Design a survey form for a given case study, collect the primary data and analyze it.
3	Perform testing of hypothesis using one sample t-test
4	Perform testing of hypothesis using chi-squared goodness-of-fit test.
5	Perform testing of hypothesis using one-way ANOVA.
6	Perform the Random sampling for the given data and analyse it
7	Perform linear regression for prediction
8	Perform multiple linear regression
9	Perform Logistic regression.
10	Perform the Stratified sampling for the given data and analyse it.

9. Evaluation Pattern:

a. Total Marks : 150 Marks (10 Point Grading)

b. Passing Criteria : 40 % (4 Grade Points)

c. Marking Scheme : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. Mode of Evaluation of Answer-books : Offline

10. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of 45 minutes.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination:

Question No.	Description	Marks
1	Answer any two Questions (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10

4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.1 to Q.6 will include total 4 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	30+10 Marks	10 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Solve real world problems with scientific approach
CO2: Develop analytical skills by applying scientific methods.
CO3: Recognize, understand and apply the language, theory and models of the field of business analytics
CO4: Foster an ability to critically analyses, synthesize and solve complex unstructuredbusiness Problems.
CO5: Understand and critically apply the concepts and methods of business analytics
CO6: identify model and solve decision problems in different settings
CO7: create viable solutions to decision making problems

12. References:

1. Business Research Methods, By William G.Zikmund, B.J Babin, J.C. Carr, Atanu Adhikari, M.Griffin, 8e, 2016
2. Business Analytics by Albright Winston, 5e, 2015
3. Research Methods for Business Students Fifth Edition, by Mark , 2011

COURSE STRUCTURE

1. **Title of the Course :** Linux System Administration
2. **Semester** : V
3. **Course Code: For Theory:** BITCC502
   For Practical: BITCCP502
4. **Course Objective:**

   a. To impart knowledge and skills on various practical and theoretical aspects of Linux operating system (OS) basics and Linux OS based server configuration, management and administration.
   b. This course introduces various tools and techniques commonly used by Linux programmers, system administrators and end users to achieve their day to day work in Linux environment.
   c. It is designed for computer students who have limited or no previous exposure to Linux.

5. **Category of Course** : Core Course
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BIT106	Introduction to Database Management System	5	3	2	2	4

Module	Detailed Content	Hours
1	Introduction to Red Hat Enterprise Linux: Linux, Open Source and Red Hat, Origins of Linux, Distributions, Duties of Linux System Administrator. Command Line: Working with the Bash Shell, Getting the Best of Bash, Useful Bash Key Sequences, Working with Bash History, Performing Basic File System Management Tasks, Working with Directories, Piping and Redirection, Finding Files System Administration Tasks: Performing Job Management Tasks, System and Process Monitoring and Management, Managing Processes with ps,	12

	Sending Signals to Processes with the kill Command, using top to Show Current System Activity, Managing Process Niceness, Scheduling Jobs, Mounting Devices, Working with Links, Creating Backups, Managing Printers, Setting Up System Logging, Setting Up Rsyslog, Common Log Files, Setting Up Logrotate Managing Software: Understanding RPM, Understanding Meta Package Handlers, Creating Your Own Repositories, Managing Repositories,Installing Software with Yum, Querying Software, Extracting Files from RPM Packages	
2	Configuring and Managing Storage: Understanding Partitions and Logical Volumes, Creating Partitions, Creating FileSystems, File Systems Overview, Creating File Systems, Changing File System Properties, Checking the File System Integrity, Mounting File Systems Automatically Through fstab,Working with Logical Volumes, Creating Logical Volumes, Resizing Logical Volumes, Working with Snapshots, Replacing Failing Storage Devices, Creating Swap Space, Working with Encrypted Volumes Connecting to the Network: Understanding NetworkManager, Working with Services and Runlevels, Configuring the Network with NetworkManager, Working with system-config-network, NetworkManager Configuration Files, Network Service Scripts, Networking from the Command Line, Troubleshooting Networking, Setting Up IPv6, Configuring SSH, Enabling the SSH Server, Using the SSH Client, Using PuTTY on Windows Machines, Configuring Key-Based SSH Authentication, Using Graphical Applications with SSH, Using SSH Port Forwarding, Configuring VNC Server Access 1214 Working with Users, Groups, and Permissions: Managing Users and Groups, Commands for User Management, Managing Passwords, Modifying and Deleting User Accounts, Configuration Files, Creating Groups, Using Graphical Tools for User, and Group Management, Using External Authentication Sources, the Authentication Process, sssd, nsswitch, Pluggable Authentication Modules, Managing Permissions, the Role of Ownership, Basic Permissions: Read, Write, and Execute, Advanced Permissions, Working with Access Control Lists, Setting Default Permissions with umask, Working with Attributes	12
3	Securing Server with iptables: Understanding Firewalls, Setting Up a Firewall with system-config-firewall, Allowing Services, Trusted Interfaces, Masquerading, Configuration Files, Setting Up a Firewall with iptables, Tables, Chains, and Rules,	12

	Composition of Rule, Configuration Example, Advanced iptables Configuration, Configuring Logging, The Limit Module, Configuring NAT Setting Up Cryptographic Services: Introducing SSL, Proof of Authenticity: The Certificate Authority, Managing Certificates with openssl, Creating a Signing Request, Working with GNU Privacy Guard, Creating GPG Keys, Key Transfer, Managing GPG Keys, Encrypting Files with GPG, GPG Signing, Signing RPM Files Configuring Server for File Sharing: What is NFS? Advantages and Disadvantages of NFS, Configuring NFS4, Setting Up NFSv4, Mounting an NFS Share, Making NFS Mounts Persistent, Configuring Automount, Configuring Samba, Setting Up a Samba File Server, Samba Advanced Authentication Options, Accessing Samba Shares, Offering FTP Services.	
4	Configuring DNS and DHCP:Introduction to DNS, The DNS Hierarchy, DNS Server Types, The DNS Lookup Process, DNS Zone Types, Setting Up a DNS Server, Setting Up a Cache-Only Name Server, Setting Up a Primary Name Server, Setting Up a Secondary Name Server, Understanding DHCP, Setting Up a DHCP Server Setting Up a Mail Server: Using the Message Transfer Agent, the Mail Delivery Agent, the Mail User Agent, Setting Up Postfix as an SMTP Server, Working with Mutt, Basic Configuration, Internet Configuration, Configuring Dovecot for POP and IMAP Configuring Apache on Red Hat Enterprise Linux: Configuring the Apache Web Server, creating a Basic Website, Understanding the Apache Configuration Files, Apache Log Files, Working with Virtual Hosts, Securing the Web Server with TLS Certificates, Configuring Authentication, Setting Up Authentication with .htpasswd, Configuring LDAP Authentication, Setting Up MySQL	12
5	Introducing Bash Shell Scripting: Introduction, Elements of a Good Shell Script, Executing the Script, Working with Variables and Input, Understanding Variables, Variables, Subshells, and Sourcing, Working with Script Arguments, Asking for Input, Using Command Substitution, Substitution Operators, Changing Variable Content with Pattern Matching, Performing Calculations, Using Control Structures, Using if...then...else, Using case, Using while, Using until, Using for, Configuring booting with GRUB. High-Availability Clustering: High-Availability Clustering, The Workings of High Availability, High-Availability Requirements, Red Hat High-Availability Add-on Software, Components, Configuring Cluster-Based	12

	Services, Setting Up Bonding, Setting Up Shared Storage, Installing the Red Hat High Availability Add-On, Building the Initial State of the Cluster, Configuring Additional Cluster Properties, Configuring a Quorum Disk, Setting Up Fencing, Creating Resources and Services, Troubleshooting a Nonoperational Cluster, Configuring GFS2 File Systems Setting Up an Installation Server: Configuring a Network Server as an Installation Server, Setting Up a TFTP and DHCP Server for PXE Boot, Installing the TFTP Server, Configuring DHCP for PXE Boot, Creating the TFTP PXE Server Content, creating a Kickstart File, Using a Kickstart File to Perform an Automated, Installation, Modifying the Kickstart File with, system-config-kickstart, Making Manual Modifications to the Kickstart File	
	Total	60

Sr. No.	**List of Practical**
1	Installation of RHEL 6.X Graphical User Interface and Command Line Interface and Processes a Exploring the Graphical Desktop b The Command Line Interface c Managing Processes
2	Storage Devices and Links, a Backup and Repository b Working with Storage Devices and Links
3	Working with RPMs Storage and Networking a Using Query Options b Extracting Files From RPMs c Configuring and Managing Storage d Connecting to the Network
4	Working with Users, Groups, and Permissions
5	Firewall and Cryptographic services a Securing Server with iptables b Setting Up Cryptographic Services
6	Configuring Server for File Sharing a Configuring NFS Server and Client b Configuring Samba c Configuring FTP

7	DNS, DHCP and Mail Server a Configuring DNS28 b Configuring DHCP c Setting Up a Mail Server
8	Web Server a Configuring Apache on Red Hat Enterprise Linux b Writing a Script to Monitor Activity on the Apache Web Server c Using the select Command
9	Shell Scripts and High-Availability Clustering a Writing Shell Scripts b Configuring Booting with GRUB c Configuring High Availability Clustering
10	Setting Up an Installation Server a Configuring Network Server as an Installation Server b Setting Up a TFTP and DHCP Server for PXE Boot

9. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** :Offline

1. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of 45 Minutes.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination :

Question No.	**Description**	**Marks**
1	Answer any two Questions (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.1 to Q.6 will include total 3 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	30+10 Marks	10 Marks	50 Marks

10. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Understand the role and responsibilities of a Linux system administrator
CO2: Install and configure the Linux operating system
CO3: Feel comfortable navigating the command line interface to manipulate the system you are managing, including managing files, processes, users, software, system configurations, etc.
CO4: Perform backups and utilize software configuration management tools to be able to recreate systems efficiently.
CO5: Apply security best practices to perform basic server and network hardening.
CO6: Understand the networking protocols and network services that make the internet work (TCP/IP, DNS, HTTP, SMTP, etc).
CO7: Perform system and service health monitoring

11. References:

1. Red Hat Enterprise Linux 6 Administration by Sander van Vugt John -Wiley and Sons 2013

2. Red hat Linux Networking and System Administration Terry Collings and Kurt Wall Wiley 3rd

3. Linux Administration: A Beginner's Guide Wale Soyinka TMH Fifth Edition

COURSE STRUCTURE

1. **Title of the Course:** Internet of Things
2. **Semester**: V
3. **Course Code: For Theory:** BITCC503
   For Practical: BITCCP503
4. **Course Objective:**
   a. The aim of this course is to make students aware about 'Internet of Things'-IOT, which is an emerging technology through which all the manual process is to be converted in to system operated process and also integrates with the business.
   b. Learners will understand the concepts of Internet of Things and can able to build IoT applications.
5. **Category of Course**: Core
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITCC503	Internet of Things	5	3	2	2	4

Module	Detailed Content	Hours
1	**The Internet of Things:** An Overview: Flavour of the Internet of Things, the "Internet" of "Things", The Technology of the Internet of Things, Enchanted Objects, who is Making the Internet of Things? **Design Principles for Connected Devices:** Calm and Ambient Technology, Magic as Metaphor, Privacy, Keeping Secrets, Whose Data Is It Anyway? Web Thinking for Connected Devices, Small Pieces, Loosely Joined, First-Class Citizens on The Internet, Graceful Degradation, Affordances. **Internet Principles:** Internet Communications: An Overview, IP, TCP, The IP Protocol Suite (TCP/IP), UDP, IP Addresses, DNS, Static IP Address Assignment, Dynamic IP Address Assignment, IPv6, MAC Addresses, TCP and UDP Ports, An Example: HTTP Ports, Other Common Ports, Application Layer Protocols, HTTP. **HTTPS:** Encrypted HTTP, Other Application Layer Protocols.	12
2	**Thinking About Prototyping:** Sketching, Familiarity, Costs versus Ease of Prototyping, Prototypes and Production,	12

	Changing Embedded Platform, Physical Prototypes and Mass Personalisation, climbing into the Cloud, Open Source versus Closed Source, Why Closed? Why Open? Mixing Open and Closed Source, Closed Source for Mass Market Projects, Tapping into the Community. **Prototyping Embedded Devices:** Electronics, Sensors, Actuators, Scaling Up the Electronics, Embedded Computing Basics, Microcontrollers, System-on-Chips, Choosing Your Platform, Arduino, developing on the Arduino, Some Notes on the Hardware, Openness, Raspberry Pi, Cases and Extension Boards, Developing on the Raspberry Pi, Some Notes on the Hardware, Openness.	
3	**Prototyping the Physical Design:** Preparation, Sketch, Iterate, and Explore, Nondigital Methods, Laser Cutting, Choosing a Laser Cutter, Software, Hinges and Joints, 3D Printing, Types of 3D Printing, Software, CNC Milling, Repurposing/Recycling. **Prototyping Online Components:** Getting Started with an API, Mashing Up APIs, Scraping, Legalities, writing a New API, Clockodillo, Security, Implementing the API, Using Curl to Test, Going Further, Real-Time Reactions, Polling, Comet, Other Protocols, MQ Telemetry Transport, Extensible Messaging and Presence Protocol, Constrained Application Protocol.	12
4	**Techniques for Writing Embedded Code:** Memory Management, Types of Memory, Making the Most of Your RAM, Performance and Battery Life, Libraries, Debugging **Business Models:** A Short History of Business Models, Space and Time, From Craft to Mass Production, The Long Tail of the Internet, Learning from History, The Business Model Canvas, Who Is the Business Model For? Models, Make Thing, Sell Thing, Subscriptions, Customisation, Be a Key Resource, Provide Infrastructure: Sensor Networks, Take a Percentage, Funding an Internet of Things Start-up, Hobby Projects and Open Source, Venture Capital, Government Funding, Crowdfunding, Lean Start-ups.	12
5	**Moving to Manufacture:** What Are You Producing? Designing Kits, Designing Printed circuit boards, Software Choices, The Design Process, Manufacturing Printed Circuit Boards, Etching Boards, Milling Boards. Assembly, Testing, Mass-Producing the Case and Other Fixtures, Certification, Costs, Scaling Up Software, Deployment, Correctness and Maintainability, Security, Performance, User Community.	12

	Ethics: Characterizing the Internet of Things, Privacy, Control, Disrupting Control, Crowdsourcing, Environment, Physical Thing, Electronics, Internet Service, Solutions, The Internet of Things as Part of the Solution, Cautious Optimism, The Open Internet of Things Definition.	
	Total	60

Sr. No.	List of Practical
1.	Starting Raspbian OS, Familiarising with Raspberry Pi Components and interface, Connecting to ethernet, Monitor, USB.
2.	Displaying different LED patterns with Raspberry Pi.
3.	Displaying Time over 4-Digit 7-Segment Display using Raspberry Pi.
4.	Raspberry Pi Based Oscilloscope.
5.	Controlling Raspberry Pi with WhatsApp.
6.	Setting up Wireless Access Point using Raspberry Pi.
7.	Fingerprint Sensor interfacing with Raspberry Pi.
8.	Raspberry Pi GPS Module Interfacing.
9.	IoT based Web Controlled Home Automation using Raspberry Pi.
10.	Visitor Monitoring with Raspberry Pi and Pi Camera.
11.	Interfacing Raspberry Pi with RFID.
12.	Building Google Assistant with Raspberry Pi.
13.	Installing Windows 10 IoT Core on Raspberry Pi.

9. Evaluation Pattern:

a. **Total Marks:** 150 Marks (10 Point Grading)

b. **Passing Criteria**: 40 % (4 Grade Points)

c. **Marking Scheme:** 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books:**Offline

10. Paper Pattern:

a. **Internal Assessment:**

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of 45 Minutes.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination:

Question No.	Description	Marks
1	Answer any two Questions (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.1 to Q.6 will include total 3 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	30+10 Marks	10 Marks	50 Marks

11. Course Outcome:

On successful completion of this course, the Learner should be able to:

CO1: Understand the concepts of Internet of Things.

CO2: Analyse basic protocols in wireless sensor network.

CO3: Design IoT applications in different domain and be able to analyse their performance.

CO4: Implement basic IoT applications on embedded platform**.**

12. References:

1. Designing the Internet of Things by Adrian McEwen, Hakim Cassimally, 1st Edition, WILEY, 2014.
2. Internet of Things – Architecture and Design by Raj Kamal, 1st Edition, McGraw Hill, 2017.
3. Getting Started with the Internet of Things by Cuno Pfister, 6th Edition, O'Reilly, 2018.
4. Getting Started with Raspberry Pi by Matt Richardson and Shawn Wallace, 3rd Edition, SPD, 2016.

COURSE STRUCTURE

1. **Title of the Course :** ASP.Net with C#
2. **Semester** : V
3. **Course Code: For Theory:** BITSB504

   For Practical: BITSBP504

4. **Course Objective:**
   - **a.** Learner will learn to develop Web applications that use three-tier architecture, session management, and object-oriented techniques.
   - **b.** Learner will learn Concepts such as advanced CSS concepts.
   - **c.** Learner will learn Web environments, authentication, and security will also be explored.
5. **Category of Course** : Skilled Base Course
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITSB504	ASP.Net with C#	5	3	2	2	4

Module	Detailed Content	Hours
1	**Introducing .NET:** The .NET Framework, C#, VB, and the .NET Languages, The Common Language Runtime, The .NET Class Library**.** **The C# Language:** C# Language Basics, Variables and Data Types, Variable Operations, Object-Based Manipulation, Conditional Logic, Loops, Methods. **Types, Objects, and Namespaces:** The Basics About Classes, Building a Basic Class, Value Types and Reference Types,	12

	Understanding Namespaces and Assemblies, Advanced Class Programming.	
2	**Web Form Fundamentals:** Writing Code, Using the Code-Behind Class, Adding Event Handlers, Understanding the Anatomy of an ASP.NET Application, Introducing Server Controls, Using the Page Class, Using Application Events, Configuring an ASP.NET Application. **Form Controls:** Stepping Up to Web Controls, Web Control Classes, List Controls, Table Controls, Web Control Events and AutoPostBack, Validation, Understanding Validation, Using the Validation Controls, Rich Controls, The Calendar, The AdRotator, Pages with Multiple Views, User Controls and Graphics, User Controls, Dynamic Graphics, The Chart Control, **Website Navigation:** Site Maps, URL Mapping and Routing, The SiteMapPath Control, The TreeView Control, The Menu Control.	12
3	**Error Handling, Logging, and Tracing:** Avoiding Common Errors, Understanding Exception Handling, Handling Exceptions, Throwing Your Own Exceptions, Using Page Tracing **State Management**: Understanding the Problem of State, Using View State, Transferring Information Between Pages, Using Cookies, Managing Session State, Configuring Session State, Using Application State, Comparing State Management Options **Styles, Themes, and Master Pages**: Styles, Themes, Master Page Basics, Advanced Master Pages,	12
4	**ADO.NET Fundamentals:** Understanding Databases, Configuring Your Database, Understanding SQL Basics, Understanding the Data Provider Model, Using Direct Data Access, Using Disconnected Data Access. **Data Binding**: Introducing Data Binding, Using Single-Value Data Binding, Using Repeated-Value Data Binding, Working with Data Source Controls	12

	The Data Controls: The GridView, Formatting the GridView, selecting a GridView Row, Editing with the GridView, Sorting and Paging the GridView, Using GridView Templates, The DetailsView and FormView	
5	**XML**: XML Explained, The XML Classes, XML Validation, XML Display and Transforms. **Security Fundamentals:** Understanding Security Requirements, Authentication and Authorization, Forms Authentication, Windows Authentication. **ASP.NET AJAX**: Understanding Ajax, Using Partial Refreshes, Using Progress Notification, Implementing Timed Refreshes, Working with the ASP.NET AJAX Control Toolkit	12
	Total	60

Sr. No.	**List of Practical**
1	**Working with basic C# and ASP .NET** a. Create an application that obtains four int values from the user and displays the product. b. Create an application to demonstrate string operations. c. Create an application that receives the (Student Id, Student Name, Course Name, Date of Birth) information from a set of students. The application should also display the information of all the students once the data entered. d. Create an application to demonstrate following operations e. Generate Fibonacci series. ii. Test for prime numbers. iii. Test for vowels. f. Use of foreach loop with arrays v. Reverse a number and find sum of digits of a number
2	**Working with Object Oriented C# and ASP .NET** a. Create simple application to perform following operations i. Finding factorial Value ii. Money Conversion iii. Quadratic Equation iv. Temperature Conversion b. Create simple application to demonstrate use of following concepts

	i. Function Overloading ii. Inheritance (all types) iii. Constructor overloading iv. Interfaces c. Create simple application to demonstrate use of following concepts i. Using Delegates and events ii. Exception handling
3	**Working with Web Forms and Controls** a. Create a simple web page with various sever controls to demonstrate setting and use of their properties. (Example : AutoPostBack) b. Demonstrate the use of Calendar control to perform following operations. a) Display messages in a calendar control b) Display vacation in a calendar control c) Selected day in a calendar control using style d) Difference between two calendar dates c. Demonstrate the use of Treeview control perform following operations. a) Treeview control and datalist b) Treeview operations
4	**Working with Form Controls** A. Create a Registration form to demonstrate use of various Validation controls. B. Create Web Form to demonstrate use of Adrotator Control. C. Create Web Form to demonstrate use User Controls
5	**Working with Navigation, Beautification and Master page.** a. Create Web Form to demonstrate use of Website Navigation controls and Site Map. b. Create a web application to demonstrate use of Master Page with applying Styles and Themes for page beautification. c. Create a web application to demonstrate various states of ASP.NET Pages
6	**Working with Database** a. Create a web application bind data in a multiline textbox by querying in another textbox. b. Create a web application to display records by using database. c. Demonstrate the use of Datalist link control.
7	**Working with Database** a. Create a web application to display Data binding using dropdownlist control.

	b. Create a web application for to display the phone no of an author using database. c. Create a web application for inserting and deleting record from a database. (Using Execute-Non Query).
8	**Working with data controls** a. Create a web application to demonstrate various uses and properties of SqlDataSource. b. Create a web application to demonstrate data binding using DetailsView and FormView Control. c. Create a web application to display Using Disconnected Data Access and Data binding using Grandview.
9	**Working with GridView control** a. Create a web application to demonstrate use of GridView control template and GridView hyperlink. b. Create a web application to demonstrate use of GridView button column and GridView events. c. Create a web application to demonstrate GridView paging and Creating own table format using GridView.
10	**Working with AJAX and XML** a. Create a web application to demonstrate reading and writing operation with XML. b. Create a web application to demonstrate Form Security and Windows Security with proper Authentication and Authorization properties. c. Create a web application to demonstrate use of various Ajax controls.

9. Evaluation Pattern:

a. Total Marks : 150 Marks (10 Point Grading)

b. Passing Criteria : 40 % (4 Grade Points)

c. Marking Scheme : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. Mode of Evaluation of Answer-books : Offline

10. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of 45 Minutes.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination :

Question No.	Description	Marks
1	Answer any two Questions (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.1 to Q.6 will include total 3 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	30+10 Marks	10 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Apply three-tier architecture concepts and advanced database techniques in web applications

CO2: Use object-oriented techniques in Web programming

CO3: Develop rich interactive environments for the Web

CO4: Create sites that utilize data validation techniques and secure code

CO5: Build sites that use session management

12. References:

1. Beginning ASP.NET 4.5 in C# Matthew MacDonald Apress 2012
2. C# 2015 Anne Bohem and Joel Murach Murach Third 2016
3. Murach's ASP.NET 4.6 Web Programming in C#2015 Mary Delamater and Anne Bohem SPD Sixth 2016
4. ASP.NET 4.0 programming J. Kanjilal Tata McGraw-Hill 2011
5. Programming ASP.NET D.Esposito Microsoft Press (Dreamtech) 2011
6. Beginning Visual C# 2010 K. Watson, C. Nagel, J.H Padderson, J.D. Reid, M.Skinner Wrox (Wiley) 2010

COURSE STRUCTURE

1. **Title of the Course :** Enterprise Java
2. **Semester** : V
3. **Subject Code: For Theory:** BITAE505
   For Practical: BITAEP505
4. **Course Objective:**
   - **a.** Students will also be able to understand integrated development environment to create, debug and run multi-tier and enterprise-level applications.
   - **b.** GUI based and web based applications using servlet, jsp.
   - **c.** Understand client and server side programming using various JSP, JSTL, JPA and Hibernate technology
   - **d.** Design and develop a Enterprise Java project from start to finish (Data storage and management).
5. **Category of Course** : Ability Enhancement
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITAE505	Enterprise Java	5	3	2	2	4

Module	Detailed Content	Hours
1	**Understanding Java EE:** WhatisanEnterpriseApplication? Whatisjavaenterpriseedition? JavaEETechnologies, JavaEEevolution, Glassfishserver **JavaEE Architecture, Serverand Containers:** TypesofSystemArchitecture, JavaEEServer, JavaEEContainers. **Introduction to JavaServlets:** TheNeedforDynamicContent, JavaServletTechnology, WhyServlets? WhatcanServletsdo? **Servlet API and Lifecycle:** JavaServletAPI, TheServletSkeleton, TheServletLifeCycle, ASimpleWelcomeServlet **WorkingwithServlets:** GettingStarted, UsingAnnotationsInsteadofDeploymentDescriptor. **Working with Databases:** WhatIsJDBC? JDBCArchitecture, AccessingDatabase, TheServletGUI and DatabaseExample	12

2	**Request Dispatcher:** Resquestdispatcher Interface, Methods of Requestdispatcher, Requestdispatcher Application. **COOKIES:** KindsofCookies, WhereCookiesAreUsed? CreatingCookiesUsingServlet,DynamicallyChangingtheColors ofAPage **SESSION:** WhatAreSessions? LifecycleofHttpSession, SessionTrackingWithServletAPI, AServlet Session Example **Workingwith Files:** UploadingFiles, CreatinganUploadFileApplication, DownloadingFiles, CreatingaDownloadFileApplication. **Workingwith Non-Blocking I/O:** CreatingaNonBlockingReadApplication, CreatingTheWeb Application, CreatingJavaClass, Creating Servlets, Retrieving The File, Creating index.jsp	12
3	**Introduction To Java ServerPages:** WhyuseJava ServerPages? Disadvantages Of JSP, JSPv\sServlets, LifeCycleofaJSPPage, HowdoesaJSPfunction? HowdoesJSPexecute? AboutJava ServerPages **Getting Started With Java ServerPages:** Comments, JSPDocument, JSPElements, JSPGUIExample. **Action Elements:** IncludingotherFiles, ForwardingJSPPageto AnotherPage, PassingParametersforother Actions, LoadingaJavabean. **Implicit Objects, Scope and El Expressions:** ImplicitObjects, CharacterQuotingConventions UnifiedExpressionLanguage[UnifiedEl], ExpressionLanguage. **Java Server Pages Standard Tag Libraries:** WhatiswronginusingJSPScriptletTags? HowJSTLFixesJSPScriptlet'sShortcomings? DisadvantagesOfJSTL, TagLibraries	12
4	**Introduction To Enterprise Javabeans:** EnterpriseBeanArchitecture,BenefitsofEnterpriseBean, TypesofEnterpriseBean, AccessingEnterpriseBeans, EnterpriseBeanApplication,PackagingEnterpriseBeans **Working with Session Beans:** WhentouseSessionBeans? TypesofSessionBeans, RemoteandLocalInterfaces, AccessingInterfaces, LifecycleofEnterpriseBeans, PackagingEnterpriseBeans, Exampleof StatefulSessionBean, Example ofStatelessSessionBean, Example of SingletonSessionBeans. **Working with Message DrivenBeans:** LifecycleofaMessageDrivenBean,UsesofMessageDrivenBeans, TheMessage DrivenBeansExample. **Interceptors:** Request andInterceptor, Defining An Interceptor, AroundInvokeMethod, ApplyingInterceptor, Adding An Interceptor To An Enterprise Bean, Build and Run the Web Application. **Java Naming and Directory Interface**: What is Naming Service? What is Directory Service? What is Java Naming and Directory interface? Basic Lookup, JNDI Namespace in Java EE, Resources and JNDI, Datasource Resource, Definition in Java EE	12

5	**Persistence, Object/Relational Mapping And JPA:** WhatisPersistence? PersistenceinJava, CurrentPersistenceStandardsinJava, WhyanotherPersistenceStandards? Object/RelationalMapping, **Introduction to JavaPersistence API:** TheJavaPersistenceAPI, JPA, ORM, DatabaseandtheApplication, ArchitectureofJPA, HowJPAWorks? JPA Specifications. **Writing JPA Application:** ApplicationRequirementSpecifications, SoftwareRequirements, TheApplicationDevelopmentApproach, CreatingDatabaseandTablesinMysql, creatingaWebApplication, AddingtheRequiredLibraryFiles, creatingaJavabeanClass, CreatingPersistenceUnit[Persistence.Xml], CreatingJSPS, TheJPAApplicationStructure, RunningtheJPAApplication. **Introduction to Hibernate:** WhatisHibernate? WhyHibernate? Hibernate,DatabaseandTheApplication, ComponentsofHibernate, ArchitectureofHibernate, HowHibernateWorks? **WritingHibernateApplication:** ApplicationRequirementSpecifications, SoftwareRequirements, TheApplicationDevelopmentApproach, CreatingDatabaseandTablesinMysql, creatingaWebApplication, AddingtheRequiredLibraryFiles, creatingaJavabeanClass, CreatingHibernateConfigurationFile, AddingaMappingClass, CreatingJSPS, RunningTheHibernateApplication.	12
	Total	60

Sr. No.	List of Practical
1	Create a simple calculator application using servlet.
2	Create a registration servlet in Java using JDBC. Accept the details such as Username, Password, Email, and Country from the user using HTML Form and store the registration details in the database.
3	Using Request Dispatcher Interface create a Servlet which will validate the password entered by the user, if the user has entered "Servlet" as password, then he will be forwarded to Welcome Servlet else the user will stay on the index.html page and an error message will be displayed.
4	Create a servlet that uses Cookies to store the number of times a user has visited servlet.
5	Develop a simple JSP application to pass values from one page to another with validations. (Name-txt, age-txt, hobbies-checkbox, email-txt, gender-radio button).
6	Create a registration and login JSP application to register and authenticate the user based on username and password using JDBC

7	Create an html page with fields, eno, name, age, desg, salary. Now on submit this data to a JSP page which will update the employee table of database with matching eno.
8	Create a JSP application to demonstrate the use of JSTL.
9	Create a Currency Converter application using EJB.
10	Develop simple EJB application to demonstrate Servlet Hit count using Singleton Session Beans.
11	Create simple JPA application to store and retrieve Book details.
12	Develop a Hibernate application to store and retrieve employee details in MySQL Database.

9. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** :Offline

10. Paper Pattern:

a. Internal Assessment:

i. Assessment consists of a class tests of 20 marks. The class test is to be conductedwhen approx. 40% syllabus is completed. Test will be of 45 Minutes.

ii. Students have to submit assignment after completion of each module which willcarry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination :

Question No.	**Description**	**Marks**
1	Answer any two Questions (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10

6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.1 to Q.6 will include total 3 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	30+10 Marks	10 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Create dynamic web pages, using Servlets and JSP.

CO2: Make a resusable software component, using Java Bean.

CO3: Understand the multi-tier architecture of web-based enterprise applications using Enterprise JavaBeans (EJB)

CO4: Map Java classes and object associations to relational database tables with Hibernate mapping files.

CO5: Develop Stateful, Stateless and Entity Beans.

CO6: Understand JSTL, JPA, Hibernet

References:

1. Java EE 7 For Beginners , By Sharanam Shah, Vaishali Shah,FIRST,SPD,2017
2. Advanced Java by Uttam Kumar Roy, Oxford Press, 2015
3. Java EE 8 Cookbook: Build reliable applications with the most robust and mature technology for enterprise development, by Elder Moraes, FIRST, Packt, 2018

COURSE STRUCTURE

1. **Title of the Course :** Artificial Intelligence
2. **Semester** : V
3. **Subject Code: For Theory:** BITEL506
   For Practical: BITELP506
4. **Course Objective:**
   - **a.** To explore the applied branches of artificial intelligence
   - **b.** To enable the student to understand applications of artificial intelligence
   - **c.** To enable the student to solve the problem aligned with derived branches of artificial intelligence
5. **Category of Course** : Elective
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITEL506	Artificial Intelligence	5	3	2	2	4

Module	Detailed Content	Hours
1	**Review of AI:** History, foundation and Applications **Expert System and Applications:** Phases in Building Expert System, Expert System Architecture, Expert System versus Traditional Systems, Rule based Expert Systems, Blackboard Systems, Truth Maintenance System, Application of Expert Systems, Shells and Tools	12
2	**Probability Theory:** joint probability, conditional probability, Bayes's theorem, probabilities in rules and facts of rule based system, cumulative probabilities, rule based system and Bayesian method **Fuzzy Sets and Fuzzy Logic:** Fuzzy Sets, Fuzzy set operations, Types of Member ship Functions, Multivalued Logic, Fuzzy Logic, Linguistic variables and Hedges, Fuzzy propositions, inference rules for fuzzy propositions, fuzzy systems, possibility theory and other enhancement to Logic	12
3	**Machine Learning Paradigms:** Machine Learning systems, supervised and un-supervised learning, inductive learning,	12

	deductive learning, clustering, support vector machines, cased based reasoning and learning. **Artificial Neural Networks:** Artificial Neural Networks, Single-Layer feedforward networks, multi-layer feedforward networks, radial basis function networks, design issues of artificial neural networks and recurrent networks	
4	**Evolutionary Computation:** Soft computing, genetic algorithms, genetic programming concepts, evolutionary programming, swarm intelligence, ant colony paradigm, particle swarm optimization and applications of evolutionary algorithms. **Intelligent Agents:** Agents vs software programs, classification of agents, working of an agent, single agent and multiagent systems, performance evaluation, architecture, agent communication language, applications	12
5	**Advanced Knowledge Representation Techniques:** Conceptual dependency theory, script structures, CYC theory, script structure, CYC theory, case grammars, semantic web. **Natural Language Processing:** Sentence Analysis phases, grammars and parsers, types of parsers, semantic analysis, universal networking language, dictionary	12
	Total	60

List of Practical	
	List of Practical: 10 practicals covering the entire syllabus must be performed. The detailed list of practical will be circulated later in the official workshop.

9. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** : Offline

10. Paper Pattern:

a. Internal Assessment:

i. Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of 45 Minutes.

ii. Students have to submit assignment after completion of each

module which willcarry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination :

Question No.	Description	Marks
1	Answer any two Questions (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.1 to Q.6 will include total 3 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	30+10 Marks	10 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Be able to use probability and concept of fuzzy sets for solving AI based problems

CO2: Be able to understand the fundamentals concepts of expert system and its applications.

CO3: Be able to understand the applications of Machine Learning. The learner can also apply fuzzy system for solving problems.

CO4: A student can use knowledge representation techniques in natural language processing.

CO5: Student will be able to apply to understand the applications of genetic algorithms in different problems related to artificial intelligence.

12. References:

1. Artificial Intelligence by Saroj Kaushik, 1st, 2019
2. Artificial Intelligence: A Modern Approach by A. Russel, Peter Norvig, 1st, 2019
3. Artificial Intelligence by Elaine Rich,Kevin Knight,Shivashankar B. Nair, 3nd Edition.2019

Bachelor of Science in Information Technology

[B. Sc. I.T]

Semester - VI

COURSE STRUCTURE

1. **Title of the Course :** Software Project Management
2. **Semester** : VI
3. **Course Code: For Theory:** BITCC601

   For Practical: BITCCP601

4. **Course Objective:**

   a. Understand the fundamental principles of Software Project management & will also have a good knowledge of responsibilities of project manager and how to handle these.

   b. Be familiar with the different methods and techniques used for project management. To study the physical and logical database designs, database modelling, relational, hierarchical, and network models.

   c. To understand the issues and challenges faced while doing the Software project Management and will also be able to understand why majority of the software projects fails and how that failure probability can be reduced effectively.

   d. Deliver successful software projects that support organization's strategic goals.

   e. Match organizational needs to the most effective software development model

   f. Plan and manage projects at each stage of the software development life cycle (SDLC)

   g. Create project plans that address real-world management challenges.

   h. Develop the skills for tracking and controlling software deliverables.

5. **Category of Course**: Core Course
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITCC501	Software Project Management	5	3	2	2	4

Module	Detailed Content	Hours
1	**Introduction to Software Project Management:** Introduction, Why is Software Project Management Important? What is a Project? Software Projects versus Other Types of Project, Contract Management and Technical Project Management, Activities Covered by Software Project Management, Plans, Methods and Methodologies, Some Ways of Categorizing Software Projects, Project Charter, Stakeholders, Setting Objectives, The Business Case, Project Success and Failure, What is Management? Management Control, Project Management Life Cycle, Traditional versus Modern Project Management Practices. **Project Evaluation and Programme Management:** Introduction, Business Case, Project Portfolio Management, Evaluation of Individual Projects, Cost–benefit Evaluation Techniques, Risk Evaluation, Programme Management, Managing the Allocation of Resources within Programmes, Strategic Programme Management, Creating a Programme, Aids to Programme Management, Some Reservations about Programme Management, Benefits Management. **An Overview of Project Planning:** Introduction to Step Wise Project Planning, Step 0: Select Project, Step 1: Identify Project Scope and Objectives, Step 2: Identify Project Infrastructure, Step 3: Analyse Project Characteristics, Step 4: Identify Project Products and Activities, Step 5: Estimate Effort for Each Activity, Step 6: Identify Activity Risks, Step 7: Allocate Resources, Step 8: Review/Publicize Plan, Steps 9 and 10: Execute Plan/Lower Levels of Planning	12
2	**Selection of an Appropriate Project Approach:** Introduction, Build or Buy? Choosing Methodologies and Technologies, Software Processes and Process Models, Choice of Process Models, Structure versus Speed of Delivery, The Waterfall Model, The Spiral Model, Software Prototyping, Other Ways of Categorizing Prototypes, Incremental Delivery, Atern/Dynamic Systems Development Method, Rapid Application Development, Agile Methods, Extreme Programming (XP), Scrum, Lean Software Development, Managing Iterative Processes, Selecting the Most Appropriate Process Model. **Software Effort Estimation:** Introduction, Where are the Estimates Done? Problems with Over- and Under-Estimates, The Basis for Software Estimating, Software Effort Estimation Techniques, Bottom- up Estimating, The Top-down Approach and Parametric Models, Expert Judgement, Estimating by Analogy, Albrecht Function Point Analysis, Function Points Mark II, COSMIC Full Function Points, COCOMO II: A Parametric Productivity Model,	12

	Cost Estimation, Staffing Pattern, Effect of Schedule Compression, Capers Jones Estimating Rules of Thumb.	
3	**Activity Planning:** Introduction, Objectives of Activity Planning, When to Plan, Project Schedules, Projects and Activities, Sequencing and Scheduling Activities, Network Planning Models, Formulating a Network Model, Adding the Time Dimension, The Forward Pass, Backward Pass, Identifying the Critical Path, Activity Float, Shortening the Project Duration, Identifying Critical Activities, Activity-on-Arrow Networks. **Risk Management:** Introduction, Risk, Categories of Risk, Risk Management Approaches, A Framework for Dealing with Risk, Risk Identification, Risk Assessment, Risk Planning, Risk Management, Evaluating Risks to the Schedule, Boehm's Top 10 Risks and Counter Measures, Applying the PERT Technique, Monte Carlo Simulation, Critical Chain Concepts. **Resource Allocation:** Introduction, Nature of Resources, Identifying Resource Requirements, Scheduling Resources, Creating Critical Paths, Counting the Cost, Being Specific, Publishing the Resource Schedule, Cost Schedules, Scheduling Sequence.	12
4	**Monitoring and Control:** Introduction, Creating the Framework, Collecting the Data, Review, Visualizing Progress, Cost Monitoring, Earned Value Analysis, Prioritizing Monitoring, Getting the Project Back to Target, Change Control, Software Configuration Management (SCM). **Managing Contracts:** Introduction, Types of Contract, Stages in Contract Placement, Typical Terms of a Contract, Contract Management, Acceptance. **Managing People in Software Environments:** Introduction, Understanding Behaviour, Organizational Behaviour: A Background, Selecting the Right Person for the Job, Instruction in the Best Methods, Motivation, The Oldham–Hackman Job Characteristics Model, Stress, Stress Management, Health and Safety, Some Ethical and Professional Concerns.	12
5	**Working in Teams:** Introduction, Becoming a Team, Decision Making, Organization and Team Structures, Coordination Dependencies, Dispersed and Virtual Teams, Communication Genres, Communication Plans, Leadership. **Software Quality:** Introduction, The Place of Software Quality in Project Planning, Importance of Software Quality, Defining Software	12

	Quality, Software Quality Models, ISO 9126, Product and Process Metrics, Product versus Process Quality Management, Quality Management Systems, Process Capability Models, Techniques to Help Enhance Software Quality, Testing, Software Reliability, Quality Plans. **Project Closeout:** Introduction, Reasons for Project Closure, Project Closure Process, Performing a Financial Closure, Project Closeout Report.	
	Total	60

Sr. No.	List of Practical
1	**Create Project Plan :** ▪ Specify project name and start (or finish) date. ▪ Identify and define project tasks. ▪ Define duration for each project task. ▪ Define milestones in the plan. ▪ Define dependency between tasks.
2	**Assign Resources to Project :** ▪ Define project calendar. ▪ Define project resources. ▪ Specify resource type and resource rates. ▪ Assign resources against each task. ▪ Baseline the project plans.
3	**Execute and Monitor Project Plan :** ▪ Update % Complete with current task status. ▪ Review the status of each task. ▪ Compare Planned vs Actual Status. ▪ Review the status of Critical Path. ▪ Review resources assignation status.
4	**Generate Dashboard and Reports :** ▪ Dashboard a) Project Overview b) Cost Overview c) Upcoming Tasks ▪ Resource Reports a) Over-allocated Resources b) Resource Overview
5	▪ **Cost Reports** a) Earned Value Report b) Resource Cost Overview c) Task Cost Overview

6	▪ **Progress Reports** a) Critical Tasks b) Milestone Report c) Slipping Tasks

9. Evaluation Pattern:

a. Total Marks : 150 Marks (10 Point Grading)

b. Passing Criteria : 40 % (4 Grade Points)

c. Marking Scheme : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. Mode of Evaluation of Answer-books :Offline

10.Paper Pattern:

a. Internal Assessment:

i. Assessment consists of a class tests of 20 marks. The class test is to be conductedwhen approx. 40% syllabus is completed. Test will be of 45 Minutes.

ii. Students have to submit assignment after completion of each module which willcarry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination :

Question No.	**Description**	**Marks**
1	Answer any two Questions (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.1 to Q.6 will include total 3 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	30+10 Marks	10 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Understand project characteristics and various stages of a project.

CO2: Understand the conceptual clarity about project organization and feasibility analyses- Market, Technical, Financial and Economic.

CO3: Analyze the learning and understand techniques for Project planning, scheduling and Execution Control.

CO4: Apply the risk management plan and analyse the role of stakeholders.

CO5: Understand the contract management, Project Procurement, Service level Agreements and productivity.

CO6: Understand the project closeout process and documentation logging.

12. References:

1. Software Project Management by Bob Hughes, Mike Cotterell, Rajib Mall , 6th Edition, McGraw-Hill, 2018
2. Project Management and Tools & Technologies – An overview by Shailesh Mehta , 1st Edition , SPD , 2017
3. Software Project Management by Walker Royce, Pearson, 2005

COURSE STRUCTURE

1. **Title of the Course :** Business Intelligence
2. **Semester** : VI
3. **Course Code: For Theory:** BITCC602

   For Practical: BITCCP602

4. **Course Objective:**
   - **a.** Data extraction: Investigate data to establish new relationships and patterns
   - **b.** Predictive Analytic and Predictive Modelling: Analyse the correlation between different variables
   - **c.** Logistic Regression: Analyze the possibility of default and generate customer records
   - **d.** Problem analysis: Understand and explore problems in business
   - **e.** Data interpretation: Use tools such as Excel and open source to interpret data
   - **f.** Problem-solving: Use analytics to solve business problems

5. **Category of Course** : Core Course
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITCC602	Business Intelligence	5	3	2	2	4

Module	Detailed Content	Hours
1	**Business intelligence:** Effective and timely decisions, Data, information and knowledge, The role of mathematical models, Business intelligence architectures, Ethics and business intelligence **Decision support systems**: Definition of system, Representation of the decision-making process, Evolution of information	12

	systems, Definition of decision support system, Development of a decision support system	
2	**Mathematical models for decision making:** Structure of mathematical models, Development of a model, Classes of models **Data mining**: Definition of data mining, Representation ofinput data , Data mining process, Analysis methodologies Data preparation: Data validation, Data transformation, Data reduction	12
3	**Classification:** Classification problems, Evaluation of classification models, Bayesian methods, Logistic regression, Neural networks, Support vector machines **Clustering:** Clustering methods, Partition methods, Hierarchical methods, Evaluation of clustering models	12
4	**Business intelligence applications:** Marketing models: Relational marketing, Sales force management, And Logistic and production models: Supply chain optimization,Optimization models for logistics planning, Revenue management systems. **Data envelopment analysis:** Efficiency measures, Efficient frontier, The CCR model, Identification of good operating practices	12
5	**Knowledge Management:** Introduction to Knowledge Management, Organizational Learning and Transformation, Knowledge Management Activities, Approaches to Knowledge Management, Information Technology (IT) In Knowledge Management, Knowledge Management Systems Implementation, Roles of People in Knowledge Management **Artificial Intelligence and Expert Systems:** Concepts and Definitions of Artificial Intelligence, Artificial Intelligence Versus Natural Intelligence, Basic Concepts of Expert Systems, Applications of Expert Systems, Structure of Expert Systems, Knowledge Engineering, Development of Expert Systems	12
	Total	60

Sr. No.	List of Practical
1	Import the legacy data from different sources such as (Excel, SqlServer, Oracle etc.) and load in the target system. (You can download sample database such as Adventureworks, Northwind, foodmart etc.)
2	Perform the Extraction Transformation and Loading (ETL) process to construct the database in the Sqlserver.
3	a. Create the Data staging area for the selected database. b. Create the cube with suitable dimension and fact tables based on ROLAP, MOLAP and HOLAP model.
4	A.Create the ETL map and setup the schedule for execution. b. Execute the MDX queries to extract the data from the data warehouse.
5	a. Import the data warehouse data in Microsoft Excel and create the Pivot table and Pivot Chart. b. Import the cube in Microsoft Excel and create the Pivot table and Pivot Chart to perform data analysis
6	Apply the what – if Analysis for data visualization. Design and generate Necessary reports based on the data warehouse data.
7	Perform the data classification using classification algorithm.
8	Perform the data clustering using clustering algorithm
9	Perform the Linear regression on the given data warehouse data.
10	Perform the logistic regression on the given data warehouse data.

9. Evaluation Pattern:

a. Total Marks : 150 Marks (10 Point Grading)

b. Passing Criteria : 40 % (4 Grade Points)

c. Marking Scheme : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. Mode of Evaluation of Answer-books : Offline

10. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of 45 Minutes.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination:

Question No.	Description	Marks
1	Answer any two Questions (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.1 to Q.6 will include total 3 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	30+10 Marks	10 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Describe the concepts and components of Business Intelligence (BI).

CO2: Critically evaluate use of BI for supporting decision making in an organisation. **CO3:** Understand and use the technologies and tools that make up BI (e.g. Data warehousing, Data reporting and use of online analytical processing (OLAP)).

CO4: Understand and design the technological architecture that underpins BI systems.

CO5: Plan the implementation of a BI system.

12. References:

1. Business Intelligence Data Mining and Optimization for Decision Making (Carlo Vercellis) Wiley 1st 2009
2. Decision support and Business Intelligence Systems (Efraim Turban, Ramesh Sharda, Dursun Delen) Pearson 9th 2011
3. Fundamentals of Business Intelligence (Grossmann W, Rinderle-Ma)

COURSE STRUCTURE

1. **Title of the Course :** Robotic Process Automation
2. **Semester** : VI
3. **Course Code: For Theory:** BITCC603
   For Practical: BITPCCP603
4. **Course Objective:**
   a. To make the students aware about the automation today in the industry.
   b. To make the students aware about the tools used for automation.
   c. To help the students automate a complete process
5. **Category of Course** : Core Course
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITCC603	Robotic Process Automation	5	3	2	2	4

Module	Detailed Content	Hours
1	Robotic Process Automation: Scope and techniques of automation, About UiPath Record and Play: UiPath stack, Downloading and installing UiPath Studio, Learning UiPath Studio, Task recorder, Step-by-step examples using the recorder.	12
2	Sequence, Flowchart, and Control Flow: Sequencing the workflow, Activities, Control flow, various types of loops, and decision making, Step-by-step example using Sequence and Flowchart, Step-by-step example using Sequence and Control flow Data Manipulation: Variables and scope, Collections, Arguments – Purpose and use, Data table usage with examples, Clipboard management, File operation with step-by-step example, CSV/Excel to data table and vice versa (with a step-by-step example)	12

3	Taking Control of the Controls : Finding and attaching windows, Finding the control, Techniques for waiting for a control, Act on controls – mouse and keyboard activities, Working with UiExplorer, Handling events, Revisit recorder, Screen Scraping, When to use OCR, Types of OCR available, How to use OCR, Avoiding typical failure points Tame that Application with Plugins and Extensions: Terminal plugin, SAP automation, Java plugin, Citrix automation, Mail plugin, PDF plugin, Web integration, 12 CO336 Excel and Word plugins, Credential management, Extensions – Java, Chrome, Firefox, and Silverlight	12
4	Handling User Events and Assistant Bots: What are assistant bots?, Monitoring system event triggers, Hotkey trigger, Mouse trigger, System trigger ,Monitoring image and element triggers, An example of monitoring email, Example of monitoring a copying event and blocking it, Launching an assistant bot on a keyboard event Exception Handling, Debugging, and Logging: Exception handling, Common exceptions and ways to handle them, Logging and taking screenshots, Debugging techniques, Collecting crash dumps, Error reporting	12
5	Managing and Maintaining the Code: Project organization, Nesting workflows, Reusability of workflows, Commenting techniques, State Machine, When to use Flowcharts, State Machines, or Sequences, Using config files and examples of a config file, Integrating a TFS server Deploying and Maintaining the Bot: Publishing using publish utility, Overview of Orchestration Server, Using Orchestration Server to control bots, Using Orchestration Server to deploy bots, License management, Publishing and managing updates	12
	Total	60

Sr. No.	**List of Practical**
1	Downloading and installing UiPath Studio
2	UiPath Studio different types of projects
3	The user interface –Record and play - How to Emptying the trash folder in Gmail
4	- How to Emptying Recycle Bin

5	How to use a Sequence, With input dialog and message box
6	How to use a Flowchart,
7	How to use Control Flow and various loops, While activity, do while activity,
8	How to use for activity, decision making
9	Step-by-step example using Sequence and Flowchart
10	Step-by-step example using Sequence and Control flow
11	Building a data table using data scraping (dynamically)
12	File operation with step-by-step example
13	Reading an Excel file and creating a data table by using data from the Excel file

9. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** : Offline

10. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of 45 minutes.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination :

Question No.	Description	Marks
1	Answer any two Questions (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10

4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.1 to Q.6 will include total 4 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	30+10 Marks	10 Marks	50 Marks

11. Course Outcome:

After completing the course, a learner will be able to:

CO1: Understand the mechanism of business process and can provide the solution in an optimize way.

CO2: Understand the features use for interacting with database plugins.

CO3: Use the plug-ins and other controls used for process automation.

CO4: Use and handle the different events, debugging and managing the errors.

CO5: Test and deploy the automated process.

12. References:

1. Learning Robotic Process Automation by Alok Mani -Tripathi Packt 1st 2018

2. Robotic Process Automation Tools, Process Automation and their benefits: Understanding RPA and Intelligent Automation Srikanth Merianda Createspace Independent Publishing 1st 2018

3. The Simple Implementation Guide to Robotic Process Automation (Rpa): How to Best Implement Rpa in an Organization Kelly Wibbenmeyer iUniverse 1st 2018

COURSE STRUCTURE

1. **Title of the Course :** Mobile Application Development
2. **Semester** : VI
3. **Subject Code: For Theory:** BITSB604
   For Practical: BITSBP604
4. **Course Objective:**

   a. To understanding of the fundamentals of Android operating systems
   b. To demonstrate their skills of using Android software development tools
   c. To ability to develop software with reasonable complexity on mobile platform
   d. To demonstrate their ability to deploy software to mobile devices
   e. To demonstrate their ability to debug programs running on mobile devices

5. **Category of Course** : Skill Based
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITSB604	Mobile Application Development	5	3	2	2	4

Module	Detailed Content	Hours
1	**Introduction to Android Operating System:** Android OS design and Features – Android development framework, SDK features, Installing and running applications on Eclipse platform, Creating AVDs, Types of Android applications, Best practices in Android programming, Android tools. **Android application components –** Android Manifest file, Externalizing resources like values, themes, layouts, Menus etc, Resources for different devices and languages, Runtime Configuration Changes. **Android Application Lifecycle** – Activities, Activity lifecycle, activity states, monitoring state changes.	12
2	**Android User Interface: Measurements** – Device and pixel density independent measuring units. **Layouts** – Linear, Relative, Grid and Table Layouts. **User Interface (UI) Components –** Editable and non editable	12

	Text Views, Buttons, Radio and Toggle Buttons, Checkboxes, Spinners, Dialog and pickers. **Event Handling** – Handling clicks or changes of various UI components. **Fragments –** Creating fragments, Lifecycle of fragments, Fragment states, Adding fragments to Activity, adding, removing and replacing fragments with fragment transactions, interfacing between fragments and Activities, Multi-screen Activities	
3	**Intents and Broadcasts: Intent** – Using intents to launch Activities, Explicitly starting new Activity, Implicit Intents, Passing data to Intents, Getting results from Activities, Native Actions, using Intent to dial a number or to send SMS. **Broadcast Receivers** – Using Intent filters to service implicit Intents, Resolving Intent filters, finding and using Intents received within an Activity. **Notifications** – Creating and Displaying notifications, Displaying Toasts.	12
4	**Persistent Storage: Files** – Using application specific folders and files, creating files, reading data from files, listing contents of a directory Shared Preferences – Creating shared preferences, saving and retrieving data using Shared Preference	12
5	**Database** – Introduction to SQLite database, creating and opening a database, creating tables, inserting retrieving and deleting data, Registering Content Providers, Using content Providers (insert, delete, retrieve and update)	12
	Total	60

Sr. No.	List of Practical
1	Introduction to Android Studio IDE, Application Fundamentals Simple "Hello World" program.
2	Android Resources: (Color, Theme, String, Drawable, Dimension, Image)
3	Programming Activities and fragments: Activity Life Cycle, Activity methods, Multiple Activities, Life Cycle of fragments and multiple fragments.
4	Programming Activities and fragments: Coordinate, Linear, Relative, Table, Absolute, Frame, List View, Grid View.
5	Programming UI elements: AppBar, Fragments, UI Components
6	Programming menus, dialog,dialog fragments
7	Programs on Intents, Events, Listeners and Adapters: The Android Intent Class, Using Events and Event Listeners
8	Programs on Services, notification and broadcast receivers
9	Database Programming with SQLite
10	Programming threads, handles and asynchronized programs

9. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** :Offline

10. Paper Pattern:

a. **Internal Assessment:**

- Assessment consists of a class tests of 20 marks. The class test is to be conductedwhen approx. 40% syllabus is completed. Test will be of 45 Minutes.
- Students have to submit assignment after completion of each module which willcarry 15 marks and 5 marks are for attendance.

b. **Semester End Theory Examination :**

Question No.	**Description**	**Marks**
1	Answer any two Questions (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.1 to Q.6 will include total 3 sub questions having 5 marks each

c. **Semester End Practical Examination:**

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	30+10 Marks	10 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Recognizes the concept of application development for mobile devices.

CO2: Understands the basic technologies used by the Android platform.
CO3: Recognizes and uses Android Environment Emulator and Application life cycle.
CO4: Understanding and uses Android Selection Widgets

12. References:

1. Beginning Android 4 Application Development, Wei-Meng Lee, Wiley India (Wrox), 2013
2. Professional Android 4 Application Development, Reto Meier, Wiley India, (Wrox) , 2012
3. Android Application Development for Java Programmers, James C Sheusi, Cengage Learning, 2013

COURSE STRUCTURE

1. **Title of the Course :** Security in Computing
2. **Semester** : VI
3. **Course Code**: For Theory: BITAE605
   For Practical: BITAEP605
4. **Course Objective:**

- To understand basics of Cryptography and Network Security.
- To be able to secure a message over insecure channel by various means.
- To learn about how to maintain the Confidentiality, Integrity and Availability of a data.
- To understand various protocols for network security to protect against the threats in the networks.

5. **Category of Course** : Ability Enhancement
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Module:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITAE605	Security in Computing	5	3	2	2	4

Module	Detailed Content	Hours
1	**Information Security Overview:** The Importance of Information Protection, The Evolution of Information Security, Justifying Security Investment, Security Methodology, How to Build a Security Program, The Impossible Job, The Weakest Link, Strategy and Tactics, Business Processes vs. Technical Controls. Risk Analysis: Threat Definition, Types of Attacks, Risk Analysis. Secure Design Principles: The CIA Triad and Other Models, Défense Models, Zones of Trust, Best Practices for Network Défense.	12
2	**Authentication and Authorization:** Authentication, Authorization Encryption: A Brief History of Encryption,	12

	Symmetric-Key Cryptography, Public Key Cryptography, Public Key Infrastructure. Storage Security: Storage Security Evolution, Modern Storage Security, Risk Remediation, Best Practices. Database Security: General Database Security Concepts, Understanding Database Security Layers, Understanding Database Level Security, Using Application Security, Database Backup and Recovery, Keeping Your Servers Up to Date, Database Auditing and Monitoring	
3	**Secure Network Design:** Introduction to Secure Network Design, Performance, Availability, Security. Network Device Security: Switch and Router Basics, Network Hardening. Firewalls: Overview, The Evolution of Firewalls, Core Firewall Functions, Additional Firewall Capabilities, Firewall Design. Wireless Network Security: Radio Frequency Security Basics, DataLink Layer Wireless Security Features, Flaws, and Threats, Wireless Vulnerabilities and Mitigations, Wireless Network Hardening Practices and Recommendations, Wireless Intrusion Detection and Prevention, Wireless Network Positioning and Secure Gateways	12
4	**Intrusion Detection and Prevention Systems:** IDS Concepts, IDS Types and Detection Models, IDS Features, IDS Deployment Considerations, Security Information and Event Management (SIEM). Voice over IP (VoIP) and PBX Security: Background, VoIP Components, VoIP Vulnerabilities and Countermeasures, PBX, TEM: Telecom Expense Management. Operating System Security Models: Operating System Models, Classic Security Models, Reference Monitor, Trustworthy Computing, International Standards for Operating System Security.	12
5	**Virtual Machines and Cloud Computing:** Virtual Machines, Cloud Computing. Secure Application Design: Secure Development Lifecycle, Application Security Practices, Web Application Security, Client Application Security, Remote Administration Security. Physical Security: Classification of Assets, Physical Vulnerability Assessment, Choosing Site Location for Security, Securing Assets: Locks and Entry Controls, Physical Intrusion.	12
	Total	60

Sr. No.	List of Practical
1	Configure Routers: - a.OSPF MD5 authentication. b NTP. c to log messages to the syslog server. d to support SSH connections.
2	Configure AAA Authentication a Configure a local user account on Router and configure authenticate on the console and vty lines using local AAA b Verify local AAA authentication from the Router console and the PC-A client
3	Configuring Extended ACLs a Configure, Apply and Verify an Extended Numbered ACL
4	Configure IP ACLs to Mitigate Attacks and IPV6 ACLs a Verify connectivity among devices before firewall configuration. b Use ACLs to ensure remote access to the routers is available only from management station PC-C. c Configure ACLs on to mitigate attacks. d Configuring IPv6 ACLs
5	Configuring a Zone-Based Policy Firewall
6	Configure IOS Intrusion Prevention System (IPS) Using the CLI a Enable IOS IPS. b Modify an IPS signature
7	Layer 2 Security a Assign the Central switch as the root bridge. b Secure spanning-tree parameters to prevent STP manipulation attacks. c Enable port security to prevent CAM table overflow attacks.
8	Layer 2 VLAN Security
9	Configure and Verify a Site-to-Site IPsec VPN Using CLI
10	Configuring ASA Basic Settings and Firewall Using CLI a Configure basic ASA settings and interface security levels using CLI b Configure routing, address translation, and inspection policy using CLI c Configure DHCP, AAA, and SSH d Configure a DMZ, Static NAT, and ACLs

9. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** :Offline

10. Paper Pattern:

- **Internal Assessment:**
    - Assessment consists of a class tests of 20 marks. The class test is to be conductedwhen approx. 40% syllabus is completed. Test will be of 45 Minutes.
    - Students have to submit assignment after completion of each module which willcarry 15 marks and 5 marks are for attendance.

- **Semester End Theory Examination :**

Question No.	Description	Marks
1	Answer any two Questions (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.1 to Q.6 will include total 3 sub questions having 5 marks each

- **Semester End Practical Examination:**

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	30+10 Marks	10 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, Learner should be able to:

CO1: The learner will gain knowledge about securing both clean and corrupted systems, protect personal data, and secure computer networks.

CO2: The learner will understand key terms and concepts in cyber law, intellectual property and cyber crimes, trademarks and domain theft.

CO3: The learner will be able to examine secure software development practices.

CO4: The learner will understand principles of web security.

CO5: The learner will be able to incorporate approaches for incident analysis and response.

CO6: The learner will be able to incorporate approaches for risk management and best practices.

CO7: The learner will gain an understanding of cryptography, how it has evolved, and some key encryption techniques used today.

CO8: The learner will develop an understanding of security policies (such as confidentiality, integrity, and availability), as well as protocols to implement such policies.

CO9: The learner will gain familiarity with prevalent network and distributed system attacks, defenses against them, and forensics to investigate the aftermath.

12. References:

1. The Complete Reference Information Security Mark Rhodes-Ousley McGraw-Hill 2nd 2013

2. Essential Cybersecurity Science Josiah Dykstra O'Reilly Fifth 2017

3. Principles of Computer Security: CompTIA Security+ and Beyond Wm.Arthur Conklin, Greg White McGraw Hill Second 2010

COURSE STRUCTURE

1. **Title of the Course :** Data Science
2. **Semester** : VI
3. **Course Code: For Theory:** BITID606
   For Practical: BITID606
4. **Course Objective:**

   a. To explain idea of data analysis techniques and quantitative modeling for the solution of real world business problems.
   b. To report findings of analysis and effectively present them using data visualization techniques.
   c. To demonstrate knowledge of statistical data analysis techniques utilized in business decision making.
   d. To provide insights about the roles of a Data Scientist, such as a developer, an analyst, a statistical expert etc.
   e. To understand techniques and tools for transformation of data, Data Mining, Data formats, Machine Learning Algorithms, Data Visualization and Optimization.

5. **Category of Course**: Inter-disciplinary Course
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITID606	Data Science	5	3	2	2	4

Module	Detailed Content	Hours
1	**Data Science Technology Stack:** Rapid Information Factory Ecosystem, Data Science Storage Tools, Data Lake, Data Vault, Data Warehouse Bus Matrix, Data Science Processing Tools ,Spark, Mesos, Akka , Cassandra, Kafka, Elastic Search, R ,Scala, Python, MQTT, The Future	12

	Layered Framework: Definition of Data Science Framework, Cross- Industry Standard Process for Data Mining (CRISP-DM), Homogeneous Ontology for Recursive Uniform Schema, The Top Layers of a Layered Framework, Layered Framework for High-Level Data Science and Engineering. **Business Layer:** Business Layer, Engineering a Practical Business Layer. **Utility Layer:** Basic Utility Design, Engineering a Practical Utility Layer.	
2	**Three Management Layers:** Operational Management Layer, Processing-Stream Definition and Management, Audit, Balance, and Control Layer, Balance, Control, Yoke Solution, Cause-and-Effect, Analysis System, Functional Layer, Data Science Process. **Retrieve Superstep :** Data Lakes, Data Swamps, Training the Trainer Model, Understanding the Business Dynamics of the Data Lake, Actionable Business Knowledge from Data Lakes, Engineering a Practical Retrieve Superstep, Connecting to Other Data Sources.	12
3	**Assess Superstep:** Assess Superstep, Errors, Analysis of Data, Practical Actions, Engineering a Practical Assess Superstep.	12
4	**Process Superstep :** Data Vault, Time-Person-Object-Location-Event Data Vault, Data Science Process, Data Science. **Transform Superstep :** Transform Superstep, Building a Data Warehouse, Transforming with Data Science, Hypothesis Testing, Overfitting and Underfitting, Precision-Recall, Cross-Validation Test.	12
5	**Transform Superstep:** Univariate Analysis, Bivariate Analysis, Multivariate Analysis, Linear Regression, Logistic Regression, Clustering Techniques, ANOVA, Principal Component Analysis (PCA), Decision Trees, Support Vector Machines, Networks, Clusters, and Grids, Data Mining, Pattern Recognition, Machine Learning, Bagging Data,Random Forests, Computer Vision (CV) , Natural Language Processing (NLP), Neural Networks, TensorFlow. **Organize and Report Supersteps :** Organize Superstep, Report Superstep, Graphics, Pictures, Showing the Difference	12
	Total	60

Sr. No.	List of Practical
1	Creating Data Model using Cassandra.
2	Conversion from different formats to HOURS format. a. Text delimited csv format. b. XML c. JSON d. MySQL Database e. Picture (JPEG) f. Video g. Audio
3	Utilities and Auditing
4	Retrieving Data
5	Assessing Data
6	Processing Data
7	Transforming Data
8	Organizing Data
9	Generating Reports
10	Data Visualization with Power BI

9. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** :Offline

10. Paper Pattern:

- **Internal Assessment:**
    - Assessment consists of a class tests of 20 marks. The class test is to be conductedwhen approx. 40% syllabus is completed. Test will be of 45 Minutes.
    - Students have to submit assignment after completion of each module which willcarry 15 marks and 5 marks are for attendance.

- **Semester End Theory Examination :**

Question No.	Description	Marks
1	Answer any two Questions (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.1 to Q.6 will include total 3 sub questions having 5 marks each

- **Semester End Practical Examination:**

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	30+10 Marks	10 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Develop relevant programming abilities.

CO2: Demonstrate proficiency with statistical analysis of data.

CO3: Develop the ability to build and assess data-based models.

CO4: Execute statistical analyses with professional statistical software.

CO5: Apply data science concepts and methods to solve problems in real-world contexts and will communicate these solutions effectively

CO6: Formulate simple algorithms to solve problems, and can code them in a high-level language appropriate for data science work (e.g., Python, SQL, R, Java).

CO7: Integrate data from disparate sources, can transform data from one format to another, and can program data management in relational databases.

12. References:

1. Practical Data Scienceby Andreas François Vermeulen , APress, 2018.
2. Principles of Data Science by Sinan Ozdemir, PACKT, 2016.
3. Data Science from Scratch by Joel Grus, O'Reilly, 2015.
4. Data Science from Scratch first Principle in python by Joel Grus, Shroff Publishers, 2017.
5. Experimental Design in Data science with Least Resources by N C Das, Shroff Publishers, 2018.

COURSE DETAILS

1. **Title of the Course:** Operating System

2. **Course Code: For Theory: BDSMJ101**
   For Practical: BDSMJP101
3. **Course Objective:**
   a. To understand the basic Operating System concepts and founding the services and advantages of it.
   b. Importance of virtualization and cloud computing in today's IT industries.
   c. Learning the features of different Operating System like Linux, Windows, and Android etc.
   d. Understand how Operating system manage the File and Directory system.
   e. Gaining the knowledge about Scheduling algorithm.
4. **Category of Course:** Major Course
5. **Semester:** I
6. **Total Hours:** 60
7. **Total Credits:** 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules: -**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical / Tutorial	Theory	Practical / Tutorial	Total
BDSMJ101 BDSMJP101	Modern Operating Systems	4	2	2	2	4

Module	Details	Hours
I	**Introduction:** What is an operating system? History of operating system, computer hardware, different operating systems, operating system concepts, system calls, operating system structure. **Processes and Threads:** Processes, threads, interprocess communication, scheduling, IPC problems.	12
II	**Memory Management:** No memory abstraction, memory abstraction: address spaces, virtual memory, page replacement algorithms, design issues for paging systems, implementation issues, segmentation. **File Systems:** Files, directories, file system implementation, file-system management and optimization, MS-DOS file system, UNIX V7 file system, CD ROM file system.	12

III	**Input-Output:** Principles of I/O hardware, Principles of I/O software, I/O software layers, disks, clocks, user interfaces: keyboard, mouse, monitor, thin clients, power management, **Deadlocks:** Resources, introduction to deadlocks, the ostrich algorithm, deadlock detection and recovery, deadlock avoidance, deadlock prevention, issues.	**12**
IV	**Virtualization and Cloud:** History, requirements for virtualization, type 1 and 2 hypervisors, techniques for efficient virtualization, hypervisor microkernels, memory virtualization, I/O virtualization, Virtual appliances, virtual machines on multicore CPUs, Clouds. **Multiple Processor Systems** Multiprocessors, multicomputers, distributed systems.	**12**
V	**Case Study on LINUX and ANDROID:** History of Unix and Linux, Linux Overview, Processes in Linux, Memory management in Linux, I/O in Linux, Linux file system, security in Linux. Android **Case Study on Windows:** History of windows through Windows 10, programming windows, system structure, processes and threads in windows, memory management, caching in windows, I/O in windows, Windows NT file system, Windows power management, Security in windows.	**12**
	Total	**60**

Practical List :-

1. Installation of virtual machine software.
2. Installation of Linux operating system (RedHat / Ubuntu) on virtual machine.
3. Installation of Windows operating system on virtial machine.
4. Linux commands: Working with Directories: pwd, cd, absolute and relative paths, ls, mkdir, rmdir, file, touch, rm, cp. mv, rename, head, tail, cat, tac, more, less, strings, chmod
5.Linux commands: Working with files: ps, top, kill, pkill, bg, fg, grep, locate, find, locate.
6. date, cal, uptime, w, whoami, finger, uname, man, df, du, free, whereis, which. d. Compression: tar, gzip.
7. Windows (DOS) Commands – 1 a. Date, time, prompt, md, cd, rd, path. b. Chkdsk, copy, xcopy, format, fidsk, cls, defrag, del, move.
8. Windows (DOS) Commands – 2 a. Diskcomp, diskcopy, diskpart, doskey, echo b. Edit, fc, find, rename, set, type, ver
9. Working with Windows Desktop and utilities a. Notepad b. Wordpad c. Paint d. Taskbar e. Adjusting display resolution f. Using the browsers g. Configuring simple networking h. Creating users and shares
10. Working with Linux Desktop and utilities a. The vi editor. b. Graphics c. Terminal h

9. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** : Online/Offline

10. Paper Pattern:

a. **Internal Assessment:**

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. **Semester End Theory Examination :**

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

c. **Semester End Practical Examination:**

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	45 Marks	05 Marks	50 Marks

11. **Course Outcome:**

Students will be able to:

CO1:- Illustrate the fundamentals of Operating System and its features.

CO2:- Explain the different types and services provided by an Operating System.

CO3:- Comprehend the concepts of Virtualization and Cloud computing.

CO4:-Describe the different scheduling algorithm.

CO5:-Discuss the properties of different Operating System like Linux Windows, Android etc.

CO 6:-Understand and Execute the Linux Commands in brief.

12. **References:**

1. Modern Operating Systems Andrew S. Tanenbaum, Herbert Bos Pearson 4th edition, 2014
2. Operating Systems –Internals and Design Principles Willaim Stallings Pearson 8th edition, 2009
3. Operating System Concepts Abraham Silberschatz, Peter B. Galvineg Gagne, Wiley, 8th edition
4. Operating Systems Godbole and Kahate McGraw Hill 3rd edition

COURSE STRUCTURE

1. **Title of the Course :** Introduction to Data Science
2. **Semester** : I
3. **Course Code: For Theory:** BDSMJ102

4. **Course Objective:**

   a. To explain idea of data analysis techniques and quantitative modeling for the solution of real world business problems.
   b. To report findings of analysis and effectively present them using data visualization techniques.
   c. To demonstrate knowledge of statistical data analysis techniques utilized in business decision making.
   d. To provide insights about the roles of a Data Scientist, such as a developer, an analyst, a statistical expert etc.
   e. To understand techniques and tools for transformation of data, Data Mining, Data formats, Machine Learning Algorithms, Data Visualization and Optimization.

5. **Category of Course**: Core Course
6. **Total Hours**: 60
7. **Total Credits**: 02 Credits
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BDSMJ102	Data Science	4	-	2	-	2

Module	Detailed Content	Hours
1	**Data Science Technology Stack:** Rapid Information Factory Ecosystem, Data Science Storage Tools, Data Lake, Data Vault, Data Warehouse Bus Matrix, Data Science Processing Tools ,Spark, Mesos, Akka , Cassandra, Kafka, Elastic Search, R ,Scala, Python, MQTT, The Future **Layered Framework:** Definition of Data Science Framework, Cross-Industry Standard Process for Data Mining (CRISP-DM), Homogeneous Ontology for Recursive Uniform Schema, The Top	12

	Layers of a Layered Framework, Layered Framework for High-Level Data Science and Engineering. **Business Layer:** Business Layer, Engineering a Practical Business Layer. **Utility Layer:** Basic Utility Design, Engineering a Practical Utility Layer.	
2	**Three Management Layers:** Operational Management Layer, Processing-Stream Definition and Management, Audit, Balance, and Control Layer, Balance, Control, Yoke Solution, Cause-and-Effect, Analysis System, Functional Layer, Data Science Process. **Retrieve Superstep :** Data Lakes, Data Swamps, Training the Trainer Model, Understanding the Business Dynamics of the Data Lake, Actionable Business Knowledge from Data Lakes, Engineering a Practical Retrieve Superstep, Connecting to Other Data Sources.	12
3	**Assess Superstep:** Assess Superstep, Errors, Analysis of Data, Practical Actions, Engineering a Practical Assess Superstep.	12
4	**Process Superstep :** Data Vault, Time-Person-Object-Location-Event Data Vault, Data Science Process, Data Science. **Transform Superstep :** Transform Superstep, Building a Data Warehouse, Transforming with Data Science, Hypothesis Testing, Overfitting and Underfitting, Precision-Recall, Cross-Validation Test.	12
5	**Transform Superstep:** Univariate Analysis, Bivariate Analysis, Multivariate Analysis, Linear Regression, Logistic Regression, Clustering Techniques, ANOVA, Principal Component Analysis (PCA), Decision Trees, Support Vector Machines, Networks, Clusters, and Grids, Data Mining, Pattern Recognition, Machine Learning, Bagging Data,Random Forests, Computer Vision (CV) , Natural Language Processing (NLP), Neural Networks, TensorFlow. **Organize and Report Supersteps :** Organize Superstep, Report Superstep, Graphics, Pictures, Showing the Difference	12
	Total	60

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9. Evaluation Pattern:

a. **Total Marks** : 100 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)

d. **Mode of Evaluation of Answer-books** : Online/Offline

10. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class test of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination:

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

11. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Develop relevant programming abilities.

CO2: Demonstrate proficiency with statistical analysis of data.

CO3: Develop the ability to build and assess data-based models.

CO4: Execute statistical analyses with professional statistical software.

CO5: Apply data science concepts and methods to solve problems in real-world contexts and will communicate these solutions effectively

CO6: Formulate simple algorithms to solve problems, and can code them in a high-level language appropriate for data science work (e.g., Python, SQL, R, Java).

CO7: Integrate data from disparate sources, can transform data from one format to another, and can program data management in relational databases.

12. References:

1. Practical Data Science by Andreas François Vermeulen , APress, 2018.
2. Principles of Data Science by Sinan Ozdemir, PACKT, 2016.
3. Data Science from Scratch by Joel Grus, O'Reilly, 2015.
4. Data Science from Scratch first Principle in python by Joel Grus, Shroff Publishers, 2017.
5. Experimental Design in Data science with Least Resources by N C Das, Shroff Publishers, 2018.

COURSE STRUCTURE

1. **Title of the Course :** Introduction to Internet
2. **Semester** : I
3. **Course Code: For Theory:** BDSOE103

4. **Course Objective:**

This course is an introduction to the Internet covering the elementary concepts of networked computer systems and introducing you to various communication tools for finding and using the information and resources available on the Internet and for communicating on the Internet.

a. Discuss elementary Internet concepts and history.
b. Make a successful Internet connection.
c. Demonstrate simple principles of Internet Protocol (IP) addressing.
d. Use and customize a web browser.
e. Use e-mail to send and receive messages.
f. Create a website and publish a simple web page.
g. Use File Transfer Protocol (ftp) to perform file downloading and uploading.
h. Use Internet to read and post messages to newsgroups.
i. Use Web search tools.
j. Demonstrate Internet research tools.

5. **Category of Course**: Open Elective
6. **Total Hours**: 60
7. **Total Credits**: 2
8. **Modules:**

Modules	Details	Hours
I	**Understanding the Internet :** Defines essential terms, presents the seven basic Internet services, and reflects on how the Internet is changing the world. **Getting Connected to the Internet :** Explains the purpose and function of an Internet Service Provider (ISP), compares the advantages and disadvantages of the different transport mediums, helps you select or update your Web browser, and teaches advanced surfing techniques that will help you get more out of the Web.	12
II	**Communicating Over the Internet :** Internet Etiquette-covers the courtesy guidelines and rules of the road that you follow to be a good citizen on the Internet. How to use Electronic mail , Newsgroups, Chat Rooms & Streaming on the Internet.	12

III	**Finding Things on the Internet :** Searching for Information - how to find things on the Internet. Commonly Found Internet File Types, Downloading from the Internet-the process of downloading different kinds of files from the Internet. Bibliographic Style for Citing Internet Resources -how to cite Internet resources in APA, MLA, or CMS style.	12
IV	**Designing Web Pages-**introduces you to different ways you can create Web pages. It provides you with design guidelines and principles for creating Web pages. **How HTML works-**explains the concept of markup that will power your Web pages. Putting images and tables on Web Pages. Image mapping ,client side ,server side ,creation of table ,form ,	12
V	**Using Multimedia on the Internet :** How multimedia works over the web, recording audio and putting sound on web pages. **Social Issues and the future of Internet :** Some important issues related to the Internet's impact on our lives and tools for keeping up with technological changes and their societal impact.	12

9. Evaluation Pattern:

- **Total Marks** : 100 Marks (10 Point Grading)
- **Passing Criteria** : 40 % (4 Grade Points)
- **Marking Scheme** : 60:40 Pattern
  - 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
  - 40 Marks - Internal Assessment (Passing = 16 Marks)
- **Mode of Evaluation of Answer-books** : Offline

10 . Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class test of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignments after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination:

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

11. Course Outcome:

After completion of this course, Learner will be able to

CO1: Develop a basic understanding of technologies and protocols used on the Internet, and how to effectively use Internet tools technologies including current web-based applications, e-mail, and social networking tools.

CO2: Send and receive e-mails and chats effectively.

CO4: Search for particular information on browser using searching tools.

CO5: Learn to create simple web pages with multimedia contents like images, audio and videos.

CO6: Learn about Internet Etiquettes in the society.

12. References:

1. Deitel, Deitel, Goldberg, "Internet & World Wide Web How to Program", Third Edition, Pearson Education, 2006.
2. Raj Kamal, “Internet and Web Technologies”, Tata McGraw-Hill.
3. New Perspectives on the Internet, Comprehensive, Sixth Edition, Schneider and Evans, 2007, ISBN: 1-4188-6071-9.
4. Rohit Khurana, “Computer Fundamentals & Internet Basics”, Paperback, 1 January 2010.

COURSE STRUCTURE

1. **Title of the Course :** Introduction to Software Fundamentals
2. **Semester** : I
3. **Course Code: For Theory :** BDVSEC104
   For Practical: BDVSECP104
4. **Course Objective:**
   a. To learn the fundamental programming concepts and methodologies which are essential to building good C programs.
   b. To practice the fundamental programming methodologies in the C programming language via laboratory experiences. Microsoft Visual Studio is the programming environment that will used.
   c. To code, document, test, and implement a well-structured, robust computer program using the C programming language.
   d. To write reusable modules (collections of functions).
   e. The course is designed to provide complete knowledge of C language.
5. **Category of Course** : Vocational Skill Enhancement Course
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

CourseCode	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BDSVSEC104 BDVSECP104	Introduction to software fundamentals	4	2	2	2	4

Module	Detailed Content	Hours
1	**Introduction:** Types of Programming languages, History, features and application. Simple program logic, program development cycle, pseudocode statements and flowchart symbols, sentinel value to end a program, programming and user environments, evolution of programming models., desirable program characteristics. **Fundamentals:** Structure of a program. Compilation and Execution of a Program, Character Set, identifiers and keywords, data types, constants, variables and arrays,	12

	declarations, expressions, statements, Variable definition, symbolic constant.	
2	**Operators and Expressions:** Arithmetic operators, unary operators, relational and logical operators, assignment operators, assignment operators, the conditional operator, library functions. **Data Input and output:** Single character input and output, entering input data, scanf function, printf function, gets and puts functions, interactive programming.	12
3	**Conditional Statements and Loops:** Decision Making Within A Program, Conditions, Relational Operators, Logical Connectives, If Statement, If-Else Statement, Loops: While Loop, Do While, For Loop. Nested Loops, Infinite Loops, Switch Statement. **Functions:** Overview, defining a function, accessing a function, passing arguments to a function, specifying argument data types, function prototypes, recursion, modular programming and functions, standard library of c functions, prototype of a function: foo1lal parameter list, return type, function call, block structure, passing arguments to a function: call by reference, call by value.	12
4	**Program structure:** Storage classes, automatic variables, external variables, static variables, multifile programs, more library functions, **Preprocessor:** Features, #define and #include, Directives and Macros **Arrays:** Definition, processing, passing arrays to functions, multidimensional arrays, arrays and string.	12
5	**Pointers** : Fundamentals, Declarations, Pointer address operators, Pointer type declaration, Pointer assignment, Pointer initialization, Pointer Arithmetic, Functions and Pointers, Arrays and Pointers, Pointer Arrays, Passing functions to other functions. **Structures and Unions:** Structure variables, Initialization, Structure assignment, Nested structures, structures and functions, structures and arrays, Arrays of structures, structures containing arrays Union, structure and pointers.	12
	Total	60

Sr. No.	List of Practical
1	Write a program to find the addition, subtraction, multiplication and division of two numbers
2	Write a program to swap two numbers without using third variable.
3	Write a program to find the area of rectangle, square and circle.
4	Write a program to check whether the number is even or odd.
5	Write a program to find the factorial of a number.
6	Write a program to check whether the entered number is prime or not.
7	Write a program to find the sum of squares of digits of a number.
8	Write a programs to print the Fibonacci series.
9	Write a program to find whether a given number is palindrome or not.
10	Write a program to find the factorial of a number using recursive function..
11	Write a program to find the largest value that is stored in the array.
12	Write a program to demonstrate the use of pointers.
13	Programs on structures.

9. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** : Online/Offline

10. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination:

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10

3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	45 Marks	05 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, students should be able to develop application
CO1: To describe the advantages of a high level language like C/C++, the programming process and the compilation process
CO2: To describe and use software tools in the programming process (IDE)
CO3: To apply good programming principles to the design and implementation of C programs
CO4: To design, implement, debug and test programs using the fundamental elements of C.
CO5: 5: To demonstrate an understanding of primitive data types, values, operators and expressions in C

12. References:

1. Programming with C Byron Gottfried Tata McGRAW Hill 2nd 1996
2. Programming Logic and Design Joyce Farell Cengage Learning 8th 2014
3. "C" Programming" Brian W. Kernighan and Denis M. Ritchie. PHI 2nd
4. Let us C Yashwant P. Kanetkar, BPB publication
5. C for beginners Madhusudan Mothe X-Team Series 1st 2008
6. 21st Century C Ben Klemens OReilly 1st 2012

COURSE STRUCTURE

1. **Title of the Course :** Probability
2. **Semester** : I
3. **Course Code: For Theory :** BDSAEC105
4. **Course Objective:**

    1. To make students to use measure-theoretic and analytical techniques for understanding probability concept.
    2. Use basic counting techniques (multiplication rule, combinations, and permutations) to compute probability and odds.
    3. Work with continuous random variables. In particular, know the properties of uniform, normal and exponential distributions.
    4. Compute the covariance and correlation between jointly distributed variables

5. **Category of Course**: Ability Enhancement Course
6. **Total Hours**: 60
7. **Total Credits**: 02 Credits
8. **Evaluation Pattern:**
    - **Total Marks** : 100 Marks (10 Point Grading)
    - **Passing Criteria** : 40 % (4 Grade Points)
    - **Marking Scheme** : 60:40 Pattern
        - 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
        - 40 Marks - Internal Assessment (Passing = 16 Marks)
    - **Mode of Evaluation of Answer-books** : Online/Offline
9. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BDSAEC105	Probability	4	0	2	0	2

Module	Detailed Content	Hours
1	**Combinatorial Analysis** Introduction The Basic Principle of Counting Permutations Combinations Multinomial Coefficients **Axioms of Probability**	12

	Introduction Sample space and Events Axioms of probability Sample spaces having equally likely outcomes	
2	**Conditional Probability and Independence** Introduction Conditional Probability Bayes' Formula Independent Events **Random Variables** Random Variables Discrete Random Variables Expected Value Expectation of a function of a Random Variable Variance The Bernoulli and Binomial Random Variables The Poisson Random Variable Other Discrete Probability Distributions Expected values of Sums of Random Variables Properties of Cumulative Distribution Function	12
3	**Continuous Random Variables** Introduction Expectation and Variance of Continuous Random Variables The Uniform Random Variable Normal Random Variable Exponential Random Variable Other Continuous Distributions The Distribution of a Function of a Random Variable	12
4	**Jointly Distributed Random Variables** Joint Distribution Functions Independent Random Variables Sums of Independent Random Variables Conditional Distributions Joint probability distributions of Functions of Random Variables	12
5	**Properties of Expectation** Introduction Expectation of sums of random variables Moments of the number of events that occur Covariance, Variance of Sums, and Correlations Conditional Expectation Conditional Expectation and Prediction Moment generating Function Additional Properties of Normal Random Variables General Definition of expectation **Limit Theorem**	12

	Introduction Chebyshev's Inequality and weak law of large numbers The Central Limit Theorem The strong law of large numbers Other Inequalities	
	Total	60

10. Evaluation Pattern:

- **Total Marks** : 100 Marks (10 Point Grading)
- **Passing Criteria** : 40 % (4 Grade Points)
- **Marking Scheme** : 60:40 Pattern
  - 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
  - 40 Marks - Internal Assessment (Passing = 16 Marks)
- **Mode of Evaluation of Answer-books** : Online/Offline

11. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class test of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignments after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination :

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

12. Course Outcome:

Students will be able to:
CO1: Understand measure and measurable functions
CO2: Analyze probability concepts using measure-theoretic approach
CO3: Identify applications of different limit theorems in statistical problems
CO4: Apply Radon-Nikodym theorem in conditional probability

13. References:

1. Billingsley, P. (2008) Probability and Measure, Second edition, John Wiley
2. Bhat, B.R. (2018) Modern Probability Theory, Second edition, Wiley Eastern
3. Rohatgi, V.K. and Salah, A.K.E. (2011) an Introduction to Probability and Statistics, John Wiley & Sons.
4. Durrett, Rick. Probability: Theory and Examples. 4th ed. Cambridge University Press, 2010
5. A first course in probability by Sheldon Ross (Pearson Publication)

COURSE STRUCTURE

1. **Title of the Course :** Environmental Science
2. **Semester** : I
3. **Course Code: For Theory:** BDSVEC106
4. **Course Objective:**
   a. To make students aware about environment and various issues related to it.
   b. The course will provide brief introduction of various topic as pollution, sustainable development, environment and economic etc.
   c. Developing an attitude of concern for the environment.
   d. Motivating public to participate in environment protection and environment improvement.
   e. Acquiring skills to help the concerned individuals in identifying and solving environmental problems.
   f. Striving to attain harmony with Nature.
5. **Category of Course**: Value Education Course
6. **Total Hours**: 60
7. **Total Credits**: 02 Credits
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BDSVEC106	Environmental Science	4	-	2	-	2

Module	Detailed Content	Hours
1	**Introduction to environmental studies:** Multidisciplinary nature of environmental studies; Scope and importance; Concept of sustainability and sustainable development. **Ecosystems :** What is an ecosystem? Structure and function of ecosystem; Energy flow in an ecosystem: food chains, food webs and ecological	12

	succession. Case studies of the following ecosystems: a) Forest ecosystem b) Grassland ecosystem c) Desert ecosystem d) Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)	
2	**Natural Resources : Renewable and Non-renewable Resources:** a) Land resources and land-use change; Land degradation, soil erosion and desertification. b) Deforestation: Causes and impacts due to mining, dam building on environment, forests, biodiversity and tribal populations. c) Water: Use and over-exploitation of surface and ground water, floods, droughts, conflicts over water (international & interstate). d) Energy resources: Renewable and non renewable energy sources, use of alternate energy sources, growing energy needs, case studies. **Biodiversity and Conservation :** a) Levels of biological diversity : genetic, species and ecosystem diversity; Biogeographic zones of India; Biodiversity patterns and global biodiversity hot spots b) India as a mega biodiversity nation; Endangered and endemic species of India c) Threats to biodiversity: Habitat loss, poaching of wildlife, man-wildlife conflicts, biological invasions; Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity. d) Ecosystem and biodiversity services: Ecological, economic, social, ethical, aesthetic and Informational value.	12
3	**Environmental Pollution :** a) Environmental pollution : types, causes, effects and controls; Air, water, soil and noise pollution b) Nuclear hazards and human health risks c) Solid waste management: Control measures of urban and industrial waste. d) Pollution case studies.	12
4	**Environmental Policies & Practices:** a) Climate change, global warming, ozone layer depletion, acid rain	12

	and impacts on human communities and agriculture b) Environment Laws: Environment Protection Act; Air (Prevention & Control of Pollution) Act; Water (Prevention and control of Pollution) Act; Wildlife Protection Act; Forest Conservation Act. International agreements: Montreal and Kyoto protocols and Convention on Biological Diversity (CBD). c) Nature reserves, tribal populations and rights, and human wildlife conflicts in Indian context.	
5	**Human Communities and the Environment :** a) Human population growth: Impacts on environment, human health and welfare. b) Resettlement and rehabilitation of project affected persons; case studies. c) Disaster management: floods, earthquake, cyclones and landslides. d) Environmental movements: Chipko, Silent valley, Bishnois of Rajasthan. e) Environmental ethics: Role of Indian and other religions and cultures in environmental conservation. f) Environmental communication and public awareness, case studies (e.g., CNG vehicles in Delhi). **Field work :** a) Visit to an area to document environmental assets: river/ forest/ flora/fauna, etc. b) Visit to a local polluted site-Urban/Rural/Industrial/Agricultural. c) Study of common plants, insects, birds and basic principles of identification. d) Study of simple ecosystems---pond, river, Delhi Ridge, etc.	12
	Total	60

9. Evaluation Pattern:

a. **Total Marks** : 100

Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)

d. **Mode of Evaluation of Answer-books** : Online/Offline

10. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination :

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

11. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Understand the eco-system and need to protect it.

CO2: Understand various danger to environment and how to protect it.

CO3: Appreciate the ethical, cross-cultural, and historical context of environmental issues and the links between human and natural systems.

CO4: Understand core concepts and methods from ecological and physical sciences and their application in environmental problem-solving.

CO5: Reflect critically on their roles, responsibilities, and identities as citizens, consumers and environmental actors in a complex, interconnected world.

12. References:

1. This Fissured Land: An Ecological History of India by Gadgil, M., & Guha, R. Univ. of California Press 1993.
2. Principles of Conservation Biology by Groom, Martha J., Gary K. Meffe, and Carl Ronald Carroll.Sunderland: Sinauer Associates, 2006.
3. Fundamentals of Ecology by Odum, E.P., Odum, H.T. & Andrews, J. Philadelphia:

Saunders 1971.
4. Environmental and Pollution Science by Pepper, I.L., Gerba, C.P. & Brusseau, M.L. Academic Press 2011.
5. Environment by Raven, P.H., Hassenzahl, D.M. & Berg, L.R. 2012. 8th edition. John Wiley & Sons.
6. Ecology, Environmental Science and Conservation by Singh, J.S., Singh, S.P. and Gupta, S.R. S. Chand Publishing, New Delhi. 2014.

COURSE STRUCTURE

1. Title of the Course: Vedic Mathematics

2. Semester: I

3. Course Code: BDSIKS107

4. Course Objectives:

- To enable the learners to explore the power of Vedic Maths.
- To make learners strong in Numerical Maths.
- To enable learners to recognize and understand simple techniques of Arithmetic Calculations.
- To train learners to use the ideas of Vedic Maths in daily calculations and make those calculations with accuracy and speed.

5. Category of Course: Indian Knowledge System

6. Total Hours: 60

7. Total Credits: 02 Credits (02 Credits for Theory)

8. Evaluation Pattern:

- Total Marks : 100 Marks (10 Point Grading)
- Passing Criteria : 40 % (4 Grade Points)
- Marking Scheme : 60:40 Pattern
- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- Mode of Evaluation of Answer-books : Offline

9.Modules:

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
	Vedic Mathematics	5	-	2	-	2

Module	Detail Syllabus	Hours
Unit 1.	**INTRODUCTION:** History of Vedic maths, why Vedic maths, salient features of Vedic maths, Vedic maths formulas, 16 sutras and 13 sub sutras, terms and operations, Beejank, Vinculum Operations, High speed addition by using the concept of completing the whole and superfast subtraction by Nikhilam Sutram from basis 100,1000,10,000…and with any sub base like 200, 300 ,400 ,500…, Subtraction using Vinculum. UNIT	**12**
Unit 2.	**SUTRAS OF MULTIPLICATION:** Multiplication by Nikhilam Sutra, multiplication of numbers nearest to the bases 10,100,1000,10000, and multiplication of numbers near sub bases 20,30,40,50,60,70,80,90,500,5000…. fast multiplication by 11,12,13….,19, Multiplication with multiples of 111 and 1111, multiplication of numbers consisting of all 9s by Eknuyena and Nikhilam Sutra, multiplication of Numbers ending with 9, Multiplication by Anatyodarshkeyapi, Multiplication by Urdhav triyaghbhyam sutram, (two, three and four digits), Formation of any Two Digit table	**12**
Unit 3.	**SUTRAS OF SQUARES,SQUARE ROOTS,CUBE AND CUBE ROOTS :** Meaning of Ekadhiken Sutram and its applications in finding squaring of numbers ending in 5, squaring by Anurupeyana Sutra, squaring by Yavdunamthavadunikrityavargamchayojyet sutra, squaring by Dwandvayoga sutra (General method of squaring), Verification by Beejank Method, squaring numbers nearest 50 and any other subbase, square roots of perfect squares (upto 5 digits) by Viloknam Sutra, general method of square roots, cubes by Anurupeyana sutra, Cube Roots of Exact Cubes (upto 6digits).	**12**
Unit 4.	**SUTRAS OF FACTORISATION AND DIVISION:** HCF AND LCM, Divisibility test, Division by Nikhilam Navatascaramam Dasatah Sutra, division by Paravartya Yojayet, division by Anurupeyana, Division by Dwazank Sutra (Straight division), Conversion of vulgar fractions 1/19,1/29,1/39,1/49…..into decimals by Ekadhiken Purven Sutra, Recurring Decimals of fractions 1/13,1/23,5/33,9/11….by Anurupyen, Auxiliary fractions and its application in finding out recurring decimals of Vulgar fractions, Ratio and proportions Percentage, Profit and Loss, Simple interest, Compound Interest.	**12**
Unit 5.	**SUTRAS FOR GEOMETRY:** Triples, triples addition, double angle, quadrant angels, rotations, application of triples: Triple Subtraction, Triple Geometry, Angle between two lines, Half Angle, Coordinate Geometry (two dimension): Length of perpendicular from a point onto a line, Circle problems, Equation of a straight line through two given points by Urdhavtriagbhyam Sutra, Triple Trigonometry, Bodhayan Sutra as Pythagoras theorem, Mensuration(Measurement of Volume and Surface area of Cuboid, Cylinder, Cone, Sphere)	**12**

11. Paper Pattern:

a. Internal Assessment:

● Assessment consists of a class test of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.

● Students have to submit assignments after completion of each module which will carry 15 marks and 5 marks are for attendance

b. Semester End Theory Examination:

Question No.	Description	Marks
1.	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3.	Answer any two Questions (Descriptive based on module 2)	10
4.	Answer any two Questions (Descriptive based on module 3)	10
5.	Answer any two Questions (Descriptive based on module 4)	10
6.	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

12. Course Outcomes:

PO 1: To enhance computational skills in mathematics
PO 2: Develop Analytical thinking through Vedic maths.
PO 3: Enable further research in Indian Ancient mathematics.
PO 4: Conduct seminar on the subject and bringing together scholars in Vedic Mathematics.
PO 5: Develop postal and online study courses on Indian ancient mathematics.
PO 6: Instil love and remove the fear of mathematics.
PO 7: Promote Vedic culture.
PO 8: Crack entrance of competitive exams.
PO 9: Develop the understanding of objectives and features of Vedic Geometry.
PO 10: Understand and apply Triples in coordinate geometry of two dimension.

13. Text Book:

S. B. Tirthaji, Vedic Mathematics, Motilal Banarsidass Private Limited, Revised Edition, 1992

14. Reference Books:

1 K. R. Williams, Vedic Mathematics Teacher's Manual, Inspiration Books, Revised Edition, 2009
2 M. Tyra, Magical Book On Quicker Maths, ESC Publications, 5th Edition, 2018

COURSE STRUCTURE

1. **Title of the Course :** Data structures
2. **Semester** : II
3. **Course Code: For Theory:** BDSMJ201
4. **Course Objective:**
   a. To impart the basic concepts of data structures and algorithms
   b. To understand concepts about searching and sorting techniques
   c. To Understand basic concepts about stacks,queues,lists,trees and graphs
   d. To understanding about writing algorithms and step by step approach in solving problems with the help of fundamental data structures
5. **Category of Course** : Major Mandatory
6. **Total Hours**: 60
7. **Total Credits**: 02Credits
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BDSMJ201	Data structure	4	0	2	0	2

Module	Detailed Content	Hours
1	**Introduction:** Data and Information, Data Structure, Classification of Data Structures, Primitive Data Types, Abstract Data Types, Data structure vs. File Organization, Operations on Data Structure ,Algorithm, Importance of Algorithm Analysis, Complexity of an Algorithm, Asymptotic Analysis and Notations, Big O Notation, Big Omega Notation, Big Theta Notation, Rate of Growth and Big O Notation. **Array**: Introduction, One Dimensional Array, Memory Representation of One Dimensional Array, Traversing, Insertion, Deletion, Searching, Sorting, Merging of Arrays, Multidimensional Arrays, Memory Representation of Two Dimensional Arrays, General Multidimensional Arrays, Sparse	12

	Arrays, Sparse Matrix, Memory Representation of Special kind of Matrices, Advantages and Limitations of Arrays.	
2	**Linked List:** Linked List, One-way Linked List, Traversal of Linked List, Searching, Memory Allocation and De-allocation, Insertion in Linked List, Deletion from Linked List, Copying a List into Other List, Merging Two Linked Lists, Splitting a List into Two Lists, Reversing One way linked List, Circular Linked List, Applications of Circular Linked List, Two way Linked List, Traversing a Two way Linked List, Searching in a Two way linked List, Insertion of an element in Two way Linked List, Deleting a node from Two way Linked List, Header Linked List, Applications of the Linked list, Representation of Polynomials, Storage of Sparse Arrays, Implementing other Data Structures.	12
3	**Stack:** Introduction, Operations on the Stack Memory Representation of Stack, Array Representation of Stack, Applications of Stack, Evaluation of Arithmetic Expression, Matching Parenthesis, infix and postfix operations, Recursion. **Queue:** Introduction, Queue, Operations on the Queue, Memory Representation of Queue, Array representation of queue, Linked List Representation of Queue, Circular Queue, Some special kinds of queues, Deque, Priority Queue, Application of Priority Queue, Applications of Queues	12
4	**Sorting and Searching Techniques**: Bubble, Selection, Insertion, Merge Sort. Searching: Sequential, Binary, Indexed Sequential Searches, Binary Search. **Tree:** Tree, Binary Tree, Properties of Binary Tree, Memory Representation of Binary Tree, Operations Performed on Binary Tree, Reconstruction of Binary Tree from its Traversals, Huffman Algorithm, Binary Search Tree, Operations on Binary Search Tree, Heap, Memory Representation of Heap, Operation on Heap, Heap Sort. **Advanced Tree Structures:** Red Black Tree, Operations Performed on Red Black Tree, AVL Tree, Operations performed on AVL Tree, 2- 3 Tree, B-Tree.	12
5	**Hashing Techniques:** Hash function, Address calculation techniques, Common hashing functions Collision resolution, Linear probing, Quadratic, Double hashing, Bucket hashing, Deletion and rehashing **Graph:** Introduction, Graph, Graph Terminology, Memory Representation of Graph, Adjacency Matrix Representation of Graph, Adjacency List or Linked Representation of Graph, Operations Performed on Graph, Graph Traversal, Applications	12

	of the Graph, Reachability, Shortest Path Problems, Spanning Trees.	
	Total	60

9. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)

d. **Mode of Evaluation of Answer-books** : Offline

10. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination:

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

11. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Ability to analyse algorithms and algorithm correctness

CO2: Ability to summarize searching and sorting techniques

CO3: Ability to describe stack, queue and linked list operation.

CO4: Ability to have knowledge of tree and graphs concepts.

12. References:

1. A Simplified Approach to Data Structures Lalit Goyal, Vishal Goyal, Pawan Kumar SPD 1st 2014
2. An Introduction to Data Structure with Applications Jean – Paul Tremblay and Paul Sorenson Tata MacGraw Hill 2nd 2007
3. Data Structure and Algorithm Maria Rukadikar SPD 1st 2017
4. Schaum's Outlines Data structure Seymour Lipschutz Tata McGraw Hill 2nd 2005
5. Data structure – A Pseudo code Approach with C AM Tanenbaum, Y Langsam and MJ Augustein Prentice Hall India 2nd 2006
6. Data structure and Algorithm Analysis in C Weiss, Mark Allen Addison Wesley 1st 2006

COURSE STRUCTURE

1. **Title of the Course :** OOPS with Java
2. **Semester** : II
3. **Subject Code: For Theory:** BDSMJ202
   For Practical: BDSMJP202
4. **Course Objective:**

   a. Understanding how to implement object-oriented designs with Java.
   b. The use of Java in a variety of technologies and on different platforms
   c. To design and program stand-alone Java applications.
   d. To learn how to design a graphical user interface (GUI) with Java AWT.
   e. To understand how to use Java APIs for program development.
   f. To learn how to use exception handling in Java applications.
   g. To learn Java generics and how to use the Java Collections API.
   h. Understand how to design applications with threads in Java.
   i. To learn how to read and write files in Java.

5. **Category of Course** : Major Mandatory
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (04 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

CourseCode	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BDSMJ202 BDSMJP202	OOPS with Java	4	2	2	2	4

Module	Detailed Content	Hours
1	**Introduction:** History, architecture and its components, Java Class File, Java Runtime Environment, The Java Virtual Machine, JVM Components, The Java API, java platform, java development kit, Type Annotations, Method Parameter Reflection, setting the path environment variable, Java Compiler And Interpreter, java programs, java applications, main(), public, static, void, string[] args, statements, white space, case sensitivity, identifiers, keywords, comments, braces and code blocks, variables, variable name **Data types:** primitive data types, Object Reference Types,	12

	Strings, Auto boxing, operators and properties of operators, Arithmetic operators, assignment operators, increment and decrement operator, relational operator, logical operator, bitwise operator, conditional operator.	
2	**Control Flow Statements:** The If…Else If…Else Statement, The Switch…Case Statement. **Iterations:** The While Loop, The Do … While Loop, The For Loop, The Foreach Loop, Labeled Statements, The Break And Continue Statements, The Return Statement **Classes:** Types of Classes, Scope Rules, Access Modifier, Instantiating Objects From A Class, Initializing The Class Object And Its Attributes, Class Methods, Accessing A Method, Method Returning A Value, Method's Arguments, Method Overloading,Variable Arguments [Varargs], Constructors, this Instance, super Instance, Characteristics Of Members Of A Class, constants, this instance, static fields of a class, static methods of a class, garbage collection.	12
3	**Inheritance:** Derived Class Objects, Inheritance and Access Control, Default Base Class Constructors, this and super keywords. Abstract Classes And Interfaces, Abstract Classes, Abstract Methods, Interfaces, What Is An Interface? How Is An Interface Different From An Abstract Class?, Multiple Inheritance, Default Implementation, Adding New Functionality, Method Implementation, Classes V/s Interfaces, Defining An Interface, Implementing Interfaces. **Packages:** Creating Packages, Default Package, Importing Packages, Using A Package.	12
4	**Enumerations, Arrays:** Two Dimensional Arrays, Multi-Dimensional Arrays, Vectors, Adding Elements To A Vector, Accessing Vector Elements, Searching For Elements In A Vector, Working With The Size of The Vector. **Multithreading:** the thread control methods, thread life cycle, the main thread, creating a thread, extending the thread class. **Exceptions:** Catching Java Exceptions, Catching Run-Time Exceptions, Handling Multiple Exceptions, The finally Clause, The throws Clause **Byte streams:** reading console input, writing console output, reading file, writing file, writing binary data.	12
5	**Event Handling:** Delegation Event Model, Events, Event classes, Event listener interfaces, Using delegation event model, adapter classes and inner classes. **Abstract Window Toolkit:** Window Fundamentals, Component, Container, Panel, Window, Frame, Canvas. Components – Labels, Buttons, Check Boxes, Radio Buttons, Choice Menus, Text Fields, Text, Scrolling List, Scrollbars, Panels, Frames **Layouts:** Flow Layout, Grid Layout, Border Layout, Card Layout.	12
	Total	60

Sr. No.	List of Practical
1	Write a Java program that takes a number as input and prints its multiplication table upto 10.
2	Write a Java program to reverse a string.
3	Find the smallest and largest element from the array
4	Designed a class that demonstrates the use of constructor and destructor.
5	Write a java program to implement multiple inheritance
6	Create a package, Add the necessary classes and import the package in java class.
7	Write a java program to implement the vectors.
8	Write a java program to implement multithreading
9	Write a java program to open a file and display the contents in the console window.
10	Design a AWT program to print the factorial for an input value.
11	Design a calculator based on AWT application.

9. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** : Online/Offline

10. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination :

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10

2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	45 Marks	05 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Use an integrated development environment to write, compile, run, and test simple Object-oriented Java programs

CO2: Use the Java programming language for various programming technologies.

CO3: Develop software in the Java programming language, (application)

CO4: knowledge of the structure and model of the Java programming language, (knowledge).

CO5: propose the use of certain technologies by implementing them in the Java programming language to solve the given problem (synthesis).

12. References:

1. Core Java 8 for Beginners By Vaishali Shah, Sharnam Shah, 1th Edition, SPD,2015
2. Java: The Complete Reference By Herbert Schildt, 9th , McGraw Hill, Edtition, 2014
3. Core Java, Volume I: Fundamentals, By Hortsman, 9rd Edition, Pearson, 2019

COURSE STRUCTURE

1. **Title of the Course:** Algebra
2. **Semester**: II
3. **Course Code: For Theory:** BDSMN203
4. **Course Objective:**

The course is aimed to develop the basic Mathematical skills of learners that are imperative for effective understanding of data science subjects. The topics introduced will serve as basic tools for specialized studies in many fields of engineering and technology.

a. Determinants & Matrices: To provide knowledge of determinants & matrices which is applied for solving system of linear equations and useful in various fields of technology.
b. Complex numbers: This course enables the learner to learn the concept of imaginary numbers and gives awareness about algebra of complex numbers which helps in understanding of area of subjects like electrical circuits and complex analysis etc.
c. Vector & Vector Space: This course enables the learners to understand the concept of Vector & Vector Space and its applications.
d. This course will also enable the learners to understand the concept of fast Fourier and its usability in the field of Data Science.
e. This course will also enable the learners to understand the concept of probability and statistics and its usability in the field of Data Science.

5. **Category of Course**: Core
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BDSMN203	Algebra	4	-	2	-	2

Module	Detailed Content	Hours
1	**Determinants:** The properties of determinants, Permutations and cofactors, Cramer's rule, Inverses and Volumes. **Introduction to vectors:** Vectors and Linear combinations, Lengths and Dot products, Matrices. **Solving Linear equations:**	12

	Vectors and Linear equations, the idea of elimination, Elimination using matrices, Rules for matrix operations, Inverse matrices, Elimination = Factorization: A=LU, Transpose and permutations.	
2	**Vector spaces and subspaces:** Spaces of vectors, the nullspace of A: solving AX = 0 and Rx = 0, The complete solution to AX = b, Independence, Basis and Dimension, Dimensions of the four subspaces. **Orthogonality:** Orthogonality of the four subspaces, Projections, Least square approximations, Orthonormal bases and Gram-Schmidt. **Eigenvalues and Eigenvectors:** Introduction to Eigenvalues, Diagonalizing a Matrix, Systems of Differential equations, Symmetric Matrices, Positive Definite Matrices.	12
3	**The singular value decomposition (SVD):** Image processing by Linear algebra, Bases and matrices in the SVD, Principal component analysis (PCA by SVD), The geometry of the SVD. **Linear Transformation:** The idea of linear transformation, The matrix of a linear transformation, The search for a good basis.	12
4	**Complex vectors and matrices:** Complex Numbers, Hermitian and Unitary matrices, The Fast Fourier. **Applications:** Graphs and networks, Matrices in engineering, Markov matrices, population and economics, Linear programming, Fourier series: Linear algebra for functions, Computer graphics, Linear algebra for cryptography.	12
5	**Numerical linear algebra:** Gaussian elimination in practice, Norms and condition numbers, Iterative methods and preconditioners. **Linear algebra in probability and statistics:** Mean, variance, and probability, Covariance matrices and joint probabilities, Multivariate gaussian and weighted least squares.	12
	Total	60

Sr. No.	**List of Practical**
1.	Using SPSS, execute the basic commands like Importing from Excel, Characteristics of Variables, Adding Value Labels.
2.	Using SPSS, write a program to understand basic commands on Grouping Data, Transforming Variables, Selecting a Subset, Producing summary stat.

3.	Using SPSS, write a program for understanding Frequencies, Percentages, Averages, Measures of spread.
4.	Using SPSS, execute the basic commands for producing Bar Charts, Cluster Bar Charts.
5.	Using SPSS, execute the basic commands for producing Histograms, Pie Charts.
6.	Using SPSS, execute the basic commands for producing Boxplots, Scatter Diagrams.
7.	Using SPSS, execute the basic commands for producing Tables, Two Way Tables.
8.	Using SPSS, execute the basic commands Interpreting Output, Drawing Conclusions Exporting to Word and PDF.

9. Evaluation Pattern:

a. **Total Marks:** 150 Marks (10 Point Grading)

b. **Passing Criteria**: 40 % (4 Grade Points)

c. **Marking Scheme:** 60:40

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)

d. **Mode of Evaluation of Answer-books:** Offline

10. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination:

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each.

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	45 Marks	05 Marks	50 Marks

11. Course Outcome:

On successful completion of this course, the Learner should be able to:

CO1: Apply the knowledge of determinants and matrices to solve the problems in field of Image processing, Computer Graphics, Network Security etc.

CO2: Ability to interpret the mathematical results in physical or practical terms for complex numbers.

CO3: Solve and analyse the vector & Application in related field of engineering.

CO4: Solve and analyse fast Fourier in fields like Image processing.

CO5: Solve and Analyse problems in basic probability and statistics.

12. References:

1. A text book of Applied Mathematics by P.N.Wartikar and J.N.Wartikar, Vol – I and – II , 9th Edition, Pune Vidyarthi Graha, 2010.
2. Higher Engineering Mathematics by Dr. B. S. Grewal, 42nd Edition, Khanna Publication, 2017.
3. Advanced Engineering Mathematics by Erwin Kreyszig, 9th Edition, Wiley Eastern Limited.
4. A Textbook of Matrices by Shanti Narayan & P K Mittal, S. Chand publication, 1953.
5. Elementary Linear Algebra Application by Howard Anton and Christ Rorres, 11th edition, Wiley.

COURSE DETAILS

1. Title of the Course: E- Commerce

2. Semester: II

3. Course Code: BDSOE204

4. Course Objectives:

- To familiarize the student with the basic concept of e-commerce
- To provide him/her with the knowledge of planning, scheduling and controlling a successful e-business.

5. Category of Course: Open Elective

6. Total Hours: 60

7. Total Credits: 02 Credits

8. Modules:

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BDSOE204	E-Commerce	4	-	2	-	2

Module	Detail Syllabus	Hours
Unit 1.	**INTRODUCTION:** Introduction to E-Commerce, History of E-Commerce, Commerce vs. E-Commerce, Traditional Business vs. Direct Selling, Types of E-Commerce: Business-to-Business, Business-toConsumer, Consumer-to-Business, Consumer-to-Consumer.	**12**
Unit 2.	**ELECTRONIC PAYMENT SYSTEMS:** Overview of Electronic Payment Technology, Credit Card, Debit Card, Smart Card, E-Money, Electronic Fund Transfer, Electronic Data Interchange.	**12**
Unit 3.	**INFRASTRUCTURE FOR E-COMMERCE:** The Internet, development of Internet, TCP/IP, Router, Firewall, The World Wide Web, web browser, web server, HTTP, HTML, Web architecture, Client / server technology, web server, Application Server, Database Server	**12**
Unit 4.	**NET COMMERCE AND LEGAL AND SECURITY ISSUES IN E-COMMERCE SUPPLY CHAIN MANAGEMENT:** Basic Component, Impact of Globalization on the Supply Chain, Customer Relations Management (CRM): Process and technology Aspects to CRM, Issues, Legal and Security Issues in E-Commerce	**12**
Unit 5.	**ETHICS:** Introduction to Ethics, Overview of Ethical Issues, Privacy & its Protection, Emerging Legal Issues, Encryption & Security	**12**

9. Evaluation Pattern:

- Total Marks : 100 Marks (10 Point Grading)
- Passing Criteria : 40 % (4 Grade Points)
- Marking Scheme : 60:40 Pattern
- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- Mode of Evaluation of Answer-books : Offline

10. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class test of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignments after completion of each module which will carry 15 marks and 5 marks are for attendance

b. Semester End Theory Examination:

Question No.	Description	Marks
1.	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3.	Answer any two Questions (Descriptive based on module 2)	10
4.	Answer any two Questions (Descriptive based on module 3)	10
5.	Answer any two Questions (Descriptive based on module 4)	10
6.	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

11. Course Outcomes:

Upon successful completion of this course, Learner should be able to:

CO1: Acquire a good knowledge of e-commerce, both the technical and business aspects

CO2: Understand the principles and practices of e-commerce and its related technologies.

12. Reference Books:

1. Bajaj & Nag, E-Business (TMH: New Delhi)
2. David Whiteley, E-Commerce: Strategy, Technologies and Applications (McGraw Hill Education)
3. Chaffey, E-Business and E-Commerce Management: Strategy, implementation and Practice Pearson Education India.
4. Rayport, Jeffrey F and Jaworksi, Bernard J, “Introduction to E-Commerce”, 2003, Tata McGraw Hill, New Delhi.
5. Turban, Efraim, and David King, “Electronic Commerce: A Managerial Perspective”, 2010, Pearson Education Asia, Delhi.
6. Laudon, Kenneth C and Carol Guercio Traver: E-Commerce business. Technology, 2011, Pearson Education, Delhi.

COURSE STRUCTURE

1. Title of the Course : Python Programming

2. Semester : II

3. Course Code: For Theory: BDSVSEC205
For Practical: BDSVSECP205

4. Course Objective:

a. To understand why Python is a useful scripting language for developers.
b. To learn how to design and program Python applications.
c. To learn how to use lists, tuples, and dictionaries in Python programs.
d. To learn how to identify Python object types.

5. Category of Course : Vocational Skill Enhancement Course

6. Total Hours: 60

7. Total Credits: 04 Credits (02 Credits for Theory & 02 Credits for Practical)

8. Modules:

Course Code	**Course Name**	**Teaching Scheme (Hours /Week)**		**Credits Assigned**		
		Theory	**Practical/ Tutorial**	**Theory**	**Practical / Tutorial**	**Total**
BDSVSEC205 BDSVSECP205	Introduction to python	4	2	2	2	4

Module	**Detailed Content**	**Hours**
1	**Introduction:** The Python Programming Language, History, features, Installing Python, Running Python program, Debugging : Syntax Errors, Runtime Errors, Semantic Errors, Experimental Debugging, Formal and Natural Languages, The Difference Between Brackets, Braces, and Parentheses, **Variables and Expressions** Values and Types, Variables,Variable Names and Keywords, Type conversion, Operators andOperands, Expressions, Interactive Mode and Script Mode, Order of Operations. **Conditional Statements:** if, if-else, nested if –else **Looping**: for, while, nested loops	12

	Control statements: Terminating loops, skipping specificconditions.	
2	**Functions:** Function Calls, Type Conversion Functions, Math Functions, Composition, Adding New Functions, Definitionsand Uses, Flow of Execution, Parameters and Arguments, Variables and Parameters Are Local, Stack Diagrams, Fruitful Functions andVoid Functions, Why Functions? Importing with from, Return Values, Incremental Development, Composition, Boolean Functions, More Recursion, Leap of Faith, Checking Types **Strings:** A String Is a Sequence, Traversal with a for Loop,String Slices, Strings Are Immutable, Searching, Looping andCounting, String Methods, The in Operator, String Comparison, StringOperations.	12
3	**Lists:** Values and Accessing Elements, Lists are mutable,traversing a List, Deleting elements from List, Built-in List Operators, Concatenation, Repetition, In Operator, Built-in List functionsand methods **Tuples and Dictionaries:** Tuples, Accessing values in Tuples,Tuple Assignment, Tuples as return values, Variable-length argumenttuples, Basic tuples operations, Concatenation, Repetition, in Operator, Iteration, Built-in Tuple Functions Creating a Dictionary, Accessing Values in a dictionary, Updating Dictionary, Deleting Elements from Dictionary, Properties ofDictionary keys, Operations in Dictionary, Built-In DictionaryFunctions, Built-in Dictionary Methods **Files:** Text Files, The File Object Attributes, Directories, **Exceptions:** Built-in Exceptions, Handling Exceptions, Exception with Arguments, User-defined Exceptions	12
4	**Regular Expressions –** Concept of regular expression, varioustypes of regular expressions, using match function. **Classes and Objects:** Overview of OOP (Object Oriented Programming), Class Definition, Creating Objects, Instances as Arguments, Instances as return values, Built-in Class Attributes,	12

	Inheritance, Method Overriding, Data Encapsulation, DataHiding **Multithreaded Programming:** Thread Module, creating athread, synchronizing threads, multithreaded priority queue **Modules:** Importing module, Creating and exploring modules, Math module, Random module, Time module	
5	**Creating the GUI Form and Adding Widgets:** **Widgets:** Button, Canvas, Checkbutton, Entry, Frame, Label, Listbox, Menubutton, Menu, Message, Radiobutton, Scale, Scrollbar, text,Toplevel, Spinbox, PanedWindow, LabelFrame, tkMessagebox.Handling Standard attributes and Properties of Widgets. **Layout Management:** Designing GUI applications with proper Layout Management features. **Look and Feel Customization**: Enhancing Look and Feel of GUI using different appearances of widgets. **Storing Data in Our MySQL Database via Our GUI :** Connecting to a MySQL database from Python, Configuring the MySQLconnection, Designing the Python GUI database, Using the INSERT command, Using the UPDATE command, Using the DELETE command, Storing and retrieving data from MySQL database.	12
	Total	60

Sr. No.	List of Practical
1	**Write the program for the following:** a.Create a program that asks the user to enter their name and their age. Printout a message addressed to them that tells them the year that they will turn 100 yearsold. b. Enter the number from the user and depending on whether the number iseven or odd, print out an appropriate message to the user. c. Write a program to generate the Fibonacci series. d. Write a function that reverses the user defined value. e. Write a function to check the input value is Armstrong and also write thefunction for Palindrome.

	f. Write a recursive function to print the factorial for a given number.
2	**Write the program for the following:** a.Write a function that takes a character (i.e. a string of length 1) and returnsTrue if it is a vowel, False otherwise. b. Define a function that computes the *length* of a given list or string. c. Define a *procedure* histogram() that takes a list of integers and prints a histogram to the screen. For example, histogram([4, 9, 7]) should print the following: **** ********* *******
3	**Write the program for the following:** a.A *pangram* is a sentence that contains all the letters of the English alphabetat least once, for example: *The quick brown fox jumps over the lazy dog*. Your taskhere is to write a function to check a sentence to see if it is a pangram or not. b. Take a list, say for example this one: a = [1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89] and write a program that prints out all the elements of the list that are less than5.
4	**Write the program for the following:** a. Write a program that takes two lists and returns True if they have at least onecommon member. b. Write a Python program to print a specified list after removing the 0th, 2nd,4th and 5th elements. c. Write a Python program to clone or copy a list
5	**Write the program for the following:** a.Write a Python script to sort (ascending and descending) a dictionary byvalue. b. Write a Python script to concatenate following dictionaries to create a newone. Sample Dictionary : dic1={1:10, 2:20} dic2={3:30, 4:40} dic3={5:50,6:60} Expected Result : {1: 10, 2: 20, 3: 30, 4: 40, 5: 50, 6: 60} c. Write a Python program to sum all the items in a dictionary.
6	**Write the program for the following:** a.Write a Python program to read an entire text file. b. Write a Python program to append text to a file and display the text.

	c. Write a Python program to read last n lines of a file.
7	**Write the program for the following:** a.Design a class that store the information of student and display the same b. Implement the concept of inheritance using python c. Create a class called Numbers, which has a single class attribute called MULTIPLIER, and a constructor which takes the parameters x and y (theseshould all be numbers). i. Write a method called add which returns the sum of the attributes x and y. ii. Write a class method called multiply, which takes a single numberparameter a and returns the product of a and MULTIPLIER. iii. Write a static method called subtract, which takes two number parameters,b and c, and returns b - c. iv. Write a method called value which returns a tuple containing the values ofx and y. Make this method into a property, and write a setter and a deleter formanipulating the values of x and y.
8	**Write the program for the following:** Open a new file in IDLE ("New Window" in the "File" menu) and save it as geometry.py in the directory where you keep the files you create for thiscourse.Then copy the functions you wrote for calculating volumes and areasin the "Control Flow and Functions" exercise into this file and save it. Now open a new file and save it in the same directory. You should now beable to import your own module like this: import geometry Try and add print dir(geometry) to the file and run it. Now write a function pointyShapeVolume(x, y, squareBase) that calculatesthe volume of a square pyramid if squareBase is True and of a right circularcone if squareBase is False. x is the length of an edge on a square if squareBaseis True and the radius of a circle when squareBase is False. y is the height ofthe object.First use squareBase to distinguish the cases. Use the circleArea and squareArea from the geometry module to calculate the base areas. b. Write a program to implement exception handling.
9	**Write the program for the following:** a.Try to configure the widget with various options like: bg="red", family="times",size=18 b. Try to change the widget type and configuration options to experiment withother widget types like Message, Button, Entry, Checkbutton, Radiobutton,,Scaleetc.

10	**Design the database applications for the following:** a. Design a simple database application that stores the records and retrieve thesame. b. Design a database application to search the specified record from the database. c. Design a database application to that allows the user to add, delete and modify the records

9. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** : Online/Offline

10. Paper Pattern:

a. **Internal Assessment:**

- Assessment consists of a class tests of 20 marks. The class test is to be conductedwhen approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which willcarry 15 marks and 5 marks are for attendance.

b. **Semester End Theory Examination:**

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

c. **Semester End Practical Examination:**

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	45 Marks	05 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, Learner should be able to:

CO1: Explain basic principles of Python programming language

CO2: Implement object oriented concepts.

CO3: Implement database and GUI applications.

12. References:

1. Think Python Allen Downey O'Reilly 1st 2012

2. An Introduction to Computer Science using Python 3 Jason Montojo, Jennifer Campbell, Paul Gries SPD 1st 2014.

3. Python GUI Programming Cookbook Burkhard A. Meier Packt 2015

4. Fundaments of Database System by Ramez Elmasri and Shamkant B. Navathe, 7th Edition, Pearson Education India, 2010

5. Object-oriented Programming in Python Michael H. Goldwasser, David Letscher Pearson Prentice Hall 1st 2008.

COURSE DETAILS

1. **Title of the Course:** Communication Skill
2. **Course Code: For Theory:** BDSAEC206
3. **Course Objective:**
   a. Understand how they use their energy to work effectively.
   b. Learn how to manage themselves better, especially when facing work situations which cause them stress.
   c. Be more aware of the impact they have on other people.
   d. Be more skillful at understanding how and why other people behave and react as they do.
4. **Category of Course:** Ability Enhancement Course
5. **Semester:** II
6. **Total Hours:** 60
7. **Total Credits:** 02 Credits
8. **Modules: -**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical / Tutorial	Theory	Practical / Tutorial	Total
BDSAEC206	Communication Skill	4	-	2	-	2

Module	Details	Hours
I	**The Seven Cs of Effective Communication:** Completeness, Conciseness, Consideration, Concreteness, Clarity, Courtesy, Correctness. **Understanding Business Communication:** Nature and Scope of Communication, Non-verbal Communication, Cross-cultural communication, Technology-enabled Business	12

II	**Writing Business Messages and Documents:** Business writing, Business Correspondence, Instructions Business Reports and Proposals, Career building and Resume writing. **Developing Oral Communication Skills for Business:** Effective Listening, Business Presentations and Public Speaking,	**12**
III	**Developing Oral Communication Skills for Business:** Meetings and Conferences, Group Discussions and Team Presentations, Team Briefing. **Understanding Specific Communication Needs:** Communication across Functional Areas	**12**
IV	**Understanding Specific Communication Needs:** Corporate Communication, Persuasive Strategies in Business Communication, Ethics in Business Communication, Business Communication Aids	**12**
V	**Presentation Process:** Planning the presentations, executing the presentations, Impressing the audience by performing, Planning stage: Brainstorming, mind maps / concept maps, executing stage: chunking theory, creating outlines, Use of templates. Adding graphics to your presentation: Visual communication, Impress stage: use of font, colour, layout, Importance of practice and performance.	**12**
	Total	**60**

9. Evaluation Pattern:

a. **Total Marks:** 100 Marks (10 Point Grading)
b. **Passing Criteria**: 40 % (4 Grade Points)
c. **Marking Scheme:** 60:40 Pattern
   - 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
   - 40 Marks - Internal Assessment (Passing = 16 Marks)
d. **Mode of Evaluation of Answer-books:** Online/Offline

10. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination:

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

11.Course Outcome:

After studying this course, the learners will be able to

CO1: understand and apply knowledge of human communication and language processes as they occur across various contexts, e.g., interpersonal, intrapersonal, small group, organizational, media, gender, family, intercultural communication, technologically mediated communication, etc. from multiple perspectives.

CO2: understand and evaluate key theoretical approaches used in the interdisciplinary field of communication. I.e., students will be able to explain major theoretical frameworks, constructs, and concepts for the study of communication and language, summarize the work of central thinkers associated with particular approaches, and begin to evaluate the strengths and weaknesses of their approaches.

CO3: understand the research methods associated with the study of human communication, and apply at least one of those approaches to the analysis and evaluation of human communication.

12. References:

1. Business Communication Edited by Meenakshi Raman and Prakash Singh Oxford University Press Second.
2. Professional Communication Aruna Koneru Tata McGraw Hill
3. Strategies for improving your business communication Prof. M. S. Rao Shroff publishers and distributors 2016.
4. Business Communication Dr. Rishipal and Dr. Jyoti Sheoran SPD 2014.
5. Communication Skills Dr. Nageshwar Rao Dr. Rajendra P. Das Himalaya Publishing House.

COURSE DETAILS

1. **Title of the Course:** Green Computing
2. **Course Code: For Theory:** BDSVEC207
3. **Course Objective:**
   a. To understand how to reduce the use of hazardous materials, maximize energy efficiency during the product life time.
   b. Importance of recycling, biodegradability of defunct products and factory waste. Changing the way of work with GREEN in mind.
4. **Category of Course**: Value Education
5. **Semester:** II
6. **Total Hours:** 60
7. **Total Credits:** 02 Credits
8. **Modules: -**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BDSVEC207	Green Computing	4	-	2	-	2

Module	Details	Hours
I	**Overview and Issues:** Problems: Toxins, Power Consumption, Equipment Disposal, Company's Carbon Footprint: Measuring, Details, reasons to bother, Plan for the Future, Cost Savings: Hardware, Power. **Initiatives and Standards:** Global Initiatives: United Nations, Basel Action Network, Basel Convention, North America: The United States, Canada,Australia, Europe, WEEE Directive, RoHS, National Adoption, Asia: Japan, China, Korea.	**12**

II	**Minimizing Power Usage:** Power Problems, Monitoring Power Usage, Servers, Low-Cost Options, Reducing Power Use, Data De-Duplication, Virtualization, Management, Bigger Drives, Involving the Utility Company, Low-Power Computers, PCs, Linux, Components, Servers, Computer Settings, Storage, Monitors, Power Supplies, Wireless Devices, Software. **Cooling:** Cooling Costs, Power Cost, Causes of Cost, Calculating Cooling Needs, Reducing Cooling Costs, Economizers, On-Demand Cooling, HP's Solution, Optimizing Airflow, Hot Aisle/Cold Aisle, Raised Floors, Cable Management, Vapour Seal, Prevent Recirculation of Equipment Exhaust, Supply Air Directly to Heat Sources, Fans, Humidity, Adding Cooling, Fluid Considerations, System Design, Datacentre Design, Centralized Control, Design for Your Needs, Put Everything Together.	**12**
III	**Changing the Way of Work:** Old Behaviours, starting at the Top, Process Reengineering with Green in Mind, Analysing the Global Impact of Local Actions, Steps: Water, Recycling, Energy, Pollutants, Teleworkers and Outsourcing, Telecommuting, Outsourcing, how to Outsource. **Going Paperless:** Paper Problems, The Environment, Costs: Paper and Office, Practicality, Storage, Destruction, Going Paperless, Organizational Realities, Changing Over, Paperless Billing, Handheld Computers vs. the Clipboard, Unified Communications, Intranets, What to Include, Building an Intranet, Microsoft Office SharePoint Server 2007, Electronic Data Interchange (EDI), Nuts and Bolts, Value Added Networks, Advantages, Obstacles.	**12**
IV	**Recycling:** Problems, China, Africa, Materials, Means of Disposal, Recycling,Refurbishing, Make the Decision, Life Cycle, from beginning to end, Life, Cost, Green Design, Recycling Companies, Finding the Best One,Checklist, Certifications, Hard Drive Recycling, Consequences,cleaning a Hard Drive, Pros and cons of each method, CDs and DVDs,good and bad about CD and DVDs disposal, Change the mind-set,David vs. America Online **Hardware Considerations:** Certification Programs, EPEAT, RoHS, Energy Star, Computers, Monitors, Printers, Scanners, All-in-Ones, Thin Clients, Servers, Blade Servers, Consolidation, Products, Hardware Considerations, Planned Obsolescence, Packaging, Toxins, Other Factors, Remote Desktop,	

V	**Greening Your Information Systems:** Initial Improvement Calculations, Selecting Metrics, Tracking Progress, Change Business Processes, Customer Interaction, PaperReduction, Green Supply Chain, Improve Technology Infrastructure,Reduce PCs and Servers, Shared Services, Hardware Costs, Cooling. **Staying Green:** Organizational Check-ups, Chief Green Officer, Evolution, Sell the CEO, SMART Goals, Equipment Check-ups, Gather Data, Tracking the data, Baseline Data, Benchmarking, Analyse Data, Conduct Audits, Certifications, Benefits, Realities, Helpful Organizations.	
	Total	**60**

9. Evaluation Pattern:

a. **Total Marks** : 100 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)

d. **Mode of Evaluation of Answer-books:** Offline

10. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination:

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

11. Course Outcome:

CO1: Practice of environmentally sustainable production practices, energy efficient computers.

CO2: Understand the importance of energy efficiency, power consumption and other way is making green software to thrive the industry and make innovatory products.

CO3: Comprehend the concepts of Recycling like water recycling.

12. References:

1. Green IT Toby Velte, Anthony Velte, Robert Elsenpeter McGrawHill 2008.
2. Green Data Center: Steps for the Journey AlvinGalea, Michael Schaefer, Mike Ebbers Shroff Publishers and Distributers 2011.
3. Green Computing and Green IT Best Practice Jason Harris Emereo.
4. Green Computing Tools and Techniques for Saving Energy, Money And Resources Bud E. Smith CRC Press 2014.

Bachelor of Science in Data Science

[B. Sc. DS]

Semester – III, IV

BSC DATA SCIENCE

Semester - III				
Course Code	**Course Type**	**Course Title**	**Credits**	**Marks**
BDSMJ301	**Major Mandatory**	**Database Management System**	**3**	**100**
BDSMJP301	**Major Mandatory Practical**	**Database Management System Practical**	**1**	**50**
BDSMJ302	**Major Mandatory**	**Data Visualization**	**3**	**100**
BDSMJP302	**Major Mandatory practical**	**Data Visualization Practical**	**1**	**50**
BDSMN303	**Minor Mandatory**	**Statistics**	**3**	**100**
BDSMNP303	**Minor Mandatory Practical**	**Statistics Practical**	**1**	**50**
BDSOE304	**OE**	**Optimization Technique**	**2**	**100**
BDSVSC305	**VSC**	**Data Governance**	**2**	**100**
BDSAECP306	**AEC**	**Python With GUI**	**2**	**50**
	FP,CC	**NSS/NCC/CULTURAL/SPORTS/YOGA**	**2+2**	**50**
		Total Credits	**22**	**750**

W.E.F. 2024-2025

COURSE STRUCTURE

1. **Title of the Course :** Database Management System
2. **Semester** : III
3. **Course Code: For Theory:** BDSMJ301
   For Practical: BDSMJP301

4. Course Objective:

a. To present an introduction to database management systems, with an emphasis on how to organize, maintain and retrieve - efficiently, and effectively - information from a DBMS.
b. To understand the different issues involved in the design and implementation of a database system.
c. To study the physical and logical database designs, database modelling, relational, hierarchical, and network models.
d. To understand and use data manipulation language to query, update, and manage a database.
e. To develop an understanding of essential DBMS concepts such as: database security, integrity and concurrency.
f. To design and build a simple database system and demonstrate competence with the fundamental tasks involved with modelling, designing, and implementing a DBMS.
g. Develop efficient PL/SQL programs to access Oracle databases.
h. Design modular applications using packages, procedures and functions.

5. **Category of Course**: Major Mandatory
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (03 Credits for Theory & 01 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BIT106	Introduction to Database Management System	4	2	3	1	4

Module	Detailed Content	Hours
1	**Introduction to Databases**:-What is database system, purpose of database system, view of data, relational databases, database architecture and different types of databases. **Data Models: -** The importance of data models, Basic building blocks, Business rules, The evolution of data models, Degrees of data abstraction.	12

2	**Database design and ER Model:**-overview, ER-Model, Constraints, ER-Diagrams, ERD Issues, Enhanced Entity Relationship (EER) modelling, Specialization and Generalization, weak entity sets, Codd's rules, Relational Schemas. **Relational database model: -** Logical view of data, keys, integrity rules. **Relational Database design: -** features of good relational database design, atomic domain and Normalization (1NF, 2NF, 3NF, BCNF).	12
3	**Relational Algebra and Calculus:-** **Relational algebra:** introduction, Selection and projection, set operations, renaming, Joins, Division, syntax, semantics. Operators, grouping and ungrouping, relational comparison. **Calculus:** Tuple relational calculus, Domain relational Calculus, calculus vs. algebra.	12
4	**Constraints, Views and SQL** **Constraints**:-What are constraints, types, Integrity constraints. **Views:-** Introduction to views, data independence, security, updates on views, comparison between tables and views **SQL:**-data definition, aggregate function, Null Values, nested sub queries, Joined relations. Triggers.	12
5	**Transaction management and Concurrency control:** What is transaction, ACID properties, serializability and concurrency control, Lock based concurrency control (2PL, Deadlocks) and Database recovery management. **PL-SQL :** Beginning with PL/SQL, identifies and keywords, Operators Expressions, Sequences, Control structures, Cursors and Transactions, Collections and composite data types, procedures and functions, Exception handling, packages, with clause and hierarchical retrieval, triggers	12
	Total	60

Sr. No.	**List of Practical**
1	Design a Database and create required tables. For e.g. Bank, College Database
2	Apply the constraints like Primary Key, Foreign key, NOT NULL to the tables.
3	Write a SQL statement for implementing ALTER,UPDATE and DELETE
4	Write the queries to implement the joins.
5	Write the query for implementing the following functions: MAX(),MIN(),AVG(),COUNT()
6	Write the query to implement the concept of Integrity constrains

7	Write the query to create the views.
8	Perform the queries for triggers.
9	Perform the following operation for demonstrating the insertion , updation and deletion using the referential integrity constraints
10	Write the query for creating the users and their role.
11	Creation of Synonyms, Sequence, Indexes, WITH Clause, Hierarchical retrieval.
12	Study of PL/ SQL block.
13	Creation of Procedures & Implementation of Functions.
14	Write a PL/SQL block that handles types of Cursors, Cursor Variables , attributes & loops.
15	Implementation of Triggers – Row level and Statement level triggers.

9. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** : Online/Offline

10. Paper Pattern:

a. **Internal Assessment:**

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

Semester End Theory Examination :

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	40 Marks	10 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Describe the fundamental elements of relational database management systems. Improve the database design by normalization.

CO2: Explain the basic concepts of relational data model, entity-relationship model, relational database design, relational algebra and SQL.

CO3: Design ER-models to represent simple database application scenarios

CO4: Convert the ER-model to relational tables, populate relational databases and formulate SQL queries on data.

CO5: Develop an understanding of the differences between OODBMS, ORDBMS and RDBMS and the practical implications of each approach.

CO6: Analyse, design and develop a real database application using DBMS.

12. References:

1. Database System and Concepts By Abraham Silberschatz and Henry Korth and S. Sudarshan , 6th Edition, McGraw-Hill, 2011
2. Database System- Design, Implementation and Management by Peter Rob and Carlos Coronel , 7th Edition , Cengage Learning , 2007
3. Database Management Systems by Raghu Ramakrishnan and Johannes Gehrke, 3rd Edition, McGraw Hill, 2003
4. Fundaments of Database System by Ramez Elmasri and Shamkant B. Navathe, 7th Edition, Pearson Education India, 2010
5. Murach's Oracle SQL and PLSQL by Joel Murach, Murach and Associates.
6. Oracle Database 11g PL/SQL Programming Workbook, ISBN :9780070702264, By :
7. Michael McLaughlin, John Harper, Tata McGrawHill. "IT Savvy: What Top

8. Executives Must Know to Go from Pain to Gain" by Peter Weill. Harvard Business
9. Press, 2009.
10. Oracle PL/SQL Programming, Fifth Edition By Steven Feuerstein, Bill Pribyl.

COURSE DETAILS

1) **Title of the Course: Data Visualization**
2) **Course Code: For Theory: BDSMJ302**

For Practical: BDSMJP302

3) Course Objective:

1) to explore sources
2) to tell stories
3) to predict sales volumes
4) to identify areas that need attention or improvement
5) to understand what factors influence customers' behaviour
6) to know which products to place where
7) to discover how to increase revenues or reduce expenses
8) spreadsheets are hard to visualize
9) patterns and trends can be spotted quickly and easily
10) saves time and energy

4) **Category of Course :** Core Course

5) **Semester :** III

6) **Total Hours:** 60 lectures

7) **Total Credits:** 04 Credits (03 Credits for Theory & 01Credits for Practical)

8) Modules:-

Course Code	**Course Name**	**Teaching Scheme (Hours /Week)**		**Credits Assigned**		
		Theory	**Practical / Tutorial**	**Theory**	**Practical / Tutorial**	**Total**
BDSMJ302	Data visualization	4	2	3	1	4

Unit	Details	Lectures
I	Creating visual analytics with tableau desktop: The shortcomings of traditional information analysis. The Business case for visual analysis. Tableau's desktop tools. Introducing the Tableau desktop workspace. Connecting to your data**:** How to connect to your data, Connecting to desktop sources. Understanding the connect page. Connecting to a database Connecting to cloud services ,Connecting to desktop sources Understanding the connect page Connecting to a database Connecting to cloud services problems.	**12**
II	Building your first virtualization: Fast and easy analysis via Show Me. The analytics pane. Creating calculations to enhance data: What is aggression? What are calculated fields and table calculations?	**12**
III	Using maps to improve insights New map features Creating a standard map view. Developing an Ad Hoc analysis environment. Data discovery as a creative process. Providing self service Ad Hoc analysis with parameters	**12**
IV	Tips, tricks and timesavers. Saving time and improving formatting Customizing shapes, colours, fonts, and images. Advanced chart types Bringing it all together with dashboards .How dashboards facilitate analysis and understanding. How tableau improves the dashboard-building process. The wrong way to build a dashboard. The right way to build a dashboard. Building your first advanced dashboard. Sharing your dashboard with tableau reader. Using the tableau performance recorder to improve load speed. Sharing dashboards with tableau online or tableau server	**12**

V	Designing for mobile. The physics of mobile consumption Security considerations for mobile consumption. Offline access Typical mobile usage patterns. Design best practices for mobile consumption. A tablet dashboard example. Mobile authoring and editing. A note on project elastic. Conveying your findings with stories. Turning analysis into insight .Building a story. Formatting story points. Sharing your story point deck. Managing tableau server. Managing published dashboards in tableau server. Navigating tableau server. Organizing reports for consumption. Options for securing reports.Improve efficiency with the data server. Consuming information in the tableau server. Authorizing and editing reports via server. What is required to author reports on the web? Saving and exporting via the web-table environment. Sharing connections, data models, and data extracts. Embedding tableau reports securely on the web.	**12**
	Total	**60**

Practical List :-

10 practical's covering the entire syllabus must be performed. The detailed list of practical will be circulated later in the official workshop.

9) Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)
b. **Passing Criteria** : 40 % (4 Grade Points)
c. **Marking Scheme** : 60:40:50 Pattern
   - 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
   - 40 Marks - Internal Assessment (Passing = 16 Marks)
   - 50 Marks - Practical Assessment (Passing = 20 Marks)
d. **Mode of Evaluation of Answer-books** : Online/Offline

10) Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination :

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	40 Marks	10 Marks	50 Marks

11) Course Outcome:

By the completion of this course, learners will be able to:

CO1: Design and create data visualizations.

CO2: Conduct exploratory data analysis using visualization.

CO3: Craft visual presentations of data for effective communication.

CO4: Use knowledge of perception and cognition to evaluate visualization design alternatives.

CO5: Design and evaluate color palettes for visualization based on principles of perception.

CO6: Apply data transformations such as aggregation and filtering for visualization.

CO7: Identify opportunities for application of data visualization in various domains.

CO8: Critique existing visualizations based on data visualization theory and principles.

12) References:

1) “Visual Thinking for Design” by Colin Ware.

2) “Semiology of Graphics: Diagrams, Networks, Maps” by Jacques Bertin.

3) “Data Visualization: A Handbook for Data Driven Design” by Andy Kirk.

4) “Show Me the Numbers: Designing Tables and Graphs to Enlighten, SecondEdition” by Stephen Few.

5) TableauF your data by Dan Murray, Wiley publication

COURSE STRUCTURE

1. **Title of the Course:** Statistics
2. **Semester**: III
3. **Course Code: For Theory:** BDSMN303
   For Practical: BDSMNP303
4. **Course Objective:**
   This course aims
   a. To equip the learners with a working knowledge of statistics and modelling in the presence of uncertainties.
   b. To understand the concept of hypothesis and significance tests.
   c. To help the students to develop an intuition and an interest for random phenomena.
   d. To introduce both theoretical issues and applications that may be useful in real life.
5. **Category of Course**: Ability Enhancement
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (03 Credits for Theory & 01 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BDSAE205	Statistics	4	2	3	1	4

Module	Detailed Content	Hours
1	**Descriptive Statistics:** Populations, Samples and Processes, Pictorial and tabular methods in Descriptive Statistics, Measures of Location, Measures of variability. **Point Estimation:** Introduction, General concepts of point estimation, Methods for point estimation.	12
2	**Statistical Intervals Based on a single sample:** Introduction, Basic properties of Confidence intervals, Large-sample confidence intervals for a Population mean and proportion, Intervals based on normal population distribution, Confidence intervals for the variance and standard deviation of a normal population. **Tests of hypothesis based on a single sample:** Hypothesis and test procedures, Tests about population mean, Tests concerning a population proportion, P-values, Selecting a test.	12

3	**Inferences based on Two Samples:** Z-test for difference between two population means, T-tests, Analysis for paired data, Inference concerning a difference between population proportions, Inferences concerning two population variances.	12
4	**The Analysis of Variance:** One-way ANOVA, Multiple Comparisons, More in One-way ANOVA. **Multifactor Analysis of variance:** Two-way ANOVA, Three-way ANOVA, 2^p factorial experiments.	12
5	**Distribution-free procedures:** The Wilcoxon Signed-rank test, The Wilcoxon Rank-sum test, Non parametric Confidence intervals, Non parametric ANOVA **Simple Linear Regression and Correlation:** The simple linear regression model, Estimating model parameters, Inferences about model parameters, Prediction of future values, Correlation.	12
	Total	60

Sr. No.	**List of Practical**
1.	Execute the basic commands, array, list and frames.
2.	Create a Matrix and Perform the operations addition, inverse, transpose and multiplication operations.
3.	Execute the statistical functions: mean, median, mode, quartiles, range, inter quartile range histogram.
4.	Calculate the standard deviation, variance, co-variance.
5.	Execute the statistical functions: perform Z test.
6.	Perform t test.
7.	Perform the hypothetical testing.
8.	Perform the Chi-squared Test.
9.	Perform the correlation.
10.	Perform the Linear Regression.

9. Evaluation Pattern:

a. **Total Marks:** 150 Marks (10 Point Grading)

b. **Passing Criteria**: 40 % (4 Grade Points)

c. **Marking Scheme:** 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books:** Online/Offline

10. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class tests of 20 marks. The class test is to be conductedwhen approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which willcarry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination:

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each.

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	45 Marks	05 Marks	50 Marks

11. Course Outcome:

On successful completion of this course, the Learner should be able to:

CO1: Distinguish between quantitative and categorical data.

CO2: Apply different statistical measures on data.

CO3: Identify, formulate and solve problems on Statistics and Hypothesis.

CO4: Use Correlation and Regression and their fundamental applications.

12. References:

1. Fundamental of Mathematical Statistics by S.C. Gupta & V.K. Kapoor, 11th RevisedEdition, Sultan Chand and Sons, 2011.
2. Mathematical Statistics by J.N. Kapur & H.C. Saxena, 12th Revised Edition, S. Chand,2005.
3. Introduction to Probability & Statistics by J.Susan Milton & Jesse C. Arnold, 4thEdition, Tata McGraw Hill, 2007.
4. R for Everyone: Advanced Analytics and Graphics by Jared P. Lander, 2nd

Edition,O’Reilly, 2017.

COURSE STRUCTURE

1. **Title of the Course:** Optimization Techniques
2. **Semester**: III
3. **Course Code: For Theory:** BDSOE304
4. **Course Objective:**
   a. Introduction to optimization techniques using both linear and non-linear programming.
   b. The focus of the course is on convex optimization, though some techniques will be covered for non-convex function optimization too.
   c. After an adequate introduction to linear algebra and probability theory, learners will learn to frame engineering minima maxima problems in the framework of optimization problems.
5. **Category of Course**: Elective
6. **Total Hours**: 60
7. **Total Credits**: 02 Credits (02 Credits for Theory)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BDSEL307	Optimization Techniques	4	-	2	-	2

Module	Detailed Content	Hours
1	**Mathematical preliminaries:** Linear algebra and matrices, Vector space, eigen analysis, Elements of probability theory, Elementary multivariable calculus.	12
2	**Linear Programming:** Introduction to linear programming model, Simplex method, Duality, Karmarkar's method.	12
3	**Unconstrained optimization:** One-dimensional search methods, Gradient-based methods, Conjugate direction and quasi-Newton methods.	12
4	**Constrained Optimization:** Lagrange theorem, FONC, SONC, and SOSC conditions.	12

5	**Non-linear problems:** Non-linear constrained optimization models, KKT conditions, Projection methods.	12
	Total	60

Sr. No.	**List of Practical**
1.	Perform Matrix operations.
2.	Differentiation of a vector and matrix.
3.	Integration of a vector and matrix.
4.	Perform Simplex algorithm.
5.	Implementation of Newton's method.
6.	Implementation of Secant method.
7.	Implementation of Lagrange multiplier method.
8.	Implementation of KKT theorem.
9.	Implementation of BFGS method

9. Evaluation Pattern:

a. **Total Marks:** 150 Marks (10 Point Grading)

b. **Passing Criteria**: 40 % (4 Grade Points)

c. **Marking Scheme:** 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books:** Online/Offline

10. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination:

Question No.	**Description**	**Marks**
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10

4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each.

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	45 Marks	05 Marks	50 Marks

11. Course Outcome:

On successful completion of this course, the Learner should be able to:

CO1: Model engineering minima/maxima problems as optimization problems.

CO2: Use various tools/software to implement optimization algorithms.

12. References:

1. An introduction to Optimization by Edwin P K Chong, Stainslaw Zak, 4th Edition,Wiley, 2017.
2. Nonlinear Programming by Dimitri Bertsekas, 2nd Edition, Athena Scientific, 1999.

COURSE STRUCTURE

1. **Title of the Course:** Data Governance
2. **Semester:** III
3. **Course Code: For Theory: BDSVSC305**
4. **Course Objective:**
   - **a.** To make students aware about how to design a data governance solution that meets your company's needs.
   - **b.** The course will provide brief introduction of the different types of metadata and how to build a metadata management system, enterprise data model, and enterprise data catalog.
   - **c.** The students will learn about data profiling, remediation options for data quality, data quality scores, thresholds, dashboards.
   - **d.** The students will learn the concepts of master data, golden record creation, master data management architectures, and master data governance processes.
5. **Category of Course**: Vocational
6. **Total Hours**: 30
7. **Total Credits**: 02 Credits (02 Credits for Theory)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BDSVSC305	Data Governance	2	-	2	-	2

Module	Detailed Content	Hours
1	**Introduction to Data Governance** • Understand what data governance is and its importance. • Learn about the different disciplines of data governance. • Understand the different stakeholders involved in data governance projects.	06

2	**Metadata Management:** • Understand the different types of metadata. • Understand the components and capabilities of a metadata management system. • Create conceptual and logical enterprise data models. • Create an enterprise data catalog.	06
3	**Data Quality Management:** • Perform data profiling using various techniques using data quality dimensions. • Identify remediation options for data quality issues. • Measure data quality using data quality scores and thresholds. • Monitor data quality using dashboards, exception, and trend reports.	06
4	**Master Data Management:** • Understand the concepts of master data and golden record. • Understand different types of master data management architectures. • Create a golden record using various match and merge techniques. • Understand data governance processes for authoring, monitoring, and approval of master data.	06
5	**Data governance Best Practices:** • Ensure sustainability • Pitfalls to avoid • Best practices to adopt • Embed data governance into operations	06
	Total	30

9. Evaluation Pattern:

a. **Total Marks** : 100 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)

d. **Mode of Evaluation of Answer-books** : Offline

10. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination :

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10

Note: Q.2 to Q.5 will include total 4 sub questions having 5 marks each

11. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Understand the how to design a data governance solution that meets your company's needs.

CO2: Understand the different types of metadata and how to build a metadata management system, enterprise data model, and enterprise data catalog.

CO3: Explore data profiling, remediation options for data quality, data quality scores, thresholds, dashboards.

CO4: Develop the concepts of master data, golden record creation, master data management architectures, and master data governance processes. To make students aware about how to design a data governance solution that meets your company's needs.

12. References:

1. Disrupting Data Governance by Laura Madsen.
2. Data Governance: How to Design, Deploy and Sustain an Effective Data Governance by John Ladley.
3. Non-Invasive Data Governance: The Path of Least Resistance and Greatest Success by Robert S.
4. Data Governance: The Definitive Guide by Evren Eryurek, Uri Gilad, Valliappa Lakshmanan, Anita Kibunguchy-Grant, Jessi Ashdown
5. Data Governance: Perspectives and Practices by Harkish Sen
6. Get Governed: Building World Class Data Governance Programs by Morgan Templar
7. Data Stewardship: An Actionable Guide to Effective Data Management and Data Governance by David Plotkin
8. The Chief Data Officer Handbook for Data Governance by Sunil Soares

COURSE STRUCTURE

1. **Title of the Course :** Python with GUI
2. **Semester :**-III
3. **Course Code:** BDSAEC306
4. **Course Objective:**

The learning objectives of this course are:

- To understand oops concept and build application with GUI and database through SQLite.
- To learn how to implement various python libraries and modules in python program.
- To learn networking through protocols with python.
- To understand image and numerical processing in python.

5. **Category of Course** : Ability Enhancement
6. **Total Hours**: 30
7. **Total Credits**: 02 Credits
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BDSAEC306	Python with GUI	-	2	-	2	2

Module	Detailed Content	Hours
1	Object Oriented and GUI recap, Assertion, decorators, closures, iterators, generator methods in python. Python standard libraries with example.	06
2	Multithreading in Python:-Creation and execution if threads using thread module, random Module, request module.	06
3	Database programming using Python:- connecting to database using SQLlite using python. Sending DML, DDL queries and processing the result from python program.	06
4	Network programming using Python:- An introduction to client-server programming .Basics of TCP and UDP protocols .Introduction to socket programming. Building an HTTP client and server.	06

5	Basic numerical processing using Python:- Introduction to numpy Creation of vectors and matrices Matrix manipulation. Basic image processing using Python:-Introduction to digital image processing. Basic operations on an image like: o Crop o Scale o Rotate o Flip o Changing contrast, brightness and color o Edge detection, blur, sharpening	06
	Total	30

9. Evaluation Pattern:

Semester End Practical Examination:

Exam Duration (in Hours)	Practical Exam	Viva	Journal	Total
2 Hours 30 min per batch	30 Marks	10 Marks	10 Marks	50 Marks

10. Course Outcome:

Upon successful completion of this course, Learner should be able to:

CO1: Explain oops concept programmatically also build application with GUI and database through SQLite.

CO2: Implement various python libraries and modules in python program.

CO3: Implement networking through protocols with python.

CO4: Do image and numerical processing in python.

11. References:

1. Think Python Allen Downey O'Reilly 1st 2012
2. An Introduction to Computer Science using Python 3 Jason Montojo, Jennifer Campbell, Paul Gries SPD 1st 2014.
3. Python GUI Programming Cookbook Burkhard A. Meier Packt 2015
4. Fundaments of Database System by Ramez Elmasri and Shamkant B. Navathe, 7th Edition, Pearson Education India, 2010
5. Object-oriented Programming in Python Michael H. Goldwasser, David LetscherPearson Prentice Hall 1st 2008.

BSC DATA SCIENCE

Semester - IV				
Course Code	**Course Type**	**Course Title**	**Credits**	**Marks**
BDSMJ401	**Major Mandatory**	**Data Warehouse**	**3**	**100**
BDSMJP401	**Major Mandatory Practical**	**Data Warehouse Practical**	**1**	**50**
BDSMJ402	**Major Mandatory**	**Artificial Intellegence**	**3**	**100**
BDSMJP402	**Major Mandatory practical**	**Artificial Intellegence Practical**	**1**	**50**
BDSMN403	**Minor Mandatory**	**Statistical Technique And Testing Hypothesis**	**3**	**100**
BDSMNP403	**Minor Mandatory Practical**	**Statistical Technique And Testing Hypothesis Practical**	**1**	**50**
BDSOE404	**OE**	**Data Preprocessing**	**2**	**100**
BDSSECP405	**SEC**	**Hands-On-Iot(P)**	**2**	**50**
BDSAEC406	**AEC**	**Statistical Computing**	**2**	**100**
	FP,CC	**NSS/NCC/CULTURAL/SPORTS/YOGA**	**2+2**	**50**
		Total Credits	**22**	**750**

W.E.F. 2024-2025

COURSE STRUCTURE

1. **Title of the Course :** Data Warehouse
2. **Semester** : IV
3. **Course Code: For Theory:** BDSMJ401
   For Practical: BDSMJP401

Course Objective:

- **a.** To understand data warehouse concepts, architecture, business analysis and tools
- **b.** To understand data pre-processing and data visualization techniques
- **c.** To study algorithms for finding hidden and interesting patterns in data

4. **Category of Course** : Major
5. **Total Hours**: 60
6. **Total Credits**: 04 Credits (03 Credits for Theory & 01 Credits for Practical)
7. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BDSMJ401	Data Warehouse	4	2	3	1	4

Module	Detailed Content	Hours
1	**Introduction to Data Warehousing:** Introduction, Necessity, Framework of the datawarehouse, options, developing datawarehouses, end points. **Data Warehousing Design Consideration and Dimensional Modeling:** Defining Dimensional Model, Granularity of Facts, Additivity of Facts, Functional dependency of the Data, Helper Tables, Implementation manyto-many relationships between fact and dimensional modelling.	12
2	**An Introduction to Oracle Warehouse Builder:** Installation of the database and OWB, About hardware and operating systems, Installing Oracle database software, Configuring the listener, Creating the database, Installing the OWB standalone software, OWB components and architecture, Configuring the repository and workspaces. **Defining and Importing Source Data Structures:** An overview of Warehouse Builder Design Center, Importing/defining source metadata, Creating a project, Creating a module, Creating an Oracle Database module,	12

	Creating a SQL Server database module, Importing source metadata from a database, Defining source metadata manually with the Data Object Editor, Importing source metadata from files	
3	**Designing the Target Structure:** Data warehouse design, Dimensional design, Cube and dimensions, Implementation ofa dimensional model in a database, Relational implementation (star schema), Multidimensional implementation (OLAP),Designing the ACME data warehouse, Identifying the dimensions, Designing the cube, Data warehouse design in OWB, Creating a target user and module, Create a target user, Create a target module, OWB design objects. **Creating the Target Structure in OWB:** Creating dimensions in OWB, The Time dimension, Creating a Time dimensionwith the Time Dimension Wizard, The Product dimension, Product Attributes (attribute type),Product Levels, Product Hierarchy (highest to lowest),Creating the Product dimension with the New Dimension Wizard, The Store dimension, Store Attributes (attribute type), data type and size, and (Identifier),Store Levels, Store Hierarchy (highest to lowest),Creating the Store dimension with the New Dimension Wizard, Creating a cube in OWB, Creating a cube with the wizard, Using the Data Object Editor	12
4	**Extract, Transform, and Load Basics:** ETL, Manual ETL processes, Staging, To stage or not to stage, Configuration of a staging area, Mappings and operators in OWB, The canvas layout, OWB operators, Source and target operators, Data flow operators, Pre/post-processing operators. **Designing and building an ETL mapping:** Designing our staging area, Designing the staging area contents, Building the staging area table with the Data Object Editor, Designing our mapping, Review of the Mapping Editor, Creating a mapping.	12
5	**ETL: Transformations and Other Operators:** STORE mapping, Adding source and target operators, Adding Transformation Operators, Using a Key Lookup operator, Creating an external table, Creating and loading a lookup table, Retrieving the key to use for a Lookup Operator, Adding a Key Lookup operator, PRODUCT mapping, SALES cube mapping, Dimension attributes in the cube, Measures and other attributes in the cube, Mapping values to cube attributes, Mapping measures' values to a cube, Mapping PRODUCT and STORE dimension values to the cube, Mapping DATE_DIM values to the cube, Features and benefits of OWB. **Validating, Generating, Deploying, and Executing Objects:** Validating, Validating in the Design Center, Validating from the editors, Validating in the Data Object Editor, Validating in the Mapping, Editor, Generating, Generating in the Design Center, Generating from the editors, Generating in the Data Object Editor, Generating in the Mapping Editor, Deploying, The Control Center Service, Deploying in the Design Center	12

	and Data Object Editor, The Control Center Manager, The Control Center Manager window overview, Deploying in the Control Center ,Manager, Executing, Deploying and executing remaining objects, Deployment Order, Execution order	
	Total	60

Sr. No.	List of Practical
1	Importing the source data structures in Oracle
2	Design the target data structure using Oracle
3	Create the target structure in OWB (Oracle Web Builder)
4	Designed and build the ETL mapping 5. Perform the ETL process and transform it to data marts.
5	Perform the ETL process and transform it to data marts. 6. Create the cube and process it in OWB.
6	Create the cube and process it in OWB.
7	Generate the different types of reports in using Oracle.
8	Perform the deployment of Warehouse
9	Create the Pivot table and Pivot chart using some existing data or create the new data.
10	Import the cube in access and create Pivot table and chart.

8. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** : Online/Offline

9. Paper Pattern:

a. **Internal Assessment:**

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination :

Question No.	Description	Marks
1	Answer any two Questions (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.1 to Q.6 will include total 4 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	40 Marks	10 Marks	50 Marks

10. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Understand Data Warehouse fundamentals.

CO2: Design data warehouse with dimensional modelling and apply OLAP operations.

CO3: Identify appropriate data mining algorithms to solve real world problems

CO4: Design a Data warehouse system and perform business analysis with OLAP tools.

11. References:

1. "Data Mining", Ian H. Witten, Eibe Frank and Mark A. Hall, 3rd Edition
2. Introduction to Data Mining by Pang-Ning Tan, Michael Steinbach and Vipin Kumar.
3. "Data Mining Methods", R. Chattamvelli, 2nd Edition.
4. Data Warehousing, Data Mining & OLAP by Alex Berson and Stephen J.Smith Tata McGraw – Hill Edition, 35th Reprint 2016

COURSE STRUCTURE

1. **Title of the Course :** Artificial Intelligence
2. **Semester** : IV
3. **Subject Code: For Theory:** BDSMJ402
   For Practical: BDSMJP402
4. **Course Objective:**
   - **a.** To explore the applied branches of artificial intelligence
   - **b.** To enable the student to understand applications of artificial intelligence
   - **c.** To enable the student to solve the problem aligned with derived branches of artificial intelligence
5. **Category of Course** : Major
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (03 Credits for Theory & 01 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BDSMJ402	Artificial Intelligence	4	2	3	1	4

Module	Detailed Content	Hours
1	**Review of AI:** History, foundation and Applications **Expert System and Applications:** Phases in Building Expert System, Expert System Architecture, Expert System versus Traditional Systems, Rule based Expert Systems, Blackboard Systems, Truth Maintenance System, Application of Expert Systems, Shells and Tools	12
2	**Probability Theory:** joint probability, conditional probability, Bayes's theorem, probabilities in rules and facts of rule based system, cumulative probabilities, rule based system and Bayesian method **Fuzzy Sets and Fuzzy Logic:** Fuzzy Sets, Fuzzy set operations, Types of Member ship Functions, Multivalued Logic, Fuzzy Logic, Linguistic variables and Hedges, Fuzzy propositions, inference rules for fuzzy propositions, fuzzy systems, possibility theory and other enhancement to Logic	12
3	**Machine Learning Paradigms:** Machine Learning systems, supervised and un-supervised learning, inductive learning,	12

	deductive learning, clustering, support vector machines, cased based reasoning and learning. **Artificial Neural Networks:** Artificial Neural Networks,Single-Layer feedforward networks, multi-layer feedforward networks, radial basis function networks, design issues of artificial neural networks and recurrent networks	
4	**Evolutionary Computation:** Soft computing, genetic algorithms, genetic programming concepts, evolutionary programming, swarm intelligence, ant colony paradigm, particle swarm optimization and applications of evolutionary algorithms. **Intelligent Agents:** Agents vs software programs, classification of agents, working of an agent, single agent and multiagent systems, performance evaluation, architecture, agent communication language, applications	12
5	**Advanced Knowledge Representation Techniques:** Conceptual dependency theory, script structures, CYC theory, script structure, CYC theory, case grammars, semantic web. **Natural Language Processing:** Sentence Analysis phases, grammars and parsers, types of parsers, semantic analysis, universal networking language, dictionary	12
	Total	60

List of Practical	
	List of Practical: 10 practicals covering the entire syllabus must be performed. The detailed list of practical will be circulated later in the official workshop.

9. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** : Offline

10. Paper Pattern:

a. **Internal Assessment:**

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will

carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination :

Question No.	Description	Marks
1	Answer any two Questions (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.1 to Q.6 will include total 4 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	40 Marks	10 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Be able to use probability and concept of fuzzy sets for solving AI based problems

CO2: Be able to understand the fundamentals concepts of expert system and its applications.

CO3: Be able to understand the applications of Machine Learning. The learner can also apply fuzzy system for solving problems.

CO4: A student can use knowledge representation techniques in natural language processing.

CO5: Student will be able to apply to understand the applications of genetic algorithms in different problems related to artificial intelligence.

12. References:

1. Artificial Intelligence by Saroj Kaushik, 1st, 2019
2. Artificial Intelligence: A Modern Approach by A. Russel, Peter Norvig, 1st, 2019
3. Artificial Intelligence by Elaine Rich,Kevin Knight,Shivashankar B. Nair, 3nd Edition.2019

COURSE STRUCTURE

1. **Title of the Course:** Statistical Techniques & Testing of Hypothesis
2. **Semester**: IV
3. **Course Code: For Theory:** BDSMN403
   For Practical: BDSMNP403
4. Course Objective:

   This course aims
   a. To equip the students with a working knowledge of probability, statistics and modelling in the presence of uncertainties.
   b. To understand the concept of hypothesis and significance tests.
   c. To help the students to develop an intuition and an interest for random phenomena.
   d. To introduce both theoretical issues and applications that may be useful in real life.
5. **Category of Course**: Core
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (03 Credits for Theory & 01 Credits for Practical)
8. **Modules**:

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BITCC402	Statistical Techniques & Testing of Hypothesis	4	2	3	1	4

Module	Detailed Content	Hours
1	**Measures of Central Tendency & Measures of Dispersion:** Frequency Distribution, Histogram, Stem and leaf diagram, Ogives, Frequency Polygon, Mean, Median, Mode, Empirical relation between Mean, Median & Mode, Quartiles, Deciles, and Percentiles; Dispersion, Range, Box whisker plot, Mean Deviation, Quartile Deviation, Standard Deviation, Variance, Semi- Interquartile Range, 10–90 Percentile Range, Empirical relations between Measures of Dispersion, Absolute and Relative Dispersion; Coefficient of Variation, Standard Scores.	12
2	**Moments, Skewness, and Kurtosis:** Moments, Moments for Grouped Data, Relations between Moments, Charlie's Check and Sheppard's Corrections, Moments in Dimensionless Form, Population Moments, Skewness, Types of Skewness, Kurtosis, Types of Kurtosis.	12

	Introduction to Probability: Random experiment, Sample space, Events, Axiomatic Probability, Algebra of events, Conditional Probability, Multiplication theorem of Probability, Independent events, Baye's Theorem. **Elementary Sampling Theory:** Sampling Theory, Random Samples and Random Numbers, Sampling with and without Replacement, Sampling Distributions, Sampling Distribution of Means, Sampling Distribution of Proportions, Sampling Distributions of Differences and Sums, Standard Errors.	
3	**Statistical Estimation Theory:** Estimation of Parameters, Unbiased Estimates, Efficient Estimates, Point Estimates and Interval Estimates; Their Reliability, Confidence-Interval Estimates of Population Parameters, Probable Error. **Statistical Decision Theory:** Statistical Decisions, Statistical Hypotheses, Tests of Hypothes es and Significance, or Decision Rules, Type I and Type II Errors, Level of Significance, Tests Involving Normal Distributions, Two-Tailed and One-Tailed Tests, Special Tests, Operating-Characteristic Curves; Power of a Test, p-Values for Hypotheses Tests, Control Charts, Tests Involving Sample Differences, Tests Involving Binomial Distributions.	12
4	**Small Sampling Theory:** Small Samples, Student t Distribution, Confidence Intervals, Tests of Hypotheses andSig nificance, Chi- Square Distribution, Confidence Intervals for Sigma, Degrees of Freedom, F Distribution. **The Chi-Square Test:** Observed and Theoretical Frequencies, Definition of chi-square, Significance Tests, Chi-Square Test for Goodness of Fit, Contingency Tables, Yates' Correction for Continuity, Simple Formulas for Computing chi-square, Coefficient of Contingency, Correlation of Attributes, Additive Property of chi- square.	12
5	**Curve Fitting and the Method of Least Squares:** Relationship between Variables, Curve Fitting, Equations of Approximating Curves, Freehand Method of Curve Fitting, Straight Line Method, Method of Least Squares, Least-Squares Line, Nonlinear Relationships, Least-Squares Parabola, Regression, Applications to Time Series, Problems Involving More Than Two Variables. **Correlation Theory:** Correlation and Regression, Linear Correlation, Measures of Correlation, Least-Squares Regression Lines, Standard Error of	12

	Estimate, Explained and Unexplained Variation, Coefficient of Correlation, Product-Moment Formula, Short Computational F ormulas, Regression Lines and Linear Correlation Coefficient, Correlation of Time Series, Correlation of Attributes, Sampling Theory of Correlation, Sampling Theory of Regression.	
	Total	60

Sr. No.	List of Practical
1.	Using R execute the basic commands, array, list and frames.
2.	Create a Matrix using R and Perform the operations addition, inverse, transpose and multiplication operations.
3.	Using R Execute the statistical functions: mean, median, mode, quartiles, range, inter quartile range histogram.
4.	Using R Execute the statistical functions: mean, median, mode, quartiles, range, inter quartile range histogram.
5.	Using R import the data from Excel / .CSV file and Calculate the standard deviation, variance, co-variance.
6.	Using R import the data from Excel / .CSV file and draw the skewness.
7.	Import the data from Excel / .CSV and perform the hypothetical testing.
8.	Import the data from Excel / .CSV and perform the Chi-squared Test.
9.	Using R perform the binomial and normal distribution on the data.
10.	Perform the Linear Regression using R.
11.	Compute the Least squares means using R.
12.	Compute the Linear Least Square Regression

9. Evaluation Pattern:

a. **Total Marks:** 150 Marks (10 Point Grading)

b. **Passing Criteria**: 40 % (4 Grade Points)

c. **Marking Scheme:** 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books:** Online/Offline

10. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination:

Question No.	Description	Marks
1	Answer any two Questions (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.1 to Q.6 will include total 4 sub questions having 5 marks each.

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	40 Marks	10 Marks	50 Marks

11. Course Outcome:

On successful completion of this course, the Learner should be able to:

CO1: Distinguish between quantitative and categorical data.

CO2: Apply different statistical measures on data.

CO3: Identify, formulate and solve problems on Statistics and Hypothesis.

CO4: Classify different types of Probability and their fundamental applications.

12. References:

1. Fundamental of Mathematical Statistics by S.C. Gupta & V.K. Kapoor, 11th Revised Edition, Sultan Chand and Sons, 2011.
2. Mathematical Statistics by J.N. Kapur & H.C. Saxena, 12th Revised Edition, S. Chand, 2005.
3. Introduction to Probability & Statistics by J.Susan Milton & Jesse C. Arnold, 4th Edition, Tata McGraw Hill, 2007.
4. Probability and Stochastic Processes: A Friendly Introduction for Electrical and Computer Engineers by Yates, R. D., & Goodman, D. J., 3rd Edition, Wiley, 2014.
5. Schaum's Outlines Probability, Random Variables & Random Process 3rd Edition Tata McGraw Hill, 2014.
6. Hands-On Programming with R: Write Your Own Functions and Simulations by Garrett Gorlemund, 1st Edition, O'Reilly, 2017.
7. R for Everyone: Advanced Analytics and Graphics by Jared P. Lander, 2nd Edition, O'Reilly, 2017.

COURSE STRUCTURE

1. **Title of the Course :** Data Preprocessing
2. **Semester** : IV
3. **Course Code: For Theory:** BDSOE404
4. **Course Objective:**

   a. Making students aware about the quality of Data.
   b. To learn the various techniques of working with noisy data.
   c. To understand the various techniques of Data Preprocessing.

5. **Category of Course**: Open Elective Course
6. **Total Hours**: 60
7. **Total Credits**: 02 Credits (02 Credits for Theory)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BDSOE404	Data Preprocessing	4	0	2	0	2

Module	Detailed Content	Hours
1	**Introduction to Data Preprocessing:** Definition, Types of Data, Features of Data, Categorical Data, Data Types **Data Collection:** Introduction to Data Collection, Importance of Data Collection, Types of Data Collection Methods, Various Data collection tools, Ethics in Data Collection, Data Collection, Summary	12
2	**Data Cleaning:** Introduction to Noisy Data, Need of Data Cleaning, Working with Missing Data, Various methods of cleaning missing data,Imputation,KNN algorithm, Working with Noisy Data using Binning Method, Regression,Clustering	12
3	**Data Integration:** Introduction to Data Integration, Types of Data Integration,Data warehousing, Data Virtualization, Data Loading. **Data Transformation:** Normalization,Attribute Selection, Fit(), Transform() method,Discretization, Hierarchy Generation,	12

4	**Data Reduction:** Feature Selection, Feature Extraction, Sampling, Clustering, Compression, **Data Discretization and Normalization** **Methods of Data Reduction** : Data Cube Aggregation,Dimension reduction, Numerosity reduction	12
5	**Applications of Data Preprocessing** Tools to be used for Data Preprocessing: Pandas, Scikit learn,weka,knime.	12
	Total	**60**

9. Evaluation Pattern:

a. **Total Marks** : 100 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)

d. **Mode of Evaluation of Answer-books** :Offline

10. Paper Pattern:

a. Internal Assessment:

i. Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of 45 Minutes.

ii. Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination :

Question No.	Description	Marks
1	Answer any two Questions (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.1 to Q.6 will include total 3 sub questions having 5 marks each

11. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Describe fundamental concepts of Data Preprocessing.

CO2: Explore about the quality of Data.

CO3: Understand the various techniques of removing Noisy Data.

CO4: Apply various techniques to convert Unprocessed Data into Processed Data.

COURSE STRUCTURE

1. **Title of the Course:** HANDS ON IOT
2. **Semester**: IV
3. **Course Code: For Theory:** BDSSECP405

4. Course Objective:

- **a.** To give students hands-on experience using different IoT architectures.
- **b.** To provide skills for interfacing sensors and actuators with different IoT architectures.

5. **Category of Course**: SEC
6. **Total Hours**: 60
7. **Total Credits**: 02 Credits (02 Credits for Practical)

8. Modules:

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BDSSECP405	HANDS ON IOT	--	4	--	2	2

Module	**Detailed Content**	**Hours**
1	Raspberry Pi 3 - Rpi3 introduction and installing the Raspbian Stretch OS, Headless - Computer and Rpi3 configuration to connect through SSH via Ethernet, Headless - connecting Rpi3 remotely without Ethernet cable via SSH, IP address, Rpi 3 - Testing the GPIO pins through Scripts. Raspberry Pi Interfaces, Programming Raspberry Pi with Python, Sensors	12 Hrs
2	Programming the GPIO and interfacing peripherals With Raspberry Pi , Interfacing an LED & Controlling LED with Raspberry Pi	12 Hrs
3	Introduction to 4x7 Segment LED, TM1637 Library, Interfacing 4x7 segment Display & Displaying Time, IP Address on 4x7 LED with Raspberry Pi	12Hrs
4	Introduction to Pi Camera, PiCamera Library, LibCamera,	12Hrs

	Interfacing Pi Camera & Capturing Images and Videos using Pi Camera with Raspberry Pi	
5	Introduction to telepot, Telegram Library, Interfacing Raspberry Pi with Telegram & Controlling Raspberry Pi using Telegram	12Hrs
	TOTAL	**60**

9. Evaluation Pattern:

Semester End Practical Examination:

Exam Duration (in Hours)	Practical Exam	Viva	Journal	Total
2 Hours 30 min per batch	30 Marks	10 Marks	10 Marks	50 Marks

10. Course Outcome:

After completion of course, students would:

1. To understand Raspberry PI along with critical protocols and its communication.
2. To apply commonly used IOT protocols through IOT based demonstration.
3. To solve analog sensor and digital sensor interfacing with IOT devices.

11. **References**:

1. Rao, M. (2018). Internet of Things with Raspberry Pi 3: Leverage the power of Raspberry Pi 3 and JavaScript to build exciting IoT projects. Packt Publishing Ltd
2. Richardson, M., & Wallace, S. (2012). Getting started with raspberry PI. " O'Reilly Publisher Media, Inc."

COURSE STRUCTURE

1. **Title of the Course :** Statistical computing (R)
2. **Semester** : IV
3. **Course Code: For Theory:** BDSAEC406
4. **Course Objective:**

a. Computationally intensive statistical methods are a key component to modern data analysis methods.

b. Student will be able to use statistical software to implement both traditional and state-of-the-art methods in computational statistics as well as recognize situations where these methods are required.

c. Students should understand the structure of a research study that produces data appropriate for an independent-measures t hypothesis test.

d. Students should understand the structure of a research study that produces data appropriate for a repeated-measures t hypothesis test.

e. Processing raw data into formatted data.

5. **Category of Course** : Ability Enhancement
6. **Total Hours**: 60
7. **Total Credits**: 02 Credits (02 Credits for Theory)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BDSA E405	Statistical computing (R)	4	-	2	-	2

Module	Detailed Content	Hours
1	**Drawing statistical conclusions** **S**tatistical inference and study design Measuring uncertainty in randomized experiment Measuring uncertainty in observational studies **Inference using t-distribution** One-sample t-test and the paired t-test A t-ratio for two-sample inference	12

	Inferences in a two-treatment randomized experiment **A closer look at assumptions** Robustness of the two-sample t-tools Resistance of the two-sample t-tools Practical strategies for the two-sample problem Transformations of data	
2	**Alternatives to the t-tools** The rank-sum test Other alternatives for two independent samples Alternatives for paired data **Comparisons among several samples** Comparing any two of the several means The one-way analysis of variance f-test More applications of the extra sums of squares f-test Robustness and model checking **Linear combinations and multiple comparison of means** Inferences about linear combinations of group means Simultaneous inferences Some multiple comparison procedures	12
3	**Simple linear regression: a model for the mean** The simple linear regression model Least squares regression estimation Inferential tools **A closer look at assumptions for simple linear regression** Robustness of least squares inferences Graphical tools for model assessment Interpretation after log transformations Assessment of the fit using analysis of variance	12
4	**Multiple regression** Regression coefficients Specially constructed explanatory variables A strategy for data analysis Graphical methods for data exploration and presentation **Inferential tools for multiple regression** Inferences about regression coefficients Extra sum of squares f-tests **Model checking and refinement** Residual plots A strategy for dealing with influential observation Case-influence statistics Refining the model	12
5	**Strategies for variable selection** Specific issues relating to many explanatory variables	12

	Sequential variable-selection techniques Model selection among all subsets Posterior beliefs about different models Analysis of sex discrimination data **Exploratory tools for summarizing multivariate responses** Linear combination of variables Principal component analysis Canonical correlations analysis Introduction to other multivariate tools **Comparisons of proportion of odds** Inferences for the difference of two proportions Inferences about the ratio of two odds Inference from retrospective studies	
	Total	60

Sr. No.	**List of Practical**
1.	T- Test in R studio to determine if there is a significant difference between the means of two groups and how they are related. T-tests are used when the data sets follow a normal distribution and have unknown variances
2.	Non Parametric Test: Mann Whitney Test using .CSV File
3.	Non Parametric Test: Mann Whitney Test by making data frame and vectors
4.	Wilcoxon signed rank test
5.	Comparison of T-test with non-parametric tests
6.	Program for Linear regression.
7.	Program for Polynomial Regression.
8.	Program for multiple linear regression
9.	Program for non-linear regression.
10.	Import the data from Excel / .CSV and perform the hypothetical testing.

9. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** : Offline

10. Paper Pattern:

a. **Internal Assessment:**

- Assessment consists of a class tests of 20 marks. The class test is to be conducted

when approx. 40% syllabus is completed. Test will be of one hour.

- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination :

Question No.	Description	Marks
1	Answer any two Questions (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.1 to Q.6 will include total 4 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	40 Marks	10 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Students will be able to enter, manipulate and plot data and run basic statistical analyses in R.

CO2: Students will be able to implement estimators for non-standard statistical problems in R.

CO3: Describe the challenges involved in handling Big Data and the strategies used to address these challenges

CO4: Design and implement simulation studies to test and compare statistical methods

12. References:

1. Book: the statistical sleuth: A course in methods of data analysis
2. Maria Rizzo, Statistical Computing with R, Chapman and Hall / CRC (2008).
3. Zuur, A.F., Ieno E.N., & Meesters, E.H.W.G., A Beginner's Guide to R, Springer (2009).

LEARNING OUTCOME BASED CURRICULUM FRAMEWORK

[LOCF]

Sanskar Sarjan Education Society's

DTSS COLLEGE OF COMMERCE

[**AUTONOMOUS**]

PROGRAMME CODE: BDS0021

Bachelor of Science in Data Science

[B. Sc. In Data Science]

w. e. f. 2023-24

Semester - V				
Course Code	**Course Type**	**Course Title**	**Credits**	**Marks**
BDSCC501	Core Course	Soft Computing	2	100
BDSCC502	Core Course	Statistical Modelling in Python	2	100
BDSSB503	Skill Based Course	Advances techniques in Data Science	2	100
BDSAE504	Ability Enhancement Course	Capstone Project 1 (R)	3	100
BDSEL505 BDSEL506	Elective Course	1. Cloud Computing 2. Big Data	2	100
BDSCCP501	Core Course Practical	Soft Computing Practical	2	50
BDSCCP502	Core Course Practical	Statistical Modelling in Python	2	50
BDSSBP503	Skill Based Course Practical	Advances techniques in Data Science	2	50
BDSAEP504	Ability Enhancement Course Practical	Capstone Project 1 (R)	3	100
BDSELP505 BDSELP506	Elective Course Practical	1. Cloud Computing Practical 2. Big Data Practical	2	50
		Total Credits	**22**	**800**

Semester - VI				
Course Code	**Course Type**	**Course Title**	**Credits**	**Marks**
BDSCC601	Core Course	Data mining	2	100
BDSCC602	Core Course	Business Intelligence	2	100
BDSSB603	Skill Based Course	Machine Learning in Python	2	100
BDSAE604	Ability Enhancement Course	Capstone Project 2 (Python)	3	100
BDSEL605 BDSEL606	Elective Course	1. Data Compression 2. SQA	2	100
BDSCCP601	Core Course Practical	Data Mining Practical	2	50
BDSCCP602	Core Course Practical	Business Intelligence Practical	2	50
BDSSBP603	Skill Based Course Practical	Machine Learning in Python Practical	2	50
BDSAEP604	Ability Enhancement Course Practical	Capstone Project 2 (Python) Practical	3	100
BDSELP605 BDSELP606	Elective Course Practical	1. Data Compression Practical 2. SQA Practical	2	50
		Total Credits	**22**	**800**

Bachelor of Science in Data Science

[B. Sc. In Data Science]

Semester - V

COURSE STRUCTURE

1. **Title of the Course:** Soft Computing
2. **Semester**: V
3. **Course Code: For Theory:** BDSCC501
   For Practical: BDSCCP501
4. **Course Objective:**
   This course aims
   a. To introduce learners to soft computing concepts and techniques and foster their abilities in designing and implementing soft computing-based solutions for real-world and engineering problems.
   b. To introduce learners to fuzzy systems, fuzzy logic and its applications.
   c. To explain the learners about Artificial Neural Networks and various categories of ANN.
   d. To explain the learners about Genetic Algorithm and various categories of it.
5. **Category of Course**: Core
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BDSCC501	Soft Computing	5	3	2	2	4

Module	Detailed Content	Hours
1	**Introduction:** What is Soft Computing? Difference between Hard and Soft computing, Requirement of Soft computing, Major Areas of Soft Computing, Applications of Soft Computing. **Introduction to Fuzzy Systems:** Fuzzy Set theory, Fuzzy versus Crisp set, Fuzzy Relation, Fuzzification, Minmax Composition, Defuzzification Method, Fuzzy Logic.	12
2	**Fuzzy Systems:** Fuzzy Rule based systems, Predicate logic, Fuzzy Decision Making, Fuzzy Control Systems, Fuzzy Classification. **Fuzzy Backpropagation Networks:** LR type Fuzzy numbers, Fuzzy Neuron, Fuzzy BP Architecture, Learning in Fuzzy BP, Application of Fuzzy BP Networks.	12
3	**Neural Networks:** What is Neural Network, Learning rules and various activation functions, Single layer Perceptrons,	12

	Back Propagation networks, Architecture of Backpropagation (BP) Networks, Backpropagation Learning, Variation of Standard Back propagation Neural Network, Introduction to Associative Memory, Adaptive Resonance theory and Self Organizing Map, Recent Applications.	
4	**Genetic Algorithm:** History of Genetic Algorithms (GA), Working Principle, Various Encoding methods, Fitness function, GA Operators- Reproduction, Crossover, Mutation, Convergence of GA, Bit wise operation in GA, Multilevel Optimization.	12
5	**GA based Backpropagation Networks:** GA based Weight Determination, K - factor determination in Columns. **Hybrid Systems:** Sequential Hybrid Systems, Auxiliary Hybrid Systems, Embedded Hybrid Systems, Neuro-Fuzzy Hybrid Systems, Neuro-Genetic Hybrid Systems, Fuzzy-Genetic Hybrid Systems.	12
	Total	60

Sr. No.	**List of Practical**
1.	Create a perceptron with appropriate no. of inputs and outputs. Train it using fixed increment learning algorithm until no change in weights is required. Output the final weights.
2.	Create a simple ADALINE network with appropriate no. of input and output nodes. Train it using delta learning rule until no change in weights is required. Output the final weights.
3.	Train the autocorrelator by given patterns: A1=(-1,1,-1,1), A2=(1,1,1,-1), A3=(-1, -1, - 1, 1). Test it using patterns: Ax=(-1,1,-1,1), Ay=(1,1,1,1), Az=(-1,-1,-1,-1).
4.	Train the hetrocorrelator using multiple training encoding strategy for given patterns: A1=(000111001), B1=(010000111), A2=(111001110) B2=(100000001), A3=(110110101) B3(101001010). Test it using pattern A2.
5.	Implement Union, Intersection, Complement and Difference operations on fuzzy sets. Also create fuzzy relation by Cartesian product of any two fuzzy sets and perform maxmin composition on any two fuzzy relations.
6.	Solve Greg Viot's fuzzy cruise controller using MATLAB Fuzzy logic toolbox.
7.	Solve Air Conditioner Controller using MATLAB Fuzzy logic toolbox.
8.	Implement TSP using GA.

9. **Evaluation Pattern:**
   a. **Total Marks:** 150 Marks (10 Point Grading)
   b. **Passing Criteria**: 40 % (4 Grade Points)
   c. **Marking Scheme:** 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books:** Online/Offline

10. Paper Pattern:

a. Internal Assessment:

i. Assessment consists of a class tests of 20 marks. The class test is to be conductedwhen approx. 40% syllabus is completed. Test will be of 45 Minutes.

ii. Students have to submit assignment after completion of each module which willcarry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination :

Question No.	Description	Marks
1	Answer any two Questions (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.1 to Q.6 will include total 3 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	30+10 Marks	10 Marks	50 Marks

11. Course Outcome:

On successful completion of this course, the Learner should be able to:

CO1: Understand soft computing techniques and their role in problem solving.

CO2: Conceptualize and parameterize various problems to be solved through basic soft computing techniques.

CO3: Analyse and integrate various soft computing techniques in order to solve problems effectively and efficiently.

12. **References:**

1. Neural Networks, Fuzzy Logic & Genetic Algorithm: Synthesis and Applications by S. Rajasekaran & G. A. Vijayalakshmi Pai, Phi, 2003.
2. Soft Computing: Methodologies and Applications by Hoffmann, F., Koeppen, M., Klawonn, F. & Roy, R., Springer, 2005.
3. Principles of Soft Computing by S. N. Sivanandam & S.N. Deepa, Wiley, 2007.
4. Genetic Algorithms by David E. Goldberg, Pearson Education India, 2006.
5. Soft Computing and Its Applications by Rafik Aziz, O. Aliev, R. R. Aliev, World Scientific, 2001.
6. Artificial Neural Networks by B. Yagnanarayana, PHI, 2009.
7. Neural Networks and Learning Machines by Simon O. Haykin, 3rd Edition, Prentice Hall, 2009.

COURSE STRUCTURE

1. **Title of the Course :** Statistical modelling in Python
2. **Semester** : V
3. **Course Code: For Theory:** BDSCC502
   For Practical: BDSCCP502
4. **Course Objective:**
   a. Analyze data using descriptive statistics and graphical tools
   b. Fit a probability distribution to data (estimate distribution parameters)
   c. Express various risk measures as statistical tests
   d. Determine quintile measures of various risk metrics
5. **Category of Course** : Core Course
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BDSCC502	Statistical modelling in Python	5	3	2	2	4

Module	Detailed Content	Hours
1	**IPython: Beyond normal python** Shell or notebook? Help and documentation in IPython Keyboard shortcut in the IPython shell IPython magic commands Input and output history IPython and shell commands Shell-related magic commands Errors and debugging	12

	Profiling and timing code More IPython resources	
2	**Introduction to NumPy** Understanding data types in Python The basics of NumPy arrays Computation on NumPy arrays: Universal functions Aggregations: Min, max and everything in between Computation on arrays: broadcasting Comparisons, Masks and Boolean logic Fancy indexing Sorting arrays Structured data: NumPy's structured arrays	12
3	**Data manipulation with Pandas** Installing and using Pandas Introducing Pandas objects Data indexing and selection Operating on data in Pandas Handling missing Data Hierarchical indexing Combining datasets: concat and append Combining datasets: merge and join Aggregation and grouping Pivot tables Vectorized string operations Working with time series High performance Pandas: eval() and query()	12
4	Visualization with Matplotlib General Matplotlib tips Two interfaces for the price of one	12

	Simple line plots Simple scatter plots Visualizing errors Density and contour plots Histogram, binning and density Customizing plot legends Customizing colorbars Multiple subplots Text and annotation Customizing ticks Customizing Matplotlib: configurations and stylesheets Three-dimensional plotting in Matplotlib Geographic data with Basemap Visualization with seaborn Further resources	
5	**Machine learning** What is machine learning? Introducing Scikit-Learn Hyperparameters and model validation Feature engineering Naïve Bayes classification Linear regression Support vector machines Decision trees and random forests Principal component analysis K-means clustering	12
	Total	60

List of Practical:

10 practical covering the entire syllabus must be performed. The detailed list of practical will be circulated later in the official workshop.

9. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)
b. **Passing Criteria** : 40 % (4 Grade Points)
c. **Marking Scheme** : 60:40:50 Pattern
   - 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
   - 40 Marks - Internal Assessment (Passing = 16 Marks)
   - 50 Marks - Practical Assessment (Passing = 20 Marks)
d. **Mode of Evaluation of Answer-books** : Offline

10. Paper Pattern:

a. Internal Assessment:

i. Assessment consists of a class tests of 20 marks. The class test is to be conductedwhen approx. 40% syllabus is completed. Test will be of 45 Minutes.

ii. Students have to submit assignment after completion of each module which willcarry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination :

Question No.	Description	Marks
1	Answer any two Questions (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.1 to Q.6 will include total 3 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	30+10 Marks	10 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Ability to derive the distributional results needed for statistical inference.

CO2: Ability to conduct appropriate hypothesis tests for comparing two or more means and for regression.

CO3: Demonstrate understanding that hypothesis tests, regression and analysis of variance can be seen as part of the same statistical theory of linear models.

References:

1. Python Data science handbook by Jake Vanderplas, O'Reilly publication

COURSE STRUCTURE

1. **Title of the Course :** Advances Techniques in Data Science
2. **Semester** : V

Course Code: For Theory: BDSSB503

3. **For Practical:** BDSSBP503
4. **Course Objective:**

   a. Demonstrate knowledge of statistical data analysis techniques utilized in business decision making.
   b. Practice problem analysis and decision-making.
   c. Identify patterns, trends, correlations, and causal relationships in big databases.
   d. Use concepts and methods of mathematical disciplines relevant to data analytics and statistical modelling.

5. **Category of Course**: Skill Based Course
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BDSSB 503	Advances Techniques in Data Science	5	3	2	2	4

Module	Detailed Content	Hours
1	**1) Statistical learning** • What is statistical learning? • Assessing model accuracy **2) Linear regression** • Simple linear regression • Multiple linear regression • Other considerations in the regression model • The marketing plan • Comparison of linear regression with K-nearest neighbours	12

2	**3) Classification** • An overview of classification • Why not linear regression? • Logistic regression • Linear discriminant analysis • A comparison of classification methods **4) Resampling methods** • Cross-validation • The bootstrap	12
3	**5) Linear model selection and regularization** • Subset selection • Shrinkage methods • Dimension reduction methods • Considerations in high dimensions 6) Tree based methods • The basics of decision trees • Bagging, random forests, boosting	12
4	**7) Support vector machines** • Maximal margin classifier • Support vector classifier • Support vector machines • SVMs with more than two classes • Relationship to logistic regression	12
5	**8) Unsupervised learning** • The challenge of unsupervised learning • Principle component analysis • Clustering methods **9) Project**	12
	Total	60

10 practical covering the entire syllabus must be performed.

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9. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** : Offline

10. Paper Pattern:

a. Internal Assessment:

i. Assessment consists of a class tests of 20 marks. The class test is to be conductedwhen approx. 40% syllabus is completed. Test will be of 45 Minutes.

ii. Students have to submit assignment after completion of each module which willcarry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination :

Question No.	Description	Marks
1	Answer any two Questions (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.1 to Q.6 will include total 3 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	30+10 Marks	10 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Utilize statistical concepts of data analysis, data collection, modeling, and inference.

CO2: Use and adapt statistical software packages and scalable computing infrastructure to formulate problems, identify and gather relevant existing data, and analyze the data to provide insights.

CO3: Apply computing theory, languages, and algorithms, as well as mathematical and statistical models, and the principles of optimization to appropriately formulate and use data analyses.

CO4: Execute statistical analyses with professional statistical software.
CO5: Compare the performance of multiple methods and models, recognize the connections between how the data were collected and the scope of conclusions from the resulting analysis, and articulate the limitations and abuses of formal inference and modelling.
CO6: Understand the linear regression model, classification and sampling methods.

12. **References:**

1. Introduction to statistical learning with applications in R, Springer publication
2. Practical Statistics for Data Scientists by Peter Bruce, Paperback – 6 June 2017

COURSE STRUCTURE

1. **Title of the Course :** Capstone Project 1 (R)
2. **Semester** : V
3. **Course Code: For Theory:** BDSAE504
   For Practical: BDSAEP504
4. **Course Objective:**
   a. Students will demonstrate an ability to handle a problem in data science from the point of problem definition through delivery of a solution. In doing so, they will demonstrate proficiency in collecting and processing real-world data, in designing the best methods to solve the problem, in implementing a solution, and quantifying the robustness and accuracy of their model.
   b. Students will demonstrate competence in presenting material by delivering two presentations: a proposal on how to approach the problem and their final solution.
   c. Students will learn how to work in small teams with at least one other student on their project.
   d. Students will write a report on their project for evaluation by the instructor(s) in consultation with the project advisors. The report will be structured as a typical research paper, and hence will include three main sections:
      a. Motivation, problem definition, and existing approaches
      b. Proposed solution and details of implementation
      c. Results, conclusion, and directions for future work
5. **Category of Course** : Ability Enhancement Course
6. **Total Hours**: 60
7. **Total Credits**: 06 Credits (03 Credits for Theory/Documentation & 03 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory/ Documentation	Practical/ Tutorial	Total
BDSAE504	Capstone Project 1 (R)			3	3	6

Course Description

The purpose of the Capstone Project is for the students to apply theoretical knowledge acquired during the Data Science program to a project involving actual data in a realistic setting. During the project, students engage in the entire process of solving a real-world data science project, from collecting and processing actual data to applying suitable and appropriate analytic methods to the problem. Both the problem statements for the project assignments and the datasets originate from real-world domains similar to those that students might typically encounter within industry, government, non-governmental organizations (NGOs), or academic research.

Illustrative project examples

A large insurance company has an anonymized dataset of worker compensation claims. The insurance claims dataset incorporates claimant demographics, claims payments, etc. A team comprised of capstone students, advised by the instructor in conjunction with a technical coach from the company, employ the dataset to develop and implement an analytic solution to reduce workplace injuries using software tools studied in previous courses.

Description of Project Requirements

- Demonstrate ability to carry out a data science project from end to end.
- Demonstrate proficiency in preparation and walk through of a presentation.
- Demonstrate ability to carry out a literature search and summarize the state of the art.
- Demonstrate ability to translate the project objects into a realistic work plan that draws on multiple people.
- Demonstrate ability to design and implement required software using tools such as R, MatLab, Torch, and traditional programming languages such as C, C++, Java.
- Demonstrate ability to professionally present the project plan and results.

9. **Evaluation Pattern:**
   a. **Total Marks** : 200 Marks (10 Point Grading)
   b. **Passing Criteria** : 40 % (4 Grade Points)
   c. **Marking Scheme** : 60:40 Pattern
   d. **Mode of Evaluation of Answer-books** :Offline

10. **Paper Pattern:**

Semester End Practical Examination:

Exam Duration (in Hours)	Project Demonstration	Project Documentation	Total
2 Hours 30 min per batch	100 Marks	100 Marks	200 Marks

COURSE STRUCTURE

1. **Title of the Course :** Cloud Computing
2. **Semester** : V
3. **Course Code: For Theory:** BDSEL505
   For Practical: BDSELP505
4. **Course Objective:**
   a. To understand data warehouse concepts, architecture, business analysis and tools
   b. To learn how to use Cloud Services.
   c. To implement Virtualization.
   d. To implement Task Scheduling algorithms.
   e. Apply Map-Reduce concept to applications. To build Private Cloud
5. **Category of Course** : Elective
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BDSEL505	Cloud Computing	5	3	2	2	4

Module	Detailed Content	Hours
1	**Introduction to Cloud Computing:** Introduction, Historical developments, Building Cloud Computing Environments, **Principles of Parallel and Distributed Computing:** Eras of Computing, Parallel v/s distributed computing, Elements of Parallel Computing, Elements of distributed computing, Technologies for distributed computing. **Virtualization**: Introduction, Characteristics of virtualized environments, Taxonomy of virtualization techniques, Virtualization and cloud computing, Pros and cons of virtualization, Technology examples. Logical Network Perimeter, Virtual Server, Cloud Storage Device, Cloud usage monitor, Resource replication, Ready-made environment.	12
2	**Cloud Computing Architecture:** Introduction, Fundamental concepts and models, Roles and boundaries, Cloud Characteristics, Cloud Delivery models, Cloud Deployment models, Economics of the cloud, Open challenges. **Fundamental Cloud Security:** Basics, Threat agents, Cloud	12

	security threats, additional considerations. **Industrial Platforms and New Developments:** Amazon Web Services, Google App Engine, Microsoft Azure.	
3	**Specialized Cloud Mechanisms:** Automated Scaling listener, Load Balancer, SLA monitor, Pay-per-use monitor, Audit monitor, fail over system, Hypervisor, Resource Centre, Multi device broker, State Management Database. **Cloud Management Mechanisms:** Remote administration system, Resource Management System, SLA Management System, Billing Management System, **Cloud Security Mechanisms:** Encryption, Hashing, Digital Signature, Public Key Infrastructure (PKI), Identity and Access Management (IAM), Single 12 11 Sign-On (SSO), Cloud-Based Security Groups, Hardened Virtual Server Images	12
4	**Fundamental Cloud Architectures:** Workload Distribution Architecture, Resource Pooling Architecture, Dynamic Scalability Architecture, Elastic Resource Capacity Architecture, Service Load Balancing Architecture, Cloud Bursting Architecture, Elastic Disk Provisioning Architecture, Redundant Storage Architecture. **Advanced Cloud Architectures:** Hypervisor Clustering Architecture, Load Balanced Virtual Server Instances Architecture, Non-Disruptive Service Relocation Architecture, Zero Downtime Architecture, Cloud Balancing Architecture, Resource Reservation Architecture, Dynamic Failure Detection and Recovery Architecture, Bare-Metal Provisioning Architecture, Rapid Provisioning Architecture, Storage Workload Management Architecture	12
5	**Cloud Delivery Model Considerations:** Cloud Delivery Models: The Cloud Provider Perspective, Cloud Delivery Models: The Cloud Consumer Perspective, **Cost Metrics and Pricing Models:** Business Cost Metrics, Cloud Usage Cost Metrics, Cost Management Considerations, **Service Quality Metrics and SLAs:** Service Quality Metrics, SLA Guidelines	12
	Total	60

Sr. No.	**List of Practical**
1	Write a program for implementing Client Server communication model using TCP. a. A client server based program using TCP to find if the number entered is prime b. A client server TCP based chatting application
2	Write a program for implementing Client Server communication model using UDP a. A client server based program using UDP to find if the number entered is even or odd. b. A client server based program using UDP to find the factorial of the

	entered number. c. A program to implement simple calculator operations like addition, subtraction, multiplication and division. d. A program that finds the square, square root, cube and cube root of the entered number
3	A multicast Socket example
4	Write a program to show the object communication using RMI a. A RMI based application program to display current date and time. b. A RMI based application program that converts digits to words, e.g. 123 will be converted to one two three.
5	Show the implementation of web services. a. Implementing "Big" Web Service. b. Implementing Web Service that connects to MySQL database.
6	Implement Xen virtualization and manage with Xen Center
7	Implement virtualization using VMWare ESXi Server and managing with vCenter
8	Implement Windows Hyper V virtualization
9	Develop application for Microsoft Azure.
10	Develop application for Google App Engine

9. **Evaluation Pattern:**
   a. **Total Marks** : 150 Marks (10 Point Grading)
   b. **Passing Criteria** : 40 % (4 Grade Points)
   c. **Marking Scheme** : 60:40:50 Pattern
      - 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
      - 40 Marks - Internal Assessment (Passing = 16 Marks)
      - 50 Marks - Practical Assessment (Passing = 20 Marks)
   d. **Mode of Evaluation of Answer-books** : Offline

10. Paper Pattern:

a. Internal Assessment:

i. Assessment consists of a class tests of 20 marks. The class test is to be conductedwhen approx. 40% syllabus is completed. Test will be of 45 Minutes.

ii. Students have to submit assignment after completion of each module which willcarry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination :

Question No.	Description	Marks
1	Answer any two Questions (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.1 to Q.6 will include total 3 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	30+10 Marks	10 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Analyze the Cloud computing setup with its vulnerabilities and applications using different architectures.

CO2: Design different workflows according to requirements and apply map reduce programming model.

CO3: Apply and design suitable Virtualization concept, Cloud Resource Management and design scheduling algorithms.

CO4: Create combinatorial auctions for cloud resources and design scheduling algorithms for computing clouds.

C05: Assess cloud Storage systems and Cloud security, the risks involved, its impact and develop cloud application

12. References:

1. Mastering Cloud Computing Foundations and Applications Programming by Rajkumar Buyya,Christian Vecchiola, S. Thamarai Selvi, 2013
2. Cloud Computing Concepts, Technology & Architecture by Thomas Erl, Zaigham Mahmood,and Ricardo Puttini, 2013
3. Distributed and Cloud Computing, From Parallel Processing to the Internet of Things by Kai Hwang, Jack Dongarra, Geoffrey Fox, 2012

COURSE STRUCTURE

1. **Title of the Course :** Big Data
2. **Semester** : V
3. **Course Code: For Theory:** BDSEL506
   For Practical: BDSELP506
4. **Course Objective:**
   a. To provide an overview of an exciting growing field of big data analytics.
   b. To introduce the tools required to manage and analyze big data like Hadoop, NoSql MapReduce.
   c. To teach the fundamental techniques and principles in achieving big data analytics with scalability and streaming capability.
   d. To enable students to have skills that will help them to solve complex realworld problems in for decision support.
5. **Category of Course** : Elective
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BDSEL506	Big Data	5	3	2	2	4

Module	Detailed Content	Hours
1	**Introduction to Big Data,** Characteristics of Data, and Big Data Evolution of Big Data, Definition of Big Data, Challenges with big data, Why Big data? Data Warehouse environment, Traditional Business Intelligence versus Big Data. State of Practice in Analytics, Key roles for New Big Data Ecosystems, Examples of big Data Analytics. Big Data Analytics, Introduction to big data analytics, Classification of Analytics, Challenges of Big Data, Importance of Big Data, Big Data Technologies, Data Science, Responsibilities, Soft state eventual consistency. Data Analytics Life Cycle	12
2	**Analytical Theory and Methods:** Clustering and Associated Algorithms, Association Rules, Apriori Algorithm, Candidate Rules, Applications of Association Rules, Validation and Testing, Diagnostics, Regression, Linear Regression, Logistic Regression, Additional Regression Models.	12

3	**Analytical Theory and Methods:** Classification, Decision Trees, Naïve Bayes, Diagnostics of Classifiers, Additional Classification Methods, Time Series Analysis, Box Jenkins methodology, ARIMA Model, Additional methods. Text Analysis, Steps, Text Analysis Example, Collecting Raw Text, Representing Text, Term Frequency-Inverse Document Frequency (TFIDF), Categorizing Documents by Topics, Determining Sentiments	12
4	**Data Product**, Building Data Products at Scale with Hadoop, Data Science Pipeline and Hadoop Ecosystem, Operating System for Big Data, Concepts, Hadoop Architecture, Working with Distributed file system, Working with Distributed Computation, Framework for Python and Hadoop Streaming, Hadoop Streaming, MapReduce with Python, Advanced MapReduce. In-Memory Computing with Spark, Spark Basics, Interactive Spark with PySpark, Writing Spark Applications,	12
5	**Distributed Analysis and Patterns**, Computing with Keys, Design Patterns, Last-Mile Analytics, Data Mining and Warehousing, Structured Data Queries with Hive, HBase, Data Ingestion, Importing Relational data with Sqoop, Injesting stream data with flume. Analytics with higher level APIs, Pig, Spark's higher level APIs	12
	Total	60

Sr. No.	List of Practical
1-10	10 Practical based on above syllabus, covering entire syllabus

9. **Evaluation Pattern:**
   a. **Total Marks** : 150 Marks (10 Point Grading)
   b. **Passing Criteria** : 40 % (4 Grade Points)
   c. **Marking Scheme** : 60:40:50 Pattern
      - 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
      - 40 Marks - Internal Assessment (Passing = 16 Marks)
      - 50 Marks - Practical Assessment (Passing = 20 Marks)
   d. **Mode of Evaluation of Answer-books** :Offline

10. **Paper Pattern:**

a. Internal Assessment:

i. Assessment consists of a class tests of 20 marks. The class test is to be conductedwhen approx. 40% syllabus is completed. Test will be of 45 Minutes.

ii. Students have to submit assignment after completion of each module which willcarry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination :

Question No.	**Description**	**Marks**
1	Answer any two Questions (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.1 to Q.6 will include total 3 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	30+10 Marks	10 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Understand the key issues in big data management and its associated applications in intelligent business and scientific computing.

CO2: Acquire fundamental enabling techniques and scalable algorithms like Hadoop, Map Reduce and NO SQL in big data analytics

CO3: Interpret business models and scientific computing paradigms, and apply software tools for big data analytics

CO4: Achieve adequate perspectives of big data analytics in various applications like recommender systems, social media applications etc.

12. References:

1. Data Analytics with Hadoop An Introduction for Data Scientists by Benjamin Bengfort and Jenny Kim, 2016
2. Big Data and Hadoop by V.K Jain, 2018

Bachelor of Science in Data Science

[B. Sc. In Data Science]

Semester - VI

COURSE STRUCTURE

1. **Title of the Course :** Data Mining
2. **Semester** : VI
3. **Course Code: For Theory:** BDSCC601
   For Practical: BDSCCP601
4. **Course Objective:**
   a. To identify the scope and essentiality of Data Mining.
   b. Students will be train on fundamentals of these techniques by exploring various data mining algorithms.
   c. This course will introduce students the various techniques and methods used for data mining
5. **Category of Course** : Core Course
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BDSCC601	Data Mining	5	3	2	2	4

Module	Detailed Content	Hours
1	**Data Mining: W**hat is data mining?, Statistical limits on data mining, MapReduce and the new software stack,Distributed file systems. **MapReduce :** Algorithms using MapReduce**,** The communication Cost model**,** Complexity theory for MapReduce	12
2	**Finding similar items:** Application of near neighbor search, Shingling of documents, Similarity-preserving summaries of sets Locality- sensitive hashing for documents, Distance measures, The theory of Locality-sensitive functions, LSH families for other distance measures, Application of locality-sensitive hashing, Methods for high degrees of similarity, **Mining Data streams:** The stream data model, Sampling data in a stream, Filtering streams, Counting distinct elements in a stream, Estimating moments, Counting ones in a window, Decaying windows,	12
3	**Link Analysis:** PageRank, Efficient computation of PageRank, Topic sensitive PageRank, Link spam, Hubs and authorities, **Frequent Itemsets:** The market-based model, Market baskets	12

	and the A-priory algorithm, Handling larger datasets in the main memory, Limited-pass algorithm, Counting frequent items in a stream,	
4	**Clustering:** Introduction to clustering techniques, Hierarchical clustering, K-means algorithms, The CURE algorithm, Clustering in non-Euclidean spaces, Clustering for streams and parallelism, **Advertising on the Web:** Issues on the On-Line advertising, On-Line algorithms, The matching problem, The Adwords problem, Adwords implementation,	12
5	**Recommendation systems:** A model for recommendation systems, Content-based recommendations, Collaborative filtering, Dimensionality reduction, The Netflix challenge, **Mining social network graphs:** Social networks as graphs, Clustering of social-network graphs, Direct discovery of communities, Simrank, Counting triangles, Neighborhood properties of graphs, **Dimensionality reduction:** Eigenvalues and Eigenvectors, Principal-component analysis, Singular-value decomposition, CUR decomposition, **Large-scale machine learning:** The machine-learning model, Perceptrons, Support vector machines, Learning from nearest neighbors, Comparison of learning methods,	12
	Total	60

Sr. No.	List of Practical
	List of Practical: 10 practicals covering the entire syllabus must be performed. The detailed list of practical will be circulated later in the official workshop

9. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** : Offline

10. Paper Pattern:

a. Internal Assessment:

i. Assessment consists of a class tests of 20 marks. The class test is

to be conductedwhen approx. 40% syllabus is completed. Test will be of 45 Minutes.

ii. Students have to submit assignment after completion of each module which willcarry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination :

Question No.	Description	Marks
1	Answer any two Questions (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.1 to Q.6 will include total 3 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	30+10 Marks	10 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Understand Data Mining Principles

CO2: Identify appropriate data mining algorithms to solve real world problems

CO3: Compare and evaluate different data mining techniques like classification, prediction, clustering and association rule mining

CO4: Describe complex data types with respect to spatial and web mining. 6. Benefit the user experiences towards research and innovation.

12. References:

1. "Data Mining", Ian H. Witten, Eibe Frank and Mark A. Hall, 3rd Edition
2. Introduction to Data Mining by Pang-Ning Tan, Michael Steinbach and Vipin Kumar.
3. "Data Mining Methods", R. Chattamvelli, 2nd Edition.

COURSE STRUCTURE

1. **Title of the Course :** Business Intelligence
2. **Semester** : VI
3. **Course Code: For Theory:** BDSCC602

   For Practical: BDSCCP602
4. **Course Objective:**
   a. Data extraction: Investigate data to establish new relationships and patterns
   b. Predictive Analytic and Predictive Modelling: Analyse the correlation between different variables
   c. Logistic Regression: Analyze the possibility of default and generate customer records
   d. Problem analysis: Understand and explore problems in business
   e. Data interpretation: Use tools such as Excel and open source to interpret data
   f. Problem-solving: Use analytics to solve business problems

5. **Category of Course** : Core Course
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BDSCC502	Business Intelligence	5	3	2	2	4

Module	Detailed Content	Hours
1	**Business intelligence:** Effective and timely decisions, Data, information and knowledge, The role of mathematical models, Business intelligence architectures, Ethics and business intelligence **Decision support systems**: Definition of system, Representation of the decision-making process, Evolution of	12

	information systems, Definition of decision support system, Development of a decision support system	
2	**Mathematical models for decision making:** Structure of mathematical models, Development of a model, Classes of models **Data mining**: Definition of data mining, Representation of input data , Data mining process, Analysis methodologies Data preparation: Data validation, Data transformation, Data reduction	12
3	**Classification:** Classification problems, Evaluation of classification models, Bayesian methods, Logistic regression, Neural networks, Support vector machines **Clustering:** Clustering methods, Partition methods, Hierarchical methods, Evaluation of clustering models	12
4	**Business intelligence applications:** Marketing models: Relational marketing, Sales force management, And Logistic and production models: Supply chain optimization, Optimization models for logistics planning, Revenue management systems. **Data envelopment analysis:** Efficiency measures, Efficient frontier, The CCR model, Identification of good operating practices	12
5	**Knowledge Management:** Introduction to Knowledge Management, Organizational Learning and Transformation, Knowledge Management Activities, Approaches to Knowledge Management, Information Technology (IT) In Knowledge Management, Knowledge Management Systems Implementation, Roles of People in Knowledge Management **Artificial Intelligence and Expert Systems:** Concepts and Definitions of Artificial Intelligence, Artificial Intelligence Versus Natural Intelligence, Basic Concepts of Expert Systems, Applications of Expert Systems, Structure of Expert Systems, Knowledge Engineering, Development of Expert Systems	12
	Total	60

Sr. No.	List of Practical
1	Import the legacy data from different sources such as (Excel, SqlServer, Oracle etc.) and load in the target system. (You can download sample database such as Adventureworks, Northwind, foodmart etc.)
2	Perform the Extraction Transformation and Loading (ETL) process to construct the database in the Sqlserver.
3	a. Create the Data staging area for the selected database. b. Create the cube with suitable dimension and fact tables based on ROLAP, MOLAP and HOLAP model.
4	A.Create the ETL map and setup the schedule for execution. b. Execute the MDX queries to extract the data from the data warehouse.
5	a. Import the data warehouse data in Microsoft Excel and create the Pivot table and Pivot Chart. b. Import the cube in Microsoft Excel and create the Pivot table and Pivot Chart to perform data analysis
6	Apply the what – if Analysis for data visualization. Design and generate necessary reports based on the data warehouse data.
7	Perform the data classification using classification algorithm.
8	Perform the data clustering using clustering algorithm
9	Perform the Linear regression on the given data warehouse data.
10	Perform the logistic regression on the given data warehouse data.

9. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** : Offline

10. **Paper Pattern:**

a. Internal Assessment:

i. Assessment consists of a class tests of 20 marks. The class test is to be conductedwhen approx. 40% syllabus is completed. Test will be of 45 Minutes.

ii. Students have to submit assignment after completion of each module which willcarry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination :

Question No.	Description	Marks
1	Answer any two Questions (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.1 to Q.6 will include total 3 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	30+10 Marks	10 Marks	50 Marks

11. **Course Outcome:**

Upon successful completion of this course, students should be able to:

CO1: Describe the concepts and components of Business Intelligence (BI).

CO2: Critically evaluate use of BI for supporting decision making in an organisation.

CO3: Understand and use the technologies and tools that make up BI (e.g. Data warehousing, Data reporting and use of online analytical processing (OLAP)).

CO4: Understand and design the technological architecture that underpins BI systems.

CO5: Plan the implementation of a BI system.

12. **References:**

1. Business Intelligence Data Mining and Optimization for Decision Making (Carlo Vercellis) Wiley 1st 2009
2. Decision support and Business Intelligence Systems (Efraim Turban, Ramesh Sharda, Dursun Delen) Pearson 9th 2011
3. Fundamentals of Business Intelligence (Grossmann W, Rinderle-Ma)

COURSE STRUCTURE

1. **Title of the Course :** Machine Learning in Python
2. **Semester** : VI
3. **Course Code: For Theory :** BDSSB603
   For Practical: BDSSBP603
4. **Course Objective:**
   a. To The objective of this course is to introduce machine learning fundamentals to students.
   b. This course provides introductory concepts of various machine learning techniques to students which will help to build foundation for further understanding.
   c. This course also aims to provide details of various steps involved in machine learning pipeline such as data collection, pre- processing, feature engineering etc.
   d. This course also introduce popular tools used in the area of machine learning
5. **Category of Course** : Skill Based
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BDSSB503	Machine Learning in Python	5	3	2	2	4

Module	Detailed Content	Hours
1	**Giving computers the ability to learn from Data:** Building intelligent machines to transform data into knowledge The three different types of machine learning Introduction to the basic terminology and notations A roadmap to building machine learning systems Using Python for machine learning **Training simple machine learning algorithms for classification:**Artificial neurons- a brief glimpse into the early history of machine learning Implementation of perceptron learning algorithm in python Adaptive linear neurons and the convergence of learning	12
2	A **tour of machine learning classifiers using scikit-learn:** Choosing a classification algorithmFirst steps with scikit learn – training a perceptron Modelling class probabilities via logistic regression Maximum margin classification with support vector machines Solving non-linear problems using a kernel SVM, Decision tree learning	12

	K-nearest neighbors- a lazy learning algorithm **Building good training sets – Data preprocessing:** Dealing with missing data, Handling categorical data Partitioning a dataset into separate training and test sets Bringing features onto the same scale, Selecting meaningful features, Assessing feature importance with random forests	
3	**Compressing Data via dimensionality reduction:** Unsupervised dimensionality reduction via principal component analysis Supervised data compression via linear discriminant analysis Using kernel principal component analysis for nonlinear mappings **Learning best practices for model evaluation and hyper parameter tuning:**Streamlining workflows with pipelines Using k-fold cross-validation to assess model performance Debugging algorithms with learning and validation curves Fine-tuning machine learning models via grid search Looking at different performance evaluation metrics Dealing with class imbalance	12
4	**Combining different models for ensemble learning:** Learning with ensembles Combining classifiers via majority vote Bagging- building an ensemble of classifiers from bootstrap samplesLeverage weak learners via adaptive boosting **Applying machine learning to sentiment analysis:** Prepare the IMDB movie review data for text processing Introducing the bag of words model Training a logistic regression model for document classification Working with bigger data- online algorithms and out of core learning Topic modelling with Latent Dirichlet Allocation **Predicting continuous target variables with regression analysis:** Introducing linear regression Exploring the housing dataset Implementing an ordinary least square linear regression model Fitting a robust regression model using RANSAC Evaluating the performance of linear regression models Using regularization methods for regression Turning a linear regression model into a curve- polynomial regression Dealing with nonlinear relationship using random forests	12
5	**Working with Unlabeled data – clustering analysis:** Grouping objects by similarity using k-means Organizing clusters as a hierarchical tree Locating regions of high density via DBSCAN **Implementing a multilayer artificial neural network from scratch:** Modelling, complex functions with artificial neural networks**,** Classifying handwritten digits**,**Training an artificial neural network.About the convergence in neural networks**,** A few words about the neural network implementation **Parallelizing neural network training with TensorFlow:**	12

	TensorFlow and training performance, Training neural network efficiently with high-level TensorFlow APIs, Choosing activation functions for multilayer networks	
	Total	60

Sr. No.	List of Practical
	List of Practical: 10 practicals covering the entire syllabus must be performed. The detailed list of practical will be circulated later in the official workshop

9. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** : Online/Offline

10. Paper Pattern:

a. **Internal Assessment:**

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. **Semester End Theory Examination :**

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

c. **Semester End Practical Examination:**

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	45 Marks	05 Marks	50 Marks

11. **Course Outcome:**

Upon successful completion of this course, students should be able to develop application

CO1: Understand the various processes involve in machine learning.
CO2: Perform data cleaning and pre-processing
CO3: Decide and classify the problem as classification, prediction or clustering
CO4: Train and test machine learning algorithms

12. **References:**

1. Understanding machine learning: From theory to algorithms, by Shalev-Shwartz, Shai, and Shai Ben-David, 2014.
2. Practical machine learning tools and techniques, by Ian H., et al. 2016

COURSE STRUCTURE

1. **Title of the Course :** Capstone Project 1 (R)
2. **Semester** : VI
3. **Course Code: For Theory:** BDSAE604
   For Practical: BDSAEP604
4. **Course Objective:**
   a. Students will demonstrate an ability to handle a problem in data science from the point of problem definition through delivery of a solution. In doing so, they will demonstrate proficiency in collecting and processing real-world data, in designing the best methods to solve the problem, in implementing a solution, and quantifying the robustness and accuracy of their model.
   b. Students will demonstrate competence in presenting material by delivering two presentations: a proposal on how to approach the problem and their final solution.
   c. Students will learn how to work in small teams with at least one other student on their project.
   d. Students will write a report on their project for evaluation by the instructor(s) in consultation with the project advisors. The report will be structured as a typical research paper, and hence will include three main sections:
      a. Motivation, problem definition, and existing approaches
      b. Proposed solution and details of implementation
      c. Results, conclusion, and directions for future work
5. **Category of Course** : Ability Enhancement Course
6. **Total Hours**: 60
7. **Total Credits**: 06 Credits (03 Credits for Theory/Documentation & 03 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory/ Documentation	Practical/ Tutorial	Total
BDSAE604	Capstone Project 2 (python)			3	3	6

Course Description

The purpose of the Capstone Project is for the students to apply theoretical knowledge acquired during the Data Science program to a project involving actual data in a realistic setting. During the project, students engage in the entire process of solving a real-world data science project, from collecting and processing actual data to applying suitable and appropriate analytic methods to the problem. Both the problem statements for the project assignments and the datasets originate from real-world domains similar to those that students might typically encounter within industry, government, non-governmental organizations (NGOs), or academic research.

Illustrative project examples

A large insurance company has an anonymized dataset of worker compensation claims. The insurance claims dataset incorporates claimant demographics, claims payments, etc. A team comprised of capstone students, advised by the instructor in conjunction with a technical coach from the company, employ the dataset to develop and implement an analytic solution to reduce workplace injuries using software tools studied in previous courses.

Description of Project Requirements

- Demonstrate ability to carry out a data science project from end to end.
- Demonstrate proficiency in preparation and walk through of a presentation.
- Demonstrate ability to carry out a literature search and summarize the state of the art.
- Demonstrate ability to translate the project objects into a realistic work plan that draws on multiple people.
- Demonstrate ability to design and implement required software using tools such as Python
- Demonstrate ability to professionally present the project plan and results.

9. **Evaluation Pattern:**
   a. **Total Marks** : 200 Marks (10 Point Grading)
   b. **Passing Criteria** : 40 % (4 Grade Points)
   c. **Mode of Evaluation of Answer-books** :Offline

10. **Paper Pattern:**

Semester End Practical Examination:

Exam Duration (in Hours)	Project Demonstration	Project Documentation	Total
2 Hours 30 min per batch	100 Marks	100 Marks	200 Marks

COURSE STRUCTURE

1. **Title of the Course:** Data Compression
2. **Semester**: VI
3. **Course Code: For Theory:** BDSEL605
   For Practical: BDSELP605
4. **Course Objective:**
   a. To introduce learners to basic applications, concepts, and techniques of Data Compression.
   b. To develop skills for using recent data compression software to solve practical problems in a variety of disciplines.
   c. To gain experience doing independent study and research.
5. **Category of Course**: Elective
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BDSEL605	Data Compression	5	3	2	2	4

Module	Detailed Content	Hours
1	**Compression Techniques:** Lossless Compression, Lossy Compression, Measures of Performance. **Mathematical Preliminaries for Lossless Compression Models:** Physical Models, Probability Models, Markov Models, Composite Source Model, Coding Uniquely Decodable Codes, Prefix Codes, Algorithmic Information Theory, Minimum Description Length principle Strings.	12
2	**Huffman Coding:** The Shannon Fano Coding, The Huffman Coding Algorithm, Minimum Variance Huffman Codes, Adaptive Huffman Coding, Application of Huffman Coding.	12
3	**Arithmetic Coding:** Overview, Introduction, coding a Sequence, Generating a Binary Code, Comparison of Huffman and Arithmetic Coding,	12

	Quantization: The Quantization Problem, Scalar Quantization, Vector Quantization, Discrete Cosine Transform.	
4	**Dictionary Techniques:** Overview, Introduction, Static Dictionary, Adaptive Dictionary (LZ77, LZ78), LZW.	12
5	**Context-Based Compression:** Overview, Introduction, Prediction with Partial Match (ppm), Dynamic Markov Compression. **Lossless Image Compression:** Overview, Introduction, CALIC, JPEG-LS, Multi resolution Approaches, Facsimile Encoding.	12
	Total	60

Sr. No.	**List of Practical**
1.	Write a Program to check whether the given code is prefix or not.
2.	Write a program to determine whether the set of given codes is uniquely decodable or not.
3.	Write a program to implement Shannon-Fano Compression Algorithm.
4.	Write a program to implement Huffman Coding Compression Algorithm.
5.	Write a program to implement Arithmetic Coding Compression Algorithm.
6.	Write a program to compress and decompress the given input string.
7.	Write a program to implement LZ77 Compression Algorithm.
8.	Write a program to implement LZ77 Decompression Algorithm.
9.	Write a program to implement LZ78 Compression Algorithm.
10.	Write a program to implement LZ78 Decompression Algorithm.
11.	Write a program to implement LZW Compression Algorithm.
12.	Write a program to implement LZW Decompression Algorithm.

9. **Evaluation Pattern:**
   a. **Total Marks:** 150 Marks (10 Point Grading)
   b. **Passing Criteria**: 40 % (4 Grade Points)
   c. **Marking Scheme:** 60:40:50 Pattern
      - 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
      - 40 Marks - Internal Assessment (Passing = 16 Marks)
      - 50 Marks - Practical Assessment (Passing = 20 Marks)
   d. **Mode of Evaluation of Answer-books:**Offline

10. **Paper Pattern:**

a. Internal Assessment:

i. Assessment consists of a class tests of 20 marks. The class test is to be conductedwhen approx. 40% syllabus is completed. Test will be of 45 Minutes.

ii. Students have to submit assignment after completion of each module which willcarry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination :

Question No.	**Description**	**Marks**
1	Answer any two Questions (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.1 to Q.6 will include total 3 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	30+10 Marks	10 Marks	50 Marks

11. Course Outcome:

On successful completion of this course, the Learner should be able to:

CO1: Understand importance of data compression.

CO2: Develop a reasonably sophisticated data compression application.

CO3: Select methods and techniques appropriate for the task.

CO4: Develop the methods and tools for the given task.

12. References:

1. Introduction to Data Compression by Khalid Sayood, 5th Edition, Morgan Kaufmann Publishers, 2017.
2. Data Compression: The Complete Reference by David Saloman, 4th Edition, Springer, 2006.
3. The Data Compression Book by Mark Nelson and Jean-Loup Gaily, 2nd Edition, John Wiley & Sons, 1995.

COURSE STRUCTURE

1. **Title of the Course :** Software Quality Assurance
2. **Semester** : VI
3. **Course Code: For Theory:** BDSEL606
   For Practical: BDSELP606
4. **Course Objective:**

   a. Create and apply a software quality assurance plan for all software projects.
   b. Create and manage a software quality assurance team
   c. Create and maintain appropriate metrics to measure and maintain quality
   d. Introduce basic concepts of software testing.
   e. To understand white box, block box, object oriented and web based testing.
   f. To know in details automation testing and tools used for automation testing.
   g. To understand the importance of software quality and assurance software systems development.

5. **Category of Course**: Elective Course
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (02 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
BDSEL 606	Software Quality Assurance	5	3	2	2	4

Module	Detailed Content	Hours
1	**Introduction to Quality:** Historical Perspective of Quality, What is Quality? (Is it a fact or perception?), Definitions of Quality, Core Components of Quality, Quality View, Financial Aspect of Quality, Customers, Suppliers and Processes, Total Quality Management (TQM), Quality Principles of Total Quality Management, Quality Management Through Statistical Process Control, Quality Management Through Cultural Changes, Continual (Continuous) Improvement Cycle, Quality in Different Areas, Benchmarking and	12

	Metrics, Problem Solving Techniques, Problem Solving Software Tools. **Software Quality:** Introduction, Constraints of Software Product Quality Assessment, Customer is a King, Quality and Productivity Relationship, Requirements of a Product, Organisation Culture, Characteristics of Software, Software Development Process, Types of Products, Schemes of Criticality Definitions, Problematic Areas of Software Development Life Cycle, Software Quality Management, Why Software Has Defects? Processes Related to Software Quality, Quality Management System Structure, Pillars of Quality Management System, Important Aspects of Quality Management.	
2	**Fundamentals of testing:** Introduction, Necessity of testing, What is testing? Fundamental test process, The psychology of testing, Historical Perspective of Testing, Definitions of Testing, Approaches to Testing, Testing During Development Life Cycle, Requirement Traceability Matrix, Essentials of Software Testing, Workbench, Important Features of Testing Process, Misconceptions About Testing, Principles of Software Testing, Salient Features of Good Testing, Test Policy, Test Strategy or Test Approach, Test Planning, Testing Process and Number of Defects Found in Testing, Test Team Efficiency, Mutation Testing, Challenges in Testing, Test Team Approach, Process Problems Faced by Testing, Cost Aspect of Testing, Establishing Testing Policy, Methods, Structured Approach to Testing, Categories of Defect, Defect, Error, or Mistake in Software, Developing Test Strategy, Developing Testing Methodologies (Test Plan), Testing Process, Attitude Towards Testing (Common People Issues), Test Methodologies/Approaches, People Challenges in Software Testing, Raising Management Awareness for Testing, Skills Required by Tester, Testing throughout the software life cycle, Software development models, Test levels, Test types, the targets of testing, Maintenance testing	12
3	**Unit Testing:** Boundary Value Testing: Normal Boundary Value Testing, Robust Boundary Value Testing, Worst-Case Boundary Value Testing, Special Value Testing, Examples, Random Testing, Guidelines for Boundary Value Testing. **Equivalence Class Testing:** Equivalence Classes, Traditional Equivalence Class Testing, Improved Equivalence Class Testing, Edge Testing, Guidelines and Observations. **Decision Table–Based Testing:** Decision Tables, Decision Table Techniques, Cause-and-Effect Graphing, Guidelines and	12

	Observations. **Path Testing:** Program Graphs, DD-Paths, Test Coverage Metrics, Basis Path Testing, Guidelines and Observations. **Data Flow Testing:** Define/Use Testing, Slice-Based Testing, Program Slicing Tools.	
4	**Software Verification and Validation:** Introduction, Verification, Verification Workbench, Methods of Verification, Types of reviews on the basis od Stage Phase, Entities involved in verification, Reviews in testing lifecycle, Coverage in Verification, Concerns of Verification, Validation, Validation Workbench, Levels of Validation, Coverage in Validation, Acceptance Testing, Management of Verification and Validation, Software development verification and validation activities. **V-test Model:** Introduction, V-model for software, Testing during Proposal stage, Testing during requirement stage, Testing during test planning phase, Testing during design phase, Testing during coding, VV Model, Critical Roles and Responsibilities.	12
5	**Levels of Testing:** Introduction, Proposal Testing, Requirement Testing, Design Testing, Code Review, Unit Testing, Module Testing, Integration Testing, Big-Bang Testing, Sandwich Testing, Critical Path First, Sub System Testing, System Testing, Testing Stages. **Special Tests:** Introduction, GUI testing, Compatibility Testing, Security Testing, Performance Testing, Volume Testing, Stress Testing, Recovery Testing, Installation Testing, Requirement Testing, Regression Testing, Error Handling Testing, Manual Support Testing, Intersystem Testing, Control Testing, Smoke Testing, Adhoc Testing, Parallel Testing, Execution Testing, Operations Testing, Compliance Testing, Usability Testing, Decision Table Testing, Documentation Testing, Training testing, Rapid Testing, Control flow graph, Generating tests on the basis of Combinatorial Designs, State Graph, Risk Associated with New Technologies, Process maturity level of Technology, Testing Adequacy of Control in New technology usage, Object Oriented Application Testing, Testing of Internal Controls, COTS Testing, Client Server Testing, Web Application Testing, Mobile Application Testing, eBusiness, eCommerce Testing, Agile Development Testing, Data Warehousing Testing.	12
	Total	60

Sr. No.	List of Practical
1	Setting up a company that sells testing services to software houses.
2	Write a SRS
3	Black Box Testing – Equivalence Partitioning and Boundary value Analysis
4	Black Box Testing – Equivalence Partitioning and Boundary value Analysis
5	Black Box Testing –: Decision table and Cause Effect Graphing
6	Branch – Decision – Condition Coverage
7	State Transition Testing
8	Data Flow Testing
9	Structured Testing – Loop Coverage, Call coverage and Path Coverage.
10	Test Automation using Selenium IDE

9. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** :Offline

10. Paper Pattern:

a. Internal Assessment:

i. Assessment consists of a class tests of 20 marks. The class test is to be conductedwhen approx. 40% syllabus is completed. Test will be of 45 Minutes.

ii. Students have to submit assignment after completion of each module which willcarry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination :

Question No.	Description	Marks
1	Answer any two Questions (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.1 to Q.6 will include total 3 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	30+10 Marks	10 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Describe fundamental concepts of software quality assurance.

CO2: Explore test planning and its management.

CO3: Understand fundamental concepts of software automation.

CO4: Apply Selenium automation tool for testing web based application.

CO5: Demonstrate the quality management, assurance, and quality standard to software system.

CO6: Demonstrate Software Quality Tools and analyze their effectiveness.

12. References:

1. Software Testing and Continuous Quality Improvement By William E. Lewis, 3rd Edition, CRC Press, 2016.
2. Software Testing: Principles, Techniques and Tools by M. G. Limaye, TMH , 2017.
3. Foundation of Software Testing by Dorothy Graham, Erik van Veenendaal, Isabel Evans, Rex Black, 3rd Edition, Cengage Learning, 2003.
4. Software Testing: A Craftsman's Approach by Paul C. Jorgenson, 4th Edition, CRC Press, 2017.

COURSE DETAILS

M.COM - SEMESTER 1 (2023-2024)				
SR. NO.	**SUBJECT**	**CATEGORY**	**SUBJECT CODE**	**CREDITS**
1	Cost and Management Accounting	Major- Mandatory	MCM-1-MJ- CMA	4
2	Strategic Management	Major- Mandatory	MCM-1-MJ- SM	4
3	Advanced Auditing	Major- Mandatory	MCM-1-MJ- AUD	4
4	Business Ethics & CSR	Major- Mandatory	MCM-1-MJ- ETH	2
5	Economics for Business Decisions	Major- Elective	MCM-1-ELEC- ECO	4
6	Research Methodology	Minor	MCM-1-MIN- RM	4
				22

M.COM - SEMESTER 2 (2023-2024)				
SR. NO.	**SUBJECT**	**CATEGORY**	**SUBJECT CODE**	**CREDITS**
1	Corporate Finance	Major- Mandatory	MCM-2-MJ- CF	4
2	E-Commerce	Major- Mandatory	MCM-2-MJ- ECOMM	4
3	Financial Management	Major- Mandatory	MCM-2-MJ- FM	4
4	Organisational Behaviour	Major- Mandatory	MCM-2-MJ- OB	2
5	Macro Economics- Concepts & Applications	Major- Elective	MCM-2-ELEC- ECO	4
6	Internship	OJT	MCM-2-OJT-I	4
				22

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1) **Evaluation Pattern** :
   a. **Total Marks** 100 Marks
   b. **Passing Criteria :** 40 % Marks **(4 Grade Points)**
   c. **Marking Scheme** : **60:40 Pattern**

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
1) Semester End Exam (S.E.E.) : Written Exam	60 Marks	24 Marks
2) Continuous Internal Assessment (C.I.A.) : Subject Oriented	40 Marks	16 Marks
TOTAL :	**100 marks**	**40 Marks**

   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Theory / Practical – Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Type of Question	Total Marks
Q.1.	Objectives : FIB/MCQ/T or F/MTC	**12 Marks**
Q.2.	A. Practical / Theory Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical / Theory Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**
Q.3.	A. Practical / Theory Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical / Theory Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**
Q.4.	A. Practical / Theory Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical / Theory Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**
Q.5	A. Practical / Theory Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical / Theory Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments Case Studies	15 Marks
Class participation & Attendance	05 Marks

M.COM - SEMESTER 1 (2023-2024)

SUBJECT	CATEGORY	SUBJECT CODE	CREDITS
Cost and Management Accounting	Major- Mandatory	MCM-1-MJ- CMA	4

SYLLABUS

1. Marginal Costing, Absorption Costing and Management Decisions-

- Meaning of Absorption Costing - Distinction between Absorption Costing and Marginal Costing - Problems on Breakeven Analysis - Cost Volume Profit Analysis - Breakeven Charts - Contribution Margin and Various Decision Making Problems
- Managerial Decisions through Cost Accounting such as Pricing Accepting Special Offer - Profit Planning - Make or Buy Decisions - Determining Key Factors - Determining Sales Mix - Determining Optimum Activity Level – Performance Evaluation - Alternative Methods of Production, Cost Reduction & Cost Control

2. Activity Based Costing System-

- Introduction, Advantages, Limitations, Identification of cost drivers
- Practical Problems on Traditional V/s Activity Based Costing System

3. Budgetary Control-

- Budget and Budgetary Control - Zero Based Budget - Performance Budgets - Functional Budgets Leading to the Preparation of Master Budgets –Capital Expenditure Budget - Fixed and Flexible Budgets - Preparation of Different Types of Budgets

4. Operating Costing-

- Meaning of Operating Costing - Determination of Per Unit Cost - Collection of Costing Data - Practical Problems based on Costing of Hospital, Hotel and Goods & Passenger Transport

M.COM - SEMESTER 1 (2023-2024)

SUBJECT	CATEGORY	SUBJECT CODE	CREDITS
Advanced Auditing	Major- Mandatory	MCM-1-MJ- AUD	4

Modules

1. Company Audit

- Introduction to Audit - Audit of Ledgers, General Considerations, Scrutiny of Ledgers of Assets, Personal and Revenue Accounts
- Company Audit - Audit of Shares, Qualifications and Disqualifications of Auditors, Appointment of auditors, Removal of auditors, Powers and duties of auditors, Branch audit, Joint audit, Special audit, Reporting requirements under the Companies Act, 2013.
- Concepts of true and fair and materiality and audit risk in the context of audit of companies.
- Audit reports; qualifications, notes on accounts, distinction between notes and qualifications, detailed observations by the statutory auditor to the management vis-a-vis obligations of reporting to the members

2. Special Audits

Special points in audit of different types of undertakings, i.e., Educational institutions, Hotels, Clubs and Hospitals.

3. Audit under Other Laws

Cost audit, Environmental Audit, Energy Audit., Audit under different statutes, viz; income tax, other direct tax laws and indirect taxes

4. Auditing in Computerized Environment

- Audit under computerised environment: Computer auditing; specific problems of EDP audit, Need for review of internal control especially procedure controls and facility controls; techniques of audit of EDP output;
- Use of computers for internal and management audit purposes; test packs, computerised audit programmes; involvement of the auditor at the time of setting up the computer system

M.COM - SEMESTER 2 (2023-2024)

SUBJECT	CATEGORY	SUBJECT CODE	CREDITS
Corporate Finance	Major- Mandatory	MCM-2-MJ- CF	4

Modules

1. **Scope and Objectives of Financial Management**
   - Introduction, Meaning, Importance, Scope, Objectives, Profit v/s Value Maximization
2. **Time Value of Money**
   - Concept, Present Value, Annuity, Techniques of Discounting, Techniques of Compounding, Bond Valuation and YTM
3. **Financial Analysis - Application of Ratio Analysis in Financial Decision Making**
   - Profitability Ratios: Gross Profit Ratio, Operating Profit Ratio, Return on Capital Employed
   - Efficiency Ratios: Sales to Capital Employed, Sales to Fixed Assets, Profit to Fixed Assets, Stock Turnover Ratio, Debtors Turnover Ratio, Creditors Turnover Ratio
   - Liquidity Ratios: Current Ratio, Quick Ratio
   - Stability Ratio: Capital Gearing Ratio, Interest Coverage Ratio
   - Investor's Analysis
   - Earnings per Share, P/E Ratio, Dividend Yield
4. **Financial Decisions**
   - Cost of Capital - Introduction, Definition of Cost of Capital, Measurement of Cost of Capital, WACC, Marginal Cost of Capital
   - Capital Structure Decisions - Meaning, Choice of Capital Structure, Importance, Optimal Capital Structure, EBIT-EPS Analysis, Cost of Capital, Capital Structure and Market Price of Share, Capital Structure Theories, Dividend Policy - Pay Out Ratio
   - Business Risk and Financial Risk - Introduction, Debt v/s Equity Financing, Types of Leverage, Investment Objective/Criteria for Individuals/Non-business Purpose

M.COM - SEMESTER 2 (2023-2024)

SR. NO.	SUBJECT	CATEGORY	SUBJECT CODE	CREDITS
3	Financial Management	Major- Mandatory	MCM-2-MJ- FM	4

Modules

1. **Risk – Returns Relationship**

- Meaning, Types of Risk- Systematic and Unsystematic risk,
- Measurement of Standard Deviation, Variance, Reduction of Risk through Diversification.
- Practical Problems on Calculation of Standard Deviation, Variance and Coefficient of Variation.

2. **Mutual Funds and Portfolio Performance Measurement**

- Introduction to Mutual Fund- History & Origin, Definition, Meaning,
- Characteristics, Advantages, Disadvantages, Limitations of Mutual Funds, Ethics in Mutual Fund.
- Entities involved – Sponsor, Trust, Trustee, Asset Management Company, Registrar and Transfer Agent (RTA) and Fund Houses in India.
- Calculations of NAV, Entry Load and Exit Load
- Meaning of Portfolio Evaluation, Sharpe's Ratio (Basic Problems), Treynor's Ratio (Basic Problems), Jensen's Differential Returns (Basic Problems)

3. **Financial Services in India**

- Factoring
- Bill Discounting

4. **Options and Futures**

- Concept of futures, characteristics of future contract, its types
- Concept of Options, option trading, option contracts settlement
- Pricing of option and futures
- Difference between future, options and forwards

M.COM: COURSE DETAILS

Proposed Credit Distribution

M.COM - SEMESTER 1 (2023-2024)				
SR. NO.	**SUBJECT**	**CATEGORY**	**SUBJECT CODE**	**CREDITS**
1	Cost and Management Accounting	Major- Mandatory	MCM-1-MJ- CMA	4
2	Strategic Management	Major- Mandatory	MCM-1-MJ- SM	4
3	Advanced Auditing - I	Major- Mandatory	MCM-1-MJ- AUD	4
4	Business Ethics & CSR	Major- Mandatory	MCM-1-MJ- ETH	2
5	Economics for Business Decisions	Major- Elective	MCM-1-ELEC- ECO	4
6	Research Methodology	Minor	MCM-1-MIN- RM	4
TOTAL				22

M.COM - SEMESTER 1 (2023-2024)				
SR. NO.	**SUBJECT**	**CATEGORY**	**SUBJECT CODE**	**CREDITS**
1	Corporate Finance	Major- Mandatory	MCM-2-MJ- CF	4
2	E-Commerce	Major- Mandatory	MCM-2-MJ- ECOMM	4
3	Financial Management	Major- Mandatory	MCM-2-MJ- FM	4
4	Organisational Behaviour	Major- Mandatory	MCM-2-MJ- OB	2
5	Macro Economics- Concepts & Applications	Major- Elective	MCM-2-ELEC- ECO	4
6	Internship	OJT	MCM-2-OJT-I	4
			TOTAL	22

SEMESTER – I

SUBJECT	CATEGORY	SUBJECT CODE	CREDITS
Strategic Management	Major- Mandatory	MCM-1-MJ- SM	4

1) **Title of the Course: Strategic Management**
2) **Course Code :** MCM-1-MJ- SM
3) **Course Objective:** The Course will help the learner –

- To understand the basic concepts and principles of strategic management and analyze the internal and external environment of business.
- To understand the principles of strategy formulation, implementation and control in organizations.
- To expose Learners to various perspectives and concepts of how to manage strategically.

4) **Course Outcome (CO) :**

CO1 –: Annual plans for businesses are often put together, but within the 21st century, it is important to be flexible and adapt to changing environments and demands. This is what the learner would learn after completion of the course.

CO2 – The learner will be able to draft a business strategy to be successful by considering customer's opinion, employees' contribution and the industry's best practices.

CO3 –The learner can think innovatively along with successful implementation and evaluation of it.

5) **Semester :** I
6) **Total Hours:** 60 hours
7) **Total Credits:** 04 credits
8) **Evaluation Pattern** :
   a. **Total Marks** 100 Marks
   b. **Passing Criteria :** 40 % Marks **(4 Grade Points)**
   c. **Marking Scheme** : **60:40 Pattern**

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
1) Semester End Exam (S.E.E.) : Written Exam	60 Marks	24 Marks
2) Continuous Internal Assessment (C.I.A.) :Subject Oriented	40 Marks	16 Marks
TOTAL :	**100 marks**	**40 Marks**

d. Mode of Evaluation of Answer-book : Online/Offline

e. Paper Pattern of Theory / Practical – Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Type of Question	Total Marks
Q.1.	Objectives : FIB/MCQ/T or F/MTC	**12 Marks**
Q.2.	Attempt any 2 out of 3 Questions (Module 1)	**12 Marks**
Q.3.	Attempt any 2 out of 3 Questions (Module 2)	**12 Marks**
Q.4.	Attempt any 2 out of 3 Questions (Module 3)	**12 Marks**
Q.5	Attempt any 2 out of 3 Questions (Module 4)	**12 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments Case Studies	15 Marks
Class participation & Attendance	05 Marks

9) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Strategic Management-**	• Concept of Strategic Management, Strategic Management Process, Benefits and Risks of Strategic Management. • Business Environment: Components of Environment- Micro and Macro and Environmental Scanning • Vision, Mission And Goals • Levels of Strategies: Corporate, Business and Operational Level Strategy • Functional Strategies: Human Resource Strategy, Marketing Strategy, Financial Strategy , Operational Strategy
II	**Strategy Formulation, Implementation and Evaluation-**	• Corporate Level Strategies • Strategic Formulation: Formulation of Alternative Strategies: Mergers, Acquisitions, Takeovers, Joint Ventures, Diversification, Turnaround, Divestment and Liquidation.

		• Strategic Analysis and Choice: Issues and Structures, Corporate Portfolio Analysis- SWOT Analysis, BCG Matrix, GE Nine Cell Matrix, Porter's 5 Forces Model , Porter's Generic Strategy-Cost Leadership & Differentiation, ANSOFF Matrix. • Strategic Choice- Factors and Importance. • Strategic Implementation: Steps, Importance and Problems, Resource Allocation-Importance & Challenges • Strategic Evaluation and Control: Importance, Limitations • Role of Leadership in Strategic Management. • Budgetary Control: Advantages, Limitations
III	**Business, Corporate and Global Strategies-**	• Corporate Restructuring Strategies: Concept, Need and Forms, Corporate Renewal Strategies: Concept, Internal and External factors and Causes. • Strategic Alliance: Concept, Types, Importance, Problems of Indian Strategic Alliances and International Businesses • Public Private Participation: Importance • Information Technology Driven Strategies: Importance, Limitations and contribution of IT sector in Indian Business • Total Quality Management – Concept,Principles,6 C's of TQM
IV	**Emerging Strategic Trends-**	• Business Process Outsourcing and Knowledge Process Outsourcing in India: • Concept and Strategies. Reasons for growing BPO and KPO businesses in India. • Reengineering Business Processes- BPR Concept & Process • Kaizen – Concept, 5 S Principles • Disaster Management: Concept, Problems and Consequences of Disasters, Strategies for Managing and Preventing disasters and Cope up Strategies. • Recent Business Scenarios – a) Concepts of - SOHO, Freelancing, Self-Financing, Networking, Start-ups **b)** Make in India Model: Government initiatives in Make in India Model, Promising Growth Sectors.

10) References:

- Strategic Management, A Dynamic Perspective -Concepts and Cases – Mason A. Carpenter, Wm. Gerard Sanders, Prashant Salwan, Published by Dorling Kindersley (India) Pvt Ltd, Licensees of Pearson Education in south Asia

- Strategic Management and Competitive Advantage-Concepts- Jay B. Barney, William S. Hesterly, Published by PHI Learning Private Limited, New Delhi
- Globalization, Liberalization and Strategic Management - V. P. Michael
- Business Policy and Strategic Management – Sukul Lomash and P.K Mishra, Vikas Publishing House Pvt. Ltd, New Delhi
- Strategic Management – Fred R. David, Published by Prentice Hall International
- Business Policy and Strategic Management – Dr Azhar Kazmi, Published by Tata McGraw Hill Publications
- Business Policy and Strategic Management- Jauch Lawrence R & William Glueck Published by Tata McGraw Hill
- Business Organisation – Rajendra P. Maheshwari, J.P. Mahajan, Published by International Book House Pvt Ltd

SUBJECT	CATEGORY	SUBJECT CODE	CREDITS
Business Ethics & CSR	Major- Mandatory	MCM-1-MJ- ETH	2

1) **Title of the Course: Business Ethics and Corporate Social Responsibility**
2) **Course Code :** MCM-1-MJ- ETH
3) **Course Objective:** The Course will help the learner –
   - To familiarize the learners with the concept and relevance of Business Ethics in the modern era
   - To enable learners to understand the scope and complexity of Corporate Social responsibility in the global and Indian context
   - To explain learners what are values, how they form the basis of individuals ethical behavior & how they may vary in a global business environment
4) **Course Outcome (CO) :**

   CO1 – Students will be able to learn and differentiate between various important concepts with respect to Business Ethics.

   CO2 - It would make students aware of ethical dilemmas at work & understand differing perceptions of interest in business related theories.

   CO3- To investigate the ethical obligations and ethical ideals present in the relationship between employer & employee
5) **Semester :** I
6) **Total Hours:** 45 hours
7) **Total Credits:** 02 credits
8) **Evaluation Pattern** :

a. Total Marks 100 Marks

b. Passing Criteria : 40 % Marks **(4 Grade Points)**

c. Marking Scheme : **60:40 Pattern**

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
1) Semester End Exam (S.E.E.) : Written Exam	60 Marks	24 Marks
2) Continuous Internal Assessment (C.I.A.) :Subject Oriented	40 Marks	16 Marks
TOTAL :	**100 marks**	**40 Marks**

d. Mode of Evaluation of Answer-book : Online/Offline

e. Paper Pattern of Theory / Practical – Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Type of Question	Total Marks
Q.1.	Objectives : FIB/MCQ/T or F/MTC	**12 Marks**
Q.2.	Attempt any 2 out of 3 Questions (Module 1)	**12 Marks**
Q.3.	Attempt any 2 out of 3 Questions (Module 2)	**12 Marks**
Q.4.	Attempt any 2 out of 3 Questions (Module 3)	**12 Marks**
Q.5	Attempt any 2 out of 3 Questions (Module 4)	**12 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments Case Studies	15 Marks
Class participation & Attendance	05 Marks

9) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Business Ethics-**	**Business Ethics –** Concept, Characteristics, Importance and Need for business ethics. • Sources of Ethics, Concept of Corporate Ethics, code of Ethics- Guidelines for developing code of ethics, Ethics Management Programme, Ethics Committee. • Various approaches to Business Ethics - Theories of Ethics- Friedman's Economic theory, Kant's Deontological theory, Mill & Bentham's Utilitarianism theory • Gandhian Approach in Management and Trusteeship, Importance and relevance of trusteeship principle in Modern Business, Gandhi's Doctrine of Satya and Ahimsa, • Emergence of new values in Indian Industries after economic reforms of 1991
II	**Indian Ethical Practices and Corporate Governance-**	• Ethics in Marketing and Advertising, Human Resources Management, Finance and Accounting, Production, Information Technology, Copyrights and Patents

		• Corporate Governance: Concept, Importance, Evolution of Corporate Governance, Principles of Corporate Governance • Regulatory Framework of Corporate Governance in India, SEBI Guidelines and clause 49, Audit Committee, Role of Independent Directors, Protection of Stake Holders, Changing roles of corporate Boards. • Elements of Good Corporate Governance, Failure of Corporate Governance and its Consequences • Case Study on Satyam Scam
III	**Introduction to Corporate Social Responsibility-**	Corporate Social Responsibility**:** Concept, Scope & Relevance and Importance of CSR in Contemporary Society. • Corporate philanthropy, Models for Implementation of CSR, Drivers of CSR, Prestigious awards for CSR in India. • CSR and Indian Corporations- Legal Provisions and Specification on CSR, A Score Card, Future of CSR in India. • Role of NGO's and International Agencies in CSR, Integrating CSR into Business
IV	**Areas of CSR and CSR Policy-**	• CSR towards Stakeholders-- Shareholders, Creditors and Financial Institutions, Government, Consumers, Employees and Workers, Local Community and Society. • CSR and environmental concerns. • Designing CSR Policy- Factors influencing CSR Policy, Role of HR Professionals in CSR • Global Recognitions of CSR- ISO- 14000-SA 8000 – AA 1000 – Codes formulated by UN Global Compact – UNDP, Global Reporting Initiative; major codes on CSR. • CSR and Sustainable Development • CSR through Triple Bottom Line in Business

10) References:

- Sharma J.P. Corporate Governance and Social Responsibility of business, Ane Books Pvt ltd, New Delhi
- S.K.Bhatia, Business Ethics and Corporate Governance
- William Shaw, Business Ethics, Wordsworth Publishing Company, International Thomson Publishing Company.
- Corporate Crimes and Financial Frauds, Dr. Sumit Sharma, New Delhi India

- R.C. Sekhar, Ethical choices in Business, Sage Publications, New Delhi
- Business Ethics, Andrew Crane and Dirk Matten, Oxford University Press.
- Business Ethics, Text and Cases, C.S.V. Murthy, Himalaya Publication House.
- Mallin, Christine A. Corporate Governance (Indian Edition) Oxford University press. New Delhi
- Blow field, Michael and Alan Murray, Corporate Responsibility, Oxford University Press,
- Philip Kotler and Nancy Lee, CSR: doing the most good for Company and your cause, Wiley 2005
- Beeslory, Michel and Evens, CSR, Taylor and Francis, 1978

SUBJECT	CATEGORY	SUBJECT CODE	CREDITS
Research Methodology	Minor	MCM-1-MIN- RM	4

1) **Title of the Course: Research Methodology for Business**
2) **Course Code :** MCM-1-MIN- RM
3) **Course Objective:** The Course will help the learner –
   - To enhance the abilities of learners to undertake research in business & social sciences
   - To enable the learners to understand, develop and apply the fundamental skills in formulating research problems
   - To enable the learners in understanding and developing the most appropriate methodology for their research
   - To make the learners familiar with the basic statistical tools and techniques applicable for research
4) **Course Outcome (CO) :**

   CO1 – Students would understand the concept, purpose and benefits of research in industry

   CO2 – Students would be able to understand the primary characteristics of quantitative & qualitative research & identify research problem

   CO3 – Students will be familiar with steps in research types of database, criteria for evaluating quality of study & different types of literature reviews.
5) **Semester :** I
6) **Total Hours:** 60 hours
7) **Total Credits:** 04 credits
8) **Evaluation Pattern** :

a. **Total Marks** 100 Marks

b. **Passing Criteria :** 40 % Marks **(4 Grade Points)**

c. **Marking Scheme** : **60:40 Pattern**

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
1) Semester End Exam (S.E.E.) : Written Exam	60 Marks	24 Marks
2) Continuous Internal Assessment (C.I.A.) :Subject Oriented	40 Marks	16 Marks
TOTAL :	**100 marks**	**40 Marks**

d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Theory / Practical – Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Type of Question	Total Marks
Q.1.	Objectives : FIB/MCQ/T or F/MTC	**12 Marks**
Q.2.	Attempt any 2 out of 3 Questions (Module 1)	**12 Marks**
Q.3.	Attempt any 2 out of 3 Questions (Module 2)	**12 Marks**
Q.4.	Attempt any 2 out of 3 Questions (Module 3)	**12 Marks**
Q.5	Attempt any 2 out of 3 Questions (Module 4)	**12 marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments Case Studies	15 Marks
Class participation & Attendance	05 Marks

9) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Research**	• Features and Importance of research in business, Objectives and Types of research- Basic, Applied, Descriptive, Analytical and Empirical Research. • Stages in Research process • Formulation of research problem – stages and sources, Significance of Review of Literature, Research Design – Elements and significance • Hypothesis: Formulation, Sources, Importance and Types • Sampling: Significance, Methods, Factors determining sample size
II	**Data Collection:**	• Primary data: Observation, Experimentation, Interview, Schedules, Survey, Advantages and Limitations of Primary data • Secondary data: Sources, Advantages and Limitations, • Factors affecting the choice of method of data collection. • Questionnaire: Types, Steps in Questionnaire Designing, Essentials of a good questionnaire, Types of questions
III	**Data Processing and Statistical Analysis-**	• Data Processing: Significance in Research, Stages in Data Processing: Editing, Coding, Classification, Tabulation, Graphic Presentation

		• Statistical Analysis: Tools and Techniques, Measures of Central Tendency, Measures of Dispersion, Correlation Analysis and Regression Analysis. • Testing of Hypotheses – • □ Parametric Test-t test, f test, z test • □ Non-Parametric Test -Chi square test, ANOVA, Factor Analysis • Interpretation of data: significance and Precautions in data interpretation
IV	**Research Reporting and Modern Practices in Research-**	• Research Report Writing: Importance, Essentials, Structure/ layout, Types • References and Citation Methods: • □ APA (American Psychological Association) • □ CMS (Chicago Manual Style) • □ MLA (Modern Language Association) • Footnotes and Bibliography • Modern Practices: Ethical Norms in Research, Plagiarism, Role of Computers and Internet in Research • Introduction to Zotero

10) References:

- Business Research Methodology by T N Srivastava and Shailaja Rego, Tata Mcgraw Hill Education
  Private Limited, New Delhi
- Methodology of Research in Social Sciences, by O.R. Krishnaswami, Himalaya Publishing House
- Research Methodology by Dr Vijay Upagude and Dr Arvind Shende
- Business Statistics by Dr S. K Khandelwal, International Book House Pvt Ltd
- Quantitative Techniques by Dr S. K Khandelwal, International Book House Pvt Ltd
- SPSS 17.0 for Researchers by Dr S.L Gupta and Hitesh Gupta, 2nd edition, Dr S. K Khandelwal, International Book House Pvt Ltd
- Foundations of Social Research and Econometrics Techniques by S.C. Srivastava, Himalaya publishing
  House
- Statistical Analysis with Business and Economics Applications, Hold Rinehart & Wrintston, 2nd Edition,
  New York
- Business Research Methods, Clover, Vernon T and Balsely, Howard L, Colombus O. Grid, Inc
- Business Research Methods, Emary C.Willima, Richard D. Irwin In. Homewood

M.COM - SEMESTER 2 (2023-2024)

SUBJECT	CATEGORY	SUBJECT CODE	CREDITS
E-Commerce	Major- Mandatory	MCM-2-MJ- ECOMM	4

1) **Title of the Course: E-Commerce**
2) **Course Code :** MCM-2-MJ- ECOMM
3) **Course Objective:** The Course will help the learner –
   - To provide an analytical framework to understand the emerging world of ecommerce
   - To make the learners familiar with current challenges and issues in ecommerce
   - To develop the understanding of the learners towards various business models
   - To enable to understand the Web- based Commerce and equip the learners to assess e-commerce requirements of a business
4) **Course Outcome (CO) :**

   CO1 –The learner will be able to learn about various concepts

   CO2-Learner will be able to know various opportunities and challenges in the world of E-commerce

   CO3-Learner will be able to learn the tricks of commerce and business through various strategies given in the syllabus.
5) **Semester :** II
6) **Total Hours:** 60 hours
7) **Total Credits:** 04 credits
8) **Evaluation Pattern** :

a. **Total Marks** 100 Marks

b. **Passing Criteria :** 40 % Marks **(4 Grade Points)**

c. **Marking Scheme** : **60:40 Pattern**

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
1) Semester End Exam (S.E.E.) : Written Exam	60 Marks	24 Marks
2) Continuous Internal Assessment (C.I.A.) :Subject Oriented	40 Marks	16 Marks
TOTAL :	**100 marks**	**40 Marks**

d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Theory / Practical – Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Type of Question	Total Marks
Q.1.	Objectives : FIB/MCQ/T or F/MTC	**12 Marks**
Q.2.	Attempt any 2 out of 3 Questions (Module 1)	**12 Marks**
Q.3.	Attempt any 2 out of 3 Questions (Module 2)	**12 Marks**
Q.4.	Attempt any 2 out of 3 Questions (Module 3)	**12 Marks**
Q.5	Attempt any 2 out of 3 Questions (Module 4)	**12 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments Case Studies	15 Marks
Class participation & Attendance	05 Marks

9) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Electronic Commerce –**	• Evolution and Models- Evolution of E-Commerce- Introduction, History/Evolution of Electronic Commerce, Roadmap of E-Commerce in India, Main activities, Functions and Scope of E-Commerce. • Benefits and Challenges of E-Commerce, E-Commerce Business Strategies for Marketing, Sales and Promotions. • Business Models of E-Commerce- Characteristics of Business to Business(B2B), Business to Consumers (B2C), Business to Government (B2G) • Concepts of other models of E-commerce. • Business to Consumer E-Commerce process, Business to Business E-Commerce- Need and Importance, alternative models of B2B E-Commerce. • E-Commerce Sales Product Life Cycle (ESLC) Model • M-Commerce-Concepts, Types, Growth

II	**World Wide Web and E-enterprise-**	• World Wide Web-Reasons for building own website, Benefits of Website, Registering a Domain Name, Role of web site in B2C E-commerce; push and pull approaches; Web site design principles. • EDI and paperless trading; Pros & Cons of EDI; Related new technologies use in E- commerce. • Applications of E-commerce and E-enterprise - Applications to Customer Relationship Management- Types of E-CRM, Functional Components of E-CRM. • Managing the E-enterprise- Introduction, Managing the E-enterprise, Comparison between Conventional and E-organisation, Organisation of Business in an E-enterprise, Benefits and Limitations of E-enterprise
III	**E-marketing and Electronic Payment System-**	• E-Marketing- Scope and Techniques of E-Marketing, Traditional web promotion; Web counters; Web advertisements, Role of Social media. • E-Commerce Customer Strategies for Purchasing and support activities, planning for Electronic Commerce and its initiates, the pros and cons of online shopping, justify an Internet business. • Electronic Payment System-Characteristics of E-payment system, SET Protocol for credit card payment, prepaid e-payment service, post-paid E-payment system, Types of payment systems. • Operational, credit and legal risks of E-payment system, Risk management options for E-payment systems, Set standards / principles for E-payment
IV	**Legal and Regulatory Environment and Security issues of E-commerce-**	• Introduction to Cyber Laws-World Scenario, Cyber-crime& Laws in India and their limitations, Hacking, Web Vandals, E-mail Abuse, Software Piracy and Patents. • Taxation Issues, Protection of Cyber Consumers in India and CPA 1986, Importance of Electronic Records as Evidence. • Security Issues in E-Commerce- Risk management approach to Ecommerce Security- Types and sources of threats, Protecting electronic commerce assets and Intellectual property.

		• Security Tools, Client server network security, Electronic signature, Encryption and concepts of public and private key infrastructure

10) References:

• Laudon, Kenneth C. and Carol Guercio Traver (2002) E-commerce: business, technology, society. (New Delhi: Pearson Education).

• Awad, Elias M. (2007), Electronic Commerce: From Vision to Fulfillment (New Delhi: Pearson Education).

• Kalakota, Ravi and Marcia Robinson (2001). Business 2.0: Roadmap for Success (New Delhi: Pearson Education).

• Smith, P.R. and Dave Chaffey (2005), eMarketing excellence; The Heart of Ebusiness (UK: Elsevier Ltd.)

• Vivek Sood Cyber Laws Simplified-TMH (2001)

• Vakul Sharma Handbook of cyber Laws-Macmillan (2002)

• Sundeep Oberol e Security and you-TMH (2001)

• Greenstein & Feinman Electronic Commerce-Security, Risk Mgt and Control-TMH (2000)

• Adam Nabll R. (Editor) Electronic Commerce: Technical Business and Legal Issues.

• Diwan, Prag and Sharma Electronic Commerce-a Manager's Guide to EBusiness

• Bharat Bhasker, Electronic Commerce – Frame work technologies and Applications, 3rd Edition-Tata McGraw Hill Publications, 2008.

• Kamlesh K.Bajaj and Debjani Nag, Ecommerce- the cutting edge of Business, Tata McGraw-Hill Publications, 2008

SUBJECT	CATEGORY	SUBJECT CODE	CREDITS
Organisational Behaviour	Major- Mandatory	MCM-2-MJ- OB	2

1) **Title of the Course: Organizational Behaviour**
2) **Course Code :** MCM-2-MJ- OB
3) **Course Objective:** The Course will help the learner –

- To develop the importance of human behavior.
- To describe how people behave under different conditions and understand why people behave as they do.
- It will provide the Learner to analyze specific strategic human resources demands for future action. To synthesize related information and evaluate options for the most logical and optimal solution such that they would be able to predict and control human behavior and improve results

4) **Course Outcome (CO) :**

CO1 –: The learner will be able to apply the concept of organizational behavior to understand the behavior of people in the organization.

CO2 - The learner will be able to analyze the complexities associated with management of individual behavior in the organization

CO3- The learner will be able to understand how organizational behavior can integrate in understanding the motivation (why) behind behavior of people in the organization

5) **Semester :** II
6) **Total Hours:** 45 hours
7) **Total Credits:** 02 credits
8) **Evaluation Pattern** :

a. Total Marks 100 Marks

b. Passing Criteria : 40 % Marks **(4 Grade Points)**

c. Marking Scheme : **60:40 Pattern**

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
1) Semester End Exam (S.E.E.) : Written Exam	60 Marks	24 Marks
2) Continuous Internal Assessment (C.I.A.) : Subject Oriented	40 Marks	16 Marks
TOTAL :	**100 marks**	**40 Marks**

d. Mode of Evaluation of Answer-book : Online/Offline

e. Paper Pattern of Theory / Practical – Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Type of Question	Total Marks
Q.1.	Objectives : FIB/MCQ/T or F/MTC	**12 Marks**
Q.2.	Attempt any 2 out of 3 Questions (Module 1)	**12 Marks**
Q.3.	Attempt any 2 out of 3 Questions (Module 2)	**12 Marks**
Q.4.	Attempt any 2 out of 3 Questions (Module 3)	**12 Marks**
Q.5	Attempt any 2 out of 3 Questions (Module 4)	**12 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments Case Studies	15 Marks
Class participation & Attendance	05 Marks

9) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Organisational Setting**	• Introduction to Organisational Behaviour (OB) – Concept, Nature, Foundation, Disciplines and Scope of OB. • Evolution of OB–Evolution – Stages, Human Relations Approach – Hawthorne Experiments, Models of OB. • Organisation Design – Key factors, Steps in Organisation Structure, Organizations for future - Types.
II	**Foundation of Individual Behaviour**	• Factors affecting Individual behaviour- Personal, Psychological, Organisation System, Environmental. • Personality& Perception – Nature of personality, Determinants of personality, Personality Traits., Factors Influencing Perception, Managing perception Process, Perception and OB • Attitude – Nature, components, work related attitudes, Barriers to attitudinal Change, Measures to attitudinal change.
III	**Group Dynamics and Behaviour**	• Group – Types of groups, Stages of Group Development, Group Decision making – Advantages and Problems.

		• Work place behaviour – Determinants of Group Behaviour, Power and Politics –Sources of Power, Types of Organisational politics. • Conflict – Levels of Conflict, Strategies for resolving Conflict, and Guidelines for effective negotiation.
IV	**Emerging Challenges**	• Stress Management – Sources, Effects, Strategies, Stress and Performance. • Organisation culture – Cultural Dimensions, Creating Organisational Culture, Maintaining Organisational Culture. • Workforce Diversity – Concept, Managing Diversity effectively, Ethical Behaviour in workplace, Managing Ethics at work place

10) References:

- Dr. S. Shajahan & Linu shajahan, Organisational Behaviour, New age International Publishers, New Delhi.
- Fred Luthans, Organizational Behavior, McGraw Hill, 1998
- S.S. Khanka, Organisational Behaviour, S.Chand & Co.,,New Delhi Edn,2007
- Stephen Robbins, Organisational Behaviour, 0th Ed. Pearson Education, 2001
- Wagner, Organizational Behavour, Thomson Learning, 2002.

M.COM (PART- II)

SEMESTER – III

COURSE DETAILS

1) **Title of the Course: Advanced Financial Accounting**
2) **Specialization :** Advanced Accounting, Corporate Accounting and Financial Management (Accountancy)
3) **Course Code :** MCM-III-AC-FA
4) **Course Objective:**

The Course will help the learner –

- To develop the skill among the learners about final accounts of banking companies, provisioning of non-performing assets, form and requirements of final accounts.
- To provide information to learners about accounting and statutory requirements of Life insurance companies
- To develop the skill among the learners about final accounts of banking companies, provisioning of non-performing assets, form and requirements of final accounts.

5) **Course Outcome (CO) :**

CO1 –Students will be able to determine the basis of conversion applicability and will get clarity in integral and non-integral foreign operation

CO2 – Students will be able to identify different types of deposits, advances and other facilities extended to customers. They will also be are able to prepare the schedules of profit and loss a/c and balance sheet. Students will be able to understand provision maintained in case of NPA's

CO3- Students will be able to understand the concept of premium, claims and commission, Final Accounts as per IRDA Regulations

6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 06 credits
9) **Evaluation Pattern** :
   a. **Total Marks** 100 Marks
   b. **Passing Criteria :** 40 % Marks **(4 Grade Points)**
   c. **Marking Scheme** : **60:40 Pattern**

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
1) Semester End Exam (S.E.E.) : Written Exam	60 Marks	24 Marks
2) Continuous Internal Assessment (C.I.A.) : Subject Oriented	40 Marks	16 Marks
TOTAL :	**100 marks**	**40 Marks**

   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Theory / Practical – Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Type of Question	Total Marks
Q.1.	Objectives : FIB/MCQ/T or F/MTC	**12 Marks**
Q.2.	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**
Q.3.	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**
Q.4.	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**
Q.5	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments Case Studies	15 Marks
Class participation & Attendance	05 Marks

12 Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Foreign Currency Conversion (As per Accounting Standard/s applicable)** **(15 lectures)**	• Foreign Currency Conversion (As per Accounting Standard/s applicable)
II	**Final Accounts & Statutory Requirements for Banking Companies** **(15 lectures)**	• Final Accounts of Banking Companies Provisioning of Non- Performing Assets Form & Requirements of Final Accounts
III	**Accounting & Statutory Requirements of (Insurance Companies)** **(15 lectures)**	• Accounting Provision for insurance Act and Insurance Regulation and Development Authorities for 1) Life Insurance Business 2) General Insurance Business • Forms and Requirements of Final Accounts for 1) Life Insurance Business 2) General Insurance Business
IV	**Accounting & Statutory Requirements of Co-operative Societies** **(15 lectures)**	• Accounting Provision of Maharashtra State Co-operative Societies Act and Rules • Forms and Requirements of Final Accounts

13 References:

- Financial Accounting by LesileChandwichk, Pentice Hall of India Adin Bakley (P) Ltd., New Delhi
- Financial Accounting for Management by Dr. Dinesh Harsalekar, Multi-Tech. Publishing Co. Ltd.,Mumbai
- Financial Accounting by P.C. Tulsian, Pearson Publications, New Delhi
- Accounting Principles by R.N. Anthony and J.S. Reece, Richard Irwin, Inc
- Financial Accounting by Monga, J.R. Ahuja, Girish Ahuja and Ashok Shehgal, Mayur Paper Back, Noida

COURSE DETAILS

1) **Title of the Course: Direct Tax**
2) **Specialization :** Advanced Accounting, Corporate Accounting and Financial Management (Accountancy)
3) **Course Code :** MCM-III-AC-DT
4) **Course Objective:** The Course will help the learner –

- To get aware of the various provisions of Income Tax Law in India
- To develop the understanding of the various provisions of Income Tax Law
- To acquire the ability to analyze and interpret the provisions of Income Tax Law
- To develop the ability to apply the knowledge of Income Tax provisions in making basic Computation of Total Income

5) **Course Outcome (CO) :**

CO1 - The learner will understand the Basic concepts of Income Tax Act

CO2 - The learner will understand the provisions of Income Tax Law related to Clubbing of Income and Set off and Carry Forward of Losses

CO3 - The learner will understand five heads of income and will be able to classify all the incomes in the respective heads

CO4 - The learner will understand the benefits of Deductions available under section 80 and Exclusions from the Total Income.

6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 06 credits
9) **Evaluation Pattern** :
   a. **Total Marks** 100 Marks
   b. **Passing Criteria :** 40 % Marks **(4 Grade Points)**
   c. **Marking Scheme** : **60:40 Pattern**

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
1) Semester End Exam (S.E.E.) : Written Exam	60 Marks	24 Marks
2) Continuous Internal Assessment (C.I.A.) : Subject Oriented	40 Marks	16 Marks
TOTAL :	**100 marks**	**40 Marks**

   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Theory / Practical – Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Type of Question	Total Marks
Q.1.	Objectives : FIB/MCQ/T or F/MTC	**12 Marks**
Q.2.	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**
Q.3.	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**
Q.4.	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**
Q.5	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments Case Studies	15 Marks
Class participation & Attendance	05 Marks

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Heads of Income** **(15 lectures)**	• Income from Salary • Income from House Property • Profits and Gains from Business and Profession • Income from Capital Gains • Income from Other Sources
II	**Deductions u/s 80 and Exclusions from the Total Income** **(15 lectures)**	• Deductions: 80C, 80CCF, 80D, 80DD, 80DDB, 80E, 80U,80TTA, 80TTB • Exclusions: Exemptions related to Specific Heads of Income to be covered with Relevant Provisions, Agricultural Income, and Sums Received from HUF by a Member, Share of Profit from Firm, and Income from Minor Child.
III	**Clubbing of Income and Set Off & Carry Forward of Losses** **(15 lectures)**	• Clubbing of Income - Section 60 to 65 • Set Off & Carry Forward of Losses – Section 70, 81, 71B, 72, 73, 74

IV	**Computation of Income and Tax of Individual** **(15 lectures)**	• Computation of Income & Tax of Individual • Advance Tax and Interest u/s 234A, 234B, 234C

11) References:

- V.K. Singhania, Direct Taxes Law & Practice, Taxman
- Ahuja, Gupta, Systematic Approach to Direct Tax, Bharat Law House
- V.K. Singhania, Income Tax Ready Recknoner, Taxman
- T.N. Manoharan, Direct Tax Laws, Snow White

COURSE DETAILS

1) **Title of the Course: Advanced Cost Accounting**
2) **Specialization :** Advanced Accounting, Corporate Accounting and Financial Management (Accountancy)
3) **Course Code :** MCM-III-AC-COST

4) **Course Objective:**

The Course will help the learner –

- To make students understand the process costing system in depth
- To make students understand the manner of overheads allocation and absorption
- To enable students to get knowledge about the concept of responsibility accounting

5) **Course Outcome (CO) :**

CO1 –: Students will be exposed to the different methods of allocation and absorption of overheads. They will also get advanced knowledge of allocation of overheads based on individual business activities

CO2 – Students will be exposed to methods of strategically managing costs and methods of pricing.

CO3- Students will be exposed to the different methods of allocation and absorption of overheads. They will also get advanced knowledge of allocation of overheads based on individual business activities.

6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 06 credits
9) **Evaluation Pattern** :
   a. **Total Marks** 100 Marks
   b. **Passing Criteria :** 40 % Marks **(4 Grade Points)**
   c. **Marking Scheme** : **60:40 Pattern**

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
1) Semester End Exam (S.E.E.) : Written Exam	60 Marks	24 Marks
2) Continuous Internal Assessment (C.I.A.) : Subject Oriented	40 Marks	16 Marks
TOTAL :	**100 marks**	**40 Marks**

   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Theory / Practical – Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Type of Question	Total Marks
Q.1.	Objectives : FIB/MCQ/T or F/MTC	**12 Marks**
Q.2.	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**
Q.3.	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**
Q.4.	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**
Q.5	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments Case Studies	15 Marks
Class participation & Attendance	05 Marks

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Process Costing** **(15 lectures)**	A) Introduction - Features of process, Concept of Process Loss, Abnormal Loss, Normal Loss, Abnormal Gain. B) Computation of Inter Process Profit – Advantages and Disadvantages C) Computation of Equivalent Production – Weighted Average and FIFO.
II	**Cost Allocation and Activity Based Costing Systems** **(15 lectures)**	A) Cost Allocation – Meaning and its Types, Relationship between resources, activities, Cost and Cost drivers, Methods of allocating central costs - cost allocation using Direct Method, Step Down Method and Reciprocal Method. B) Activity Based Costing – Introduction, Advantages, Limitations, Identification of cost drivers, Practical Problems on Traditional V/s Activity Based Costing System.
III	**Responsibility Accounting** **(15 lectures)**	A) Responsibility Accounting – Meaning, Features, Objective, Assumptions, Problems, Responsibility Centre's – Cost, Profit, Revenue and Investment. B) Concept of Controllability – Introduction, Measuring Managerial Performance (ROI and Residual Income Approach) C) Preparation of Managerial Reports using Segmented Costs and Controllable costs approach.

IV	**Strategic Cost Management** **(15 lectures)**	A) Transfer Pricing – Introduction, Advantages and Disadvantages, Setting Transfer Pricing – Negotiated transfer pricing, Cost Based transfer pricing. B) Target Costing – Introduction, Concept, Objectives, Comparison between Target Costing and Cost Plus Pricing. C) Inflation Accounting – Meaning, Features, Conversion of Income Statement, Balance Sheet, Stocks and Net Assets Block using Current Purchasing Power Method.

11) References:

- Cost Accounting by C.S. Rayudu, Tata Mc. Grow Hill and Co. Ltd., Mumbai
- Cost Accounting by JawaharLal and Seema Srivastava, Tata Mc. Grow Hill and Co. Ltd., Mumbai
- Cost Accounting by Ravi M. Kishore, Taxmann Ltd., New Delhi
- Principles and Practices of Cost Accounting by N.K. Prasad, Book Syndicate Pvt. Ltd., Calcutta
- Cost Accounting Theory and Practice by B.K. Bhar, Tata Mc. Grow Hill and Co. Ltd., Mumbai
- Cost Accounting Principles and Practice by M.N. Arora, Vikas Publishing House Pvt. Ltd., New Delhi
- Advanced Cost and Management Accounting: Problems and Solutions by V.K. Saxena and C.D. Vashist, S. Chand and Company (P) Ltd., New Delhi
- Cost Accounting by S.P. Jain and K.L. Narang, Kalyani Publishers, Ludhiana

COURSE DETAILS

1) **Title of the Course: Advanced Auditing**
2) **Specialization :** Advanced Accounting, Corporate Accounting and Financial Management (Accountancy)
3) **Course Code :** MCM-III-AC-AUD
4) **Course Objective:**

   The Course will help the learner –

- To enable learner get acquaint with the various concepts and types of auditing
- To ensure learner understand and practice the various techniques of Auditing

5) **Course Outcome (CO) : CO1 –** The learner will get to know various types of audits and importance of audit in the business
6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 06 credits
9) **Evaluation Pattern** :
   a. **Total Marks** 100 Marks
   b. **Passing Criteria :** 40 % Marks **(4 Grade Points)**
   c. **Marking Scheme** : **60:40 Pattern**

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
1) Semester End Exam (S.E.E.) : Written Exam	60 Marks	24 Marks
2) Continuous Internal Assessment (C.I.A.) : Subject Oriented	40 Marks	16 Marks
TOTAL :	**100 marks**	**40 Marks**

   d. **Mode of Evaluation of Answer-book :** Online/Offline
   e. **Paper Pattern of Theory / Practical – Semester End Exam (S.E.E.): 60 Marks Classification**

Question No.	Type of Question	Total Marks
Q.1.	Objectives : FIB/MCQ/T or F/MTC	**12 Marks**
Q.2.	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**
Q.3.	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**
Q.4.	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**
Q.5	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments Case Studies	15 Marks
Class participation & Attendance	05 Marks

10.Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Company Audit** **(15 lectures)**	• Company Audit - Audit of Shares, Qualifications and Disqualifications of Auditors, Appointment of auditors, Removal of auditors, Powers and duties of auditors, Branch audit, Joint audit, Special audit, Reporting requirements under the Companies Act, 2013. • Concepts of true and fair and materiality and audit risk in the context of audit of companies. • Audit reports; qualifications, notes on accounts, distinction between notes and qualifications, detailed observations by the statutory auditor to the management vis-a-vis obligations of reporting to the members
II	**Special Audits** **(15 lectures)**	• Special points in audit of different types of undertakings, i.e., Educational institutions, Hotels, Clubs, Hospitals
III	**Audit under other Laws** **(15 lectures)**	• Cost audit, Environmental Audit, Energy Audit., Audit under different statutes, viz; income tax, other direct tax laws and indirect taxes
IV	**Auditing in Computerized Environment** **(15 lectures)**	• Audit under Computerised environment: Computer auditing; specific problems of EDP audit, need for review of internal control especially procedure controls and facility controls; techniques of audit of EDP output; use of computers for internal and management audit purposes; test packs, Computerised audit programmes; involvement of the auditor at the time of setting up the computer system

41 References:

- Auditing Principles & Practices – SK Basu
- Sharma, T.R., Auditing Principles & Problems, SahityaBhavan, Agra
- Spicer & Pegler, Practical Auditing
- Woolf, Emile,Auditing Today
- Basu, Sanjib Kumar, Fundamentals of Auditing, Pearson
- Auditing Assurance Standards and Guidelines issued by IC

COURSE DETAILS

1) **Title of the Course: Financial Services**
2) **Specialization :** Advanced Accounting, Corporate Accounting and Financial Management (Accountancy)
3) **Course Code :** MCM-III-AC-FINS
4) **Course Objective:** The Course will help the learner –

- To give a comprehensive overview of emerging financial services
- To introduce the concepts, functions, process, techniques and create an Awareness of the role, functions and functioning of financial services

5) **Course Outcome (CO) :**

CO1 – The learner will get familiarize with the fundamental aspects of various Financial Services

CO2 – The learner will understand the importance of various Financial Services in the current dynamic business environment

6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 06 credits
9) **Evaluation Pattern** :

a. **Total Marks** 100 Marks
b. **Passing Criteria :** 40 % Marks **(4 Grade Points)**
c. **Marking Scheme** : **60:40 Pattern**

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
1) Semester End Exam (S.E.E.) : Written Exam	60 Marks	24 Marks
2) Continuous Internal Assessment (C.I.A.) : Subject Oriented	40 Marks	16 Marks
TOTAL :	**100 marks**	**40 Marks**

d. **Mode of Evaluation of Answer-book :** Online/Offline
e. **Paper Pattern of Theory / Practical – Semester End Exam (S.E.E.): 60 Marks Classification**

Question No.	Type of Question	Total Marks
Q.1.	Objectives : FIB/MCQ/T or F/MTC	**12 Marks**
Q.2.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.3.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.4.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.5	Attempt any 2 out of 3 Questions	**12 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments Case Studies	15 Marks
Class participation & Attendance	05 Marks

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Financial Services, Leasing and Hire Purchase** **(15 lectures)**	• Overview of Financial Services in India, Growth, Structure and Types of financial services • Merchant Banking Merchant Banking – Meaning, nature and functions; merchant banking in India, role in issue management; classification and regulation of merchant bankers by SEBI
II	**Factoring and Credit Rating** **(15 lectures)**	• Venture Capital: Meaning and Definition of Venture Capital, Characteristics of venture Capital, Forms/Types of Venture Capital Assistances, Venture Capital Process, Modes of Venture Capital Assistance • Securitization: Introduction, Definition, Concept, Need, Players Involved in Securitisation, Securitisation Structure, Instruments of Securitisation, Differentiate between Pass Through Certificate and Pay Through Securities, Process of Securitisation
III	**Venture Capital and Securitization** **(15 lectures)**	• Hire Purchase Finance - meaning, concepts of hire purchase finance, installment credit and consumer credit; sources of finance in India Housing Finance – need, nature of housing finance, fixed and floating rate home loans; sources of housing finance in India, growth of housing finance in India; Role of National Housing Bank; concept of mortgage and reverse mortgage; housing loans and mortgage loans, types of mortgage loans
IV	**Depository and Depository Core Services** **(15 lectures)**	• Stock Broking – meaning, types of stockbrokers, sub-brokers; stock broking in India e-broking – meaning, Indian experience Depository Services – meaning, role of depositories and their services, Advantages of depository system; Functioning of depository system; Depositories in India – NSDL & CSDL; Depository participants (DPs) and their role Custodial services - meaning; obligations and responsibilities of custodians; code of conduct

11) References:

- Financial Services, Dr.S Gurusamy, The MgrawHill companies, 2 edition (26 June 2009).
- Financial Markets and Financial services, Vasant Desai, Himalaya Publishing House, First Edition edition (2010).
- Financial Services, M.Y.Khan, Tata Mc-Graw Hill Publishing Company Ltd, Ninth edition (2017).
- Financial Markets and Services –E.Gordon and K.Natanrajan,Himalaya Publishing House, TenthEdition edition (2016)

COURSE DETAILS

1) **Title of the Course: Human Resource Management**
2) **Specialization :** Business Studies (Management)
3) **Course Code : MCM-III-MG-HRM**
4) **Course Objective:**

The Course will help the learner –

- To get acquainted to various human resource management skills and procedures.
- To study the process of job design, evaluation and analysis
- To know about the process of recruitment, selection, training and development.

5) **Course Outcome (CO) :**

CO1 –: It would enable Learners to have better knowledge about the framework of human resource management and would help them in proper job analysis in future

CO2 – Learners understand the need and objectives for human resource management

CO3- Learners gain knowledge of various aspects of Human Resource management and make them acquainted with practical aspect of the subject.

6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 06 credits
9) **Evaluation Pattern** :

a. Total Marks 100 Marks

b. Passing Criteria : 40 % Marks **(4 Grade Points)**

c. Marking Scheme : **60:40 Pattern**

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
1) Semester End Exam (S.E.E.) : Written Exam	60 Marks	24 Marks
2) Continuous Internal Assessment (C.I.A.) : Subject Oriented	40 Marks	16 Marks
TOTAL :	**100 marks**	**40 Marks**

d. Mode of Evaluation of Answer-book : Online/Offline

e. Paper Pattern of Theory / Practical – Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Type of Question	Total Marks
Q.1.	Objectives : FIB/MCQ/T or F/MTC	**12 Marks**
Q.2.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.3.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.4.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.5	Attempt any 2 out of 3 Questions	**12 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments Case Studies	15 Marks
Class participation & Attendance	05 Marks

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Human Resource Management** **(15 lectures)**	• Human Resource Management (HRM). – Concept, Traditional HRM v/s Strategic HRM , Objectives of HRM, Organisation Structure of HRM Department – Changing Role of H.R. Manager. • Human Resource Planning- Concept, Factors affecting HRP, Information Management in HRP – HRIS (Human Resource Information System), Job Analysis, Psychological and Behavioural Issues in HRP. • Recruitment and Selection of managerial personnel - Factors affecting recruitment process, Role of Recruitment agencies, Online process of selection.
II	**Human Resource Development** **(15 lectures)**	• Training and Development - Designing of the effective training programme Evaluation of the effective training programme, Challenges before trainers, Management Development Programme – Techniques. • Performance Appraisal- Process, Guidelines for conducting appraisal Interviews, Ethical aspects in performance appraisal. • Career Advancement and Succession Planning- Self-Development Mechanism and Knowledge enrichment, Managing Promotion and Transfers, Managing dismissal, Succession Planning- Problems and Issues, Culture as a factor in Succession Planning...
III	**Latest Development in H.R.M. And Labour Legislation** **(15 lectures)**	• Industrial Relation Act – Prominent features and recent changes in Trade Union Act 2016, Factories Act 1961, Industrial Disputes Act 1950. • Prominent features and recent changes to Child and Women Labour Act 1986, Social Security Act 2016, Prevention of Sexual harassment Act, 2013. • Prominent features and recent changes to Employees Acts like payment of Gratuity Act 2015, Provident Fund Act 1952, Minimum Wages Act 2016 and Payment of Wages Act 1991, Workmen Compensation Act 2014/ESI Scheme
IV	**Emerging Issues In H.R.M** **(15 lectures)**	• Health and Safety – Safety measures and safety programmes, Stress and its Impact on Job Performance, Role of organization in ensuring mental and physical health of employees

		• Work life balance – Need and Importance, Employee Engagement, Managing Millennials (Gen Y) • Talent Management – Concept , Importance, Process, Talent Management and VUCA Environment(Volatility, Uncertainty, Complexity, Ambiguity), H.R. Practices at Global level

11) References:

- A.M. Sheikh, Human Resource Development and Management, S. Chand & Co, New Delhi.
- Aswathappa, Human Resource and Personnel Management, TataMcGraw Hill, NewDelhi, 2002.
- De Cenzo and Robbins, Personnel/Human Resource Management, Prentice Hallof India, 1998.
- Dressler- Human Resource management, 8th Ed. Pearson Education, 2002
- S.K.Chakrabothy, Values and Ethics for Organization, Oxford University Press 1999

COURSE DETAILS

1) **Title of the Course: Marketing Strategies and practices**
2) **Specialization :** Business Studies (Management)
3) **Course Code : MCM-III-MG-MKT**
4) **Course Objective:** The Course will help the learner –

- To understand the concepts of marketing strategies
- To learn about marketing process for different types of products and services
- To understand the tools used by marketing managers in decision situations
- To understand the marketing environment

5) **Course Outcome (CO) :** Learner will learn to

CO1-Critically evaluate the key analytical frameworks and tools used in marketing.

CO2-Apply key marketing theories, frameworks and tools to solve Marketing problems.

CO3-Utilise information of a firm's external and internal marketing environment to identify and give importance to appropriate marketing strategies.

6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 06 credits
9) **Evaluation Pattern** :

a. **Total Marks** 100 Marks
b. **Passing Criteria :** 40 % Marks **(4 Grade Points)**
c. **Marking Scheme** : **60:40 Pattern**

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
1) Semester End Exam (S.E.E.) : Written Exam	60 Marks	24 Marks
2) Continuous Internal Assessment (C.I.A.) : Subject Oriented	40 Marks	16 Marks
TOTAL :	**100 marks**	**40 Marks**

d. **Mode of Evaluation of Answer-book :** Online/Offline
e. **Paper Pattern of Theory / Practical – Semester End Exam (S.E.E.): 60 Marks Classification**

Question No.	Type of Question	Total Marks
Q.1.	Objectives : FIB/MCQ/T or F/MTC	**12 Marks**
Q.2.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.3.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.4.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.5	Attempt any 2 out of 3 Questions	**12 Marks**

f. **Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification**

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments Case Studies	15 Marks
Class participation & Attendance	05 Marks

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Marketing Strategies** **(15 lectures)**	• Introduction: Marketing Strategies – Concept, Evolution, Role/ Importance, Types, Formulation of Marketing Strategies- Steps • Marketing Opportunities and Plan: Analyzing Marketing Opportunities, Future of Marketing, Effective Marketing Plan. • New Marketing Strategies: Holistic, New Brand, Service, Green and Guerrilla Marketing Strategies
II	**Developing Marketing Strategies & Plans** **(15 lectures)**	• Marketing Mix: Marketing Strategy Implementation - Steps, Marketing Mix 4 P's – Importance, Alternative Marketing Mix Prepositions- Profit, People, and Planet. • Marketing Plans: Marketing Planning- Importance, Types and Content, Strategic Business Unit - Structure, SWOT Analysis. • Defensive Marketing Strategies: Importance, Types, Offensive V/S Defensive Marketing Strategies, Position Defense Strategies.
III	**Market Environmental Trends & Building Customer Value** **(15 lectures)**	• Environmental Analysis: Analyzing the Macro Environment, Theories of Marketing- PESTLE Analysis, VRIO Analysis, Porter's Competency Model, and Customer Perceived Value (CPV). • Customer Value: Applying Customer Value and Satisfaction, Customer Relationship Management (CRM)- Concepts and Techniques • Customer Loyalty: Importance, Consumer Behaviour – Impact of Personal, Cultural, Social and Psychological Factors.
IV	**Recent Trends in Marketing Strategies** **(15 lectures)**	• Emerging Strategies: 21st Century Marketing Strategies, Global Marketing Strategies, and Strategies for Entering Emerging Market. • E-Marketing: Concept, Pros and Cons, Digital Marketing – Concept and features, Experiential Marketing – Concept and features, Hospitality Marketing Management. • Social Marketing: Social Marketing - Importance, Barriers, Trends in Marketing Practices in India and across Globe.

11) References:

- Boyd Walker, Larreche , Marketing Strategies – Planning Implementations, Tata McGraw Hill Publishing Company Ltd., 2010.
- Richard Hill, Alexander Rosph and James S. Cross, Industrial Marketing, AITBS, 2001
- Robert R. Reeder, Edward G.Brierty and Betty H. Reeder, Industrial Marketing – Analysis, Planning and Control, Prentice Hall, India, 1998.
- Wilson Richard M.S, Gillingam Collin, Strategic Marketing Management, Viva books (P) Ltd., 2010.

COURSE DETAILS

1) **Title of the Course: Organizational Behaviour**
2) **Specialization :** Business Studies (Management)
3) **Course Code :** MCM-III-MG-OB
4) **Course Objective:**

The Course will help the learner –

- To develop the importance of human behavior.
- To describe how people behave under different conditions and understand why people behave as they do.
- It will provide the Learner to analyze specific strategic human resources demands for future action. To synthesize related information and evaluate options for the most logical and optimal solution such that they would be able to predict and control human behavior and improve results

5) **Course Outcome (CO) :**

CO1 –: The learner will be able to apply the concept of organizational behavior to understand the behavior of people in the organization.

CO2 - The learner will be able to analyze the complexities associated with management of individual behavior in the organization

CO3- The learner will be able to understand how organizational behavior can integrate in understanding the motivation (why) behind behavior of people in the organization

6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 06 credits
9) **Evaluation Pattern** :
   a. **Total Marks** 100 Marks
   b. **Passing Criteria :** 40 % Marks **(4 Grade Points)**
   c. **Marking Scheme** : **60:40 Pattern**

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
1) Semester End Exam (S.E.E.) : Written Exam	60 Marks	24 Marks
2) Continuous Internal Assessment (C.I.A.) : Subject Oriented	40 Marks	16 Marks
TOTAL :	**100 marks**	**40 Marks**

   d. **Mode of Evaluation of Answer-book :** Online/Offline
   e. **Paper Pattern of Theory / Practical – Semester End Exam (S.E.E.): 60 Marks Classification**

Question No.	Type of Question	Total Marks
Q.1.	Objectives : FIB/MCQ/T or F/MTC	**12 Marks**
Q.2.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.3.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.4.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.5	Attempt any 2 out of 3 Questions	**12 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments Case Studies	15 Marks
Class participation & Attendance	05 Marks

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Organisational Setting** **(15 lectures)**	• Introduction to Organisational Behaviour (OB) – Concept, Nature, Foundation, Disciplines and Scope of OB. • Evolution of OB–Evolution – Stages, Human Relations Approach – Hawthorne Experiments, Models of OB. • Organisation Design – Key factors, Steps in Organisation Structure, Organizations for future - Types.
II	**Foundation of Individual Behaviour** **(15 lectures)**	• Factors affecting Individual behaviour- Personal, Psychological, Organisation System, Environmental. • Personality& Perception – Nature of personality, Determinants of personality, Personality Traits., Factors Influencing Perception, Managing perception Process, Perception and OB • Attitude – Nature, components, work related attitudes, Barriers to attitudinal Change, Measures to attitudinal change.
III	**Group Dynamics and Behaviour** **(15 lectures)**	• Group – Types of groups, Stages of Group Development, Group Decision making – Advantages and Problems. • Work place behaviour – Determinants of Group Behaviour, Power and Politics –Sources of Power, Types of Organisational politics. • Conflict – Levels of Conflict, Strategies for resolving Conflict, and Guidelines for effective negotiation.
IV	**Emerging Challenges** **(15 lectures)**	• Stress Management – Sources, Effects, Strategies, Stress and Performance. • Organisation culture – Cultural Dimensions, Creating Organisational Culture, Maintaining Organisational Culture. • Workforce Diversity – Concept, Managing Diversity effectively, Ethical Behaviour in workplace, Managing Ethics at work place

11) References:

- Dr. S. Shajahan & Linu shajahan, Organisational Behaviour, New age International Publishers, New Delhi.
- Fred Luthans, Organizational Behavior, McGraw Hill, 1998
- S.S. Khanka, Organisational Behaviour, S.Chand & Co.,,New Delhi Edn,2007
- Stephen Robbins, Organisational Behaviour, 0th Ed. Pearson Education, 2001
- Wagner, Organizational Behavour, Thomson Learning, 2002.

COURSE DETAILS

1) **Title of the Course: Rural Marketing**
2) **Specialization :** Business Studies (Management)
3) **Course Code : MCM-III-MG-RUR**
4) **Course Objective:**

The Course will help the learner –

- The learner will explore to the Agriculture and Rural Marketing environment.
- To understand the importance of Rural Marketing in the present economic situation

5) **Course Outcome (CO) :**

The learner will understand consumer's and Marketing characteristics of Rural Marketing and will be able to contribute to the emerging challenges in the upcoming global economic scenario

6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 06 credits
9) **Evaluation Pattern** :

a. **Total Marks** 100 Marks
b. **Passing Criteria :** 40 % Marks **(4 Grade Points)**
c. **Marking Scheme** : **60:40 Pattern**

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
1) Semester End Exam (S.E.E.) : Written Exam	60 Marks	24 Marks
2) Continuous Internal Assessment (C.I.A.) : Subject Oriented	40 Marks	16 Marks
TOTAL :	**100 marks**	**40 Marks**

d. **Mode of Evaluation of Answer-book :** Online/Offline
e. **Paper Pattern of Theory / Practical – Semester End Exam (S.E.E.): 60 Marks Classification**

Question No.	Type of Question	Total Marks
Q.1.	Objectives : FIB/MCQ/T or F/MTC	**12 Marks**
Q.2.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.3.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.4.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.5	Attempt any 2 out of 3 Questions	**12 Marks**

f. **Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification**

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments Case Studies	15 Marks
Class participation & Attendance	05 Marks

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Rural Marketing** **(15 lectures)**	• Rural Marketing: Concept, Scope, Nature and Evolution of Rural Marketing, Rural Marketing Strategies-4P's, Rural Infrastructural Facilities – Warehousing, Cold Storage, Logistics. • Indian Rural Market: Profile, Rural Vs Urban Market, Importance of Branding, Scope and Importance of Transportation Networking in rural markets. • Problems of Rural Consumer: Adulteration, Short Weight and Measures, Unfair Warranties and Guarantees, Unreasonable Pricing, Challenges and Future of Rural Marketing
II	**Consumer Behaviour and Rural Marketing** **(15 lectures)**	• Consumer Behaviour: Characteristics of Buying Behaviour- Awareness, Understanding, Consumer Purchase Decision, Importance of Rural Marketing Communication, Salesmen Influence. • Government Schemes: Rural Development Programmes and Schemes of Government, Entrepreneurship Development Programme, Role of Food Corporation of India (FCI), Role of Khadi and Village Industries Commission (KVIC). • Role of Banks in Rural Marketing: Role of Agricultural Cooperative Banks, Commercial Banking for Rural Marketing
III	**Agricultural Marketing** **(15 lectures)**	• Agricultural Marketing- Importance, Prospects and Issues, Role of Cooperatives and Self Help Groups (SHG) in Rural Marketing • Commodity Boards: Role and Contribution of Commodity Boards in generating revenue to government and employment in rural India. • Agricultural Exports: Composition and Contribution of Agricultural Exports in generating revenue for India- Food Grains, Organic products, Marine Products, Role of Agricultural & Processed Food Products Export Development Authority (APEDA)
IV	**Recent Trends in Rural Marketing** **(15 lectures)**	• E- Commerce: Importance of E-Commerce and Impact of E-Marketing on rural consumers, Concept of Digital Village, Role of Social Media in rural marketing. • Information Technology: Impact of IT in Agricultural Marketing, E-Chaupal, Project Shakti, Web-casting-online training and guidance to farmers. • Online Marketers: Role of Online Marketers, Growth and Challenges

11) References:

- Badi & Badi : Rural Marketing
- Mamoria, C.B. & Badri Vishal : Agriculture problems in India
- Arora, R.C. : Integrated Rural Development
- Rajgopal : Managing Rural Business
- Gopalaswamy, T.P. : Rural Marketing

COURSE DETAILS

1) **Title of the Course: Entrepreneurial Management**
2) **Specialization :** Business Studies (Management)
3) **Course Code :** MCM-III-MG-EM
4) **Course Objective:**

The Course will help the learner –

- To understand the importance and benefits of having skills of entrepreneur
- To know different aspects of entrepreneurial environment and other aspects of entrepreneurship

5) **Course Outcome (CO) :**

The learner will develop skills required for being an entrepreneur & will be able to take the responsibility of an entrepreneur efficiently.

6) **Semester :** III
7) **Total Hours:** 60 hours
8) **Total Credits:** 06 credits
9) **Evaluation Pattern** :

a. Total Marks 100 Marks

b. Passing Criteria : 40 % Marks **(4 Grade Points)**

c. Marking Scheme : **60:40 Pattern**

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
1) Semester End Exam (S.E.E.) : Written Exam	60 Marks	24 Marks
2) Continuous Internal Assessment (C.I.A.) : Subject Oriented	40 Marks	16 Marks
TOTAL :	**100 marks**	**40 Marks**

d. Mode of Evaluation of Answer-book : Online/Offline

e. Paper Pattern of Theory / Practical – Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Type of Question	Total Marks
Q.1.	Objectives : FIB/MCQ/T or F/MTC	**12 Marks**
Q.2.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.3.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.4.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.5	Attempt any 2 out of 3 Questions	**12 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments Case Studies	15 Marks
Class participation & Attendance	05 Marks

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Entrepreneurship Development Perspective** **(15 lectures)**	• Entrepreneurship – Concept, Factors affecting growth of Entrepreneurship, Types of Entrepreneurs, Requirements of Entrepreneurial structure. • Entrepreneurial Culture -Elements of culture, Steps to change Entrepreneurial culture, Entrepreneurial v/s Administrative culture. • Theories of Entrepreneurship- Schumpeter Dynamic Entrepreneurship Innovation Theory, Theory of High Achievement by McClelland, Theory of Personnel Resourcefulness
II	**Creating Entrepreneurial Venture** **(15 lectures)**	• Entrepreneurial Environment- Significance, SWOC Analysis, Problems of Entrepreneurship • Financial Analysis of Entrepreneurial Venture- Significance, Tools of Financial Analysis, Sources of development finance • Social Entrepreneurship- Features, Importance, Arguments (for and against) Social Entrepreneurship, Women Entrepreneurs – concept and special Government schemes for women entrepreneurs in India
III	**Project Management** **(15 lectures)**	• Project - Concepts and Classification of Project, Search of Business Idea, Project Cycle. • Project formulation-----Steps for project formulation, Project Design and network analysis – concept and network analysis techniques: PERT/ CPM. • Project Management – Concept, Phases, Project Identification and Project Feasibility Analysis.
IV	**Assistance and Incentives for Promotion and Development of Entrepreneurship** **(15 lectures)**	• Incentives – Need, Promotion and development Entrepreneurship-Types of Assistance and incentives -Fiscal, Financial, Promotional, Marketing, and Organisational. • NPSD - National Policy for Skill Development and Entrepreneurship 2015. • Institutions in aid of Entrepreneurship Development - The National institute for Entrepreneurship and small business development, District Industry Centre (DIC), National Alliance of young Entrepreneurs

11) References:

- Dynamics of Entrepreneurial Development Management – Vasant Desai, Himalaya Publishing House.
- Entrepreneurial Development – S.S. Khanna
- Entrepreneurship & Small Business Management – CL Bansal, Haranand Publication
- Entrepreneurial Development in India – Sami Uddin, Mittal Publication
- Entrepreneur Vs Entrepreneurship- Human Diagno
- S.L. Gupta and Dr. Arun Mittal, Entrepreneurship Development by International Books House ltd.
- Vasant Desai, Dynamics of Entrepreneurial Development
- Willaim D. Bygrave and Andrew Zacharakis, The Portable MBA in Entrepreneurship by, Fourth edition, John Wiley and Sons.
- S.S. Khanka, Entrepreneurship Development, Sultanchand and Sons ltd.
- C.B. Gupta and N.P. Shrinivasan, Entrepreneurship Development Sultan chand and sons

- Sharma Sudhir, Singh Balraj, Singhal Sandeep (2005), “Entrepreneurship Development”, Wisdom Publications, Delhi.
- Badi R.V., Badi N.V. (2010), “Entrepreneurship”, Vrinda Publications (P) Ltd., Delhi.
- Desai Vasant (2009), “The Dynamics of Entrepreneurial Development and Management – Planning for Future Sustainable Growth”, Himalaya Publishing House, India.
- Vasishth Neeru (2008), “Business Organization”, Taxmann Allied Services (P.) Ltd.,
- Holt David H. (2004), “Entrepreneurship – New Venture Creation”, Prentice Hall of India Private Limited, New Delhi.
- Roy Rajeev (2009)], “Entrepreneurship”, Oxford University Press, New Delhi.
- Burns Paul (2001), “Entrepreneurship and Small Business”, Palgrave Mecmillan, China.
- Sudha G.S. (2005), “Management and Entrepreneurship Development”, Indus Valley Publications, New Delhi.
- Basotia G.R., Sharma K.K. (1991), “Handbook of Entrepreneurship Development – An Entrepreneurs Guide to Planning, Starting, Developing and Managing a New Enterprise”, Mangal Deep Publications, Jaipur.
- Coulter Mary (2003), “Entrepreneurship in Action”, Prentice Hall of India Private Limited, New Delhi.
- Zimmerer Thomas W., Scarborough Norman M. (2009), “Essentials of Entrepreneurship And Small Business Management”, PHI Learning Private Limited, New Delhi.
- Hisrich Robert D., Peters Michael P. (2002), “Entrepreneurship – International Edition”, The McGraw-Hill Companies, New York.
- Cynthia L Greene, Entrepreneurship Ideas in Action, Thomson

SEMESTER – IV

COURSE DETAILS

1) **Title of the Course: Corporate Financial Accounting**
2) **Specialization :** Advanced Accounting, Corporate Accounting and Financial Management (Accountancy)
3) **Course Code :** MCM-IV-AC-CFA
4) **Course Objective:** The Course will help the learner –
   - To give learners a broad view of corporate financial reporting and its recent trends.
   - To give learners a broad view of the provisions to be followed for the preparation of final accounts of Consolidated companies as per Companies Act 2013.
   - To explain to the learners the concept of valuation of business after amalgamation and merger. and its implications in various accounting procedures leading to preparation of Final Accounts of a Company as per Company Act.
   - To make students aware about IFRS and Ind AS and its concepts
5) **Course Outcome (CO) :**

CO1 –: Students develop the ability to calculate Goodwill, evaluate shares adopting different methods and preparation of final accounts of Indian Companies.

CO2 – Students will be able to understand how to prepare final accounts of consolidated companies. understanding the concept of minority interest.

CO3- Students will be able to understand the concept of corporate financial reporting.

6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 06 credits
9) **Evaluation Pattern** :
   a. **Total Marks** 100 Marks
   b. **Passing Criteria :** 40 % Marks **(4 Grade Points)**
   c. **Marking Scheme** : **60:40 Pattern**

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
1) Semester End Exam (S.E.E.) : Written Exam	60 Marks	24 Marks
2) Continuous Internal Assessment (C.I.A.) : Subject Oriented	40 Marks	16 Marks
TOTAL :	**100 marks**	**40 Marks**

   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Theory / Practical – Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Type of Question	Total Marks
Q.1.	Objectives : FIB/MCQ/T or F/MTC	**12 Marks**
Q.2.	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**
Q.3.	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**
Q.4.	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**
Q.5	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments Case Studies	15 Marks
Class participation & Attendance	05 Marks

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Corporate Financial Reporting** **(15 lectures)**	• Introduction of Financial Reporting • Need for reporting • Contents of Financial Report • Recent trends in Financial reporting
II	**International Financial Reporting Standards (IFRS) & Ind – AS** **(15 lectures)**	• Accounting Standards (AS) – applicability, interpretation, scope and compliance in India • Introduction to I.F.R.S • Ind – AS • Specific Ind AS: Borrowing Costs Operating Segments Earning per share Income Taxes Accounting for fixed assets
III	**Valuation of Business for Amalgamation & Merger** **(15 lectures)**	• Meaning, Need & Approach , Methods of valuation

IV	**Consolidated Financial Statement** **(15 lectures)**	Meaning, Stand Alone Financial Statements Consolidated Financial statements – Applicability, Advantages & Disadvantages Procedure of consolidation of Balance-sheet & Profit & Loss Account (Excluding cross holding, Chain Holding & Foreign Subsidiary)

11) References:

- Corporate Financial Accounting: I M Pandey, Vikas Publishing House.
- Corporate Financial Accounting: M.Y. Khan, P.K. Jain, Tata McGraw Hill.
- Corporate Financial Accounting: Ravi M Kishore, Taxman
- Corporate Financial Accounting James C Van Horne, Prentice Hall
- Corporate Financial Accounting Prassana Chandra, Prentice Hall.
- Corporate Financial Accounting: Chandra Haribariran Iyer: IBHL Publication.

COURSE DETAILS

1) **Title of the Course: Indirect Tax- Introduction of Goods and Service Tax**
2) **Specialization :** Advanced Accounting, Corporate Accounting and Financial Management (Accountancy)
3) **Course Code :** MCM-IV-AC-IDT
4) **Course Objective:**

The Course will help the learner –

- To make the students understand the basic concepts, definitions and terms related to Goods and Service tax (GST).
- To make students understand the concept of forward charge mechanism, reverse charge mechanism, composite supply, mixed supply and various exemptions under the new Goods and Service tax regime
- To make the students understand the concept of Supply along with the rules related to time, place and value of supply.
- To help the students compute the Goods and Service Tax (GST) payable by a supplier after considering the eligible input tax credit.

5) **Course Outcome (CO) :**

CO1 –: Students should be able to understand the difference between forward charge and reverse charge mechanism and also to understand the difference between composite and mixed supply.

CO2 – Students will be able to know the contents and format for various documents like tax invoice, bill of supply, debit note, credit note etc.

CO3- Students will be able to determine whether a person is required to obtain registration under GST law.

6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 06 credits
9) **Evaluation Pattern** :
   a. **Total Marks** 100 Marks
   b. **Passing Criteria :** 40 % Marks **(4 Grade Points)**
   c. **Marking Scheme** : **60:40 Pattern**

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
1) Semester End Exam (S.E.E.) : Written Exam	60 Marks	24 Marks
2) Continuous Internal Assessment (C.I.A.) : Subject Oriented	40 Marks	16 Marks
TOTAL :	**100 marks**	**40 Marks**

   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Theory / Practical – Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Type of Question	Total Marks
Q.1.	Objectives : FIB/MCQ/T or F/MTC	**12 Marks**
Q.2.	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**
Q.3.	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**
Q.4.	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**
Q.5	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments Case Studies	15 Marks
Class participation & Attendance	05 Marks

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Overview of Goods and Service Tax** **(15 lectures)**	• Introduction and Meaning of GST and IGST Scope of GST • Present/old Tax Structure v/s GST GST in Other Countries • Existing taxes proposed to be subsumed under GST • Principles adopted for subsuming the taxes Dual GST Benefits of GST. • GST Council GST Network (GSTN) and GST regime Integrated Goods and Services Tax Act, 2017: title and definitions, administration.
II	**Registration Under GST** **(15 lectures)**	• Rules and Procedure of registration • Special provisions relating to casual taxable person and non-resident taxable person • Amendment of registration • Cancellation of registration Revocation of cancellation of registration
III	**Collection of Tax under Integrated Goods and Services Tax Act, 2017.Place**	• Sec 5 and Sec 6 • Sec 10 and Sec 12 • Sec 11 and Sec 13

	of supply of goods or services or both under Integrated Goods and Services Tax Act, 2017 **(15 lectures)**	
IV	**Payment of GST** **(15 lectures)**	• Introduction • Computation of GST • Time of GST Payment • How to make payment • Challan Generation & CPIN • TDS & TCS

11) References:

- Indirect Taxes: Law and Practice by V.S. Datey, Taxmann, New Delhi
- Commentary on M.V.A.T. ACT, 2002 by M.S. Mathuria and DilipPhadke by Maharashtra Sales Tax Vat News, Mumbai
- Indirect Taxes by V.S. Balchandra, Sultan Chand and Sons, New Delhi
- Maharashtra Value Added Tax by Shah Shantilal, Snow White Publications Pvt. Ltd., Mumbai

COURSE DETAILS

1) **Title of the Course: Financial Management**
2) **Specialization :** Advanced Accounting, Corporate Accounting and Financial Management (Accountancy)
3) **Course Code :** MCM-IV-AC-FM
4) **Course Objective:**

The Course will help the learner –

- To acquaint students with the advanced concept of financial management and to develop financial strategies for the organization.
- To provide the learners practical understanding of capital budgeting and techniques used to take capital budgeting decisions.
- To make students understand how to manage working capital.
- To make students aware about budgeting and financial policy and corporate strategy.

5) **Course Outcome (CO) :**

CO1 - Students will be able to understand the concept of financial management and various types of finance.

CO2 - Students will be able to understand how to analyze each proposal using various capital budgeting techniques and take correct financial investment decisions.

CO3- Students will be able to understand and prepare budgets such as sales, cash, production, purchases as well as understand the importance of strategic financial planning

6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 06 credits
9) **Evaluation Pattern** :
   a. **Total Marks** 100 Marks
   b. **Passing Criteria :** 40 % Marks **(4 Grade Points)**
   c. **Marking Scheme** : **60:40 Pattern**

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
1) Semester End Exam (S.E.E.) : Written Exam	60 Marks	24 Marks
2) Continuous Internal Assessment (C.I.A.) : Subject Oriented	40 Marks	16 Marks
TOTAL :	**100 marks**	**40 Marks**

   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Theory / Practical – Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Type of Question	Total Marks
Q.1.	Objectives : FIB/MCQ/T or F/MTC	**12 Marks**
Q.2.	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**
Q.3.	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**
Q.4.	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**
Q.5	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments Case Studies	15 Marks
Class participation & Attendance	05 Marks

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Types of Financing** **(15 lectures)**	• Introduction • Long Term Sources of Finance • Owners Capital / Equity Capital Preference share capital Retained Earning Debentures or Bonds Loans from Financial Institutions / Banks Short Term Sources of Finance Trade Credit Accrued Expenses and Deferred Income Advances From Customers Commercial Papers • Bank Advances: Loans, O/D, Clean O/Ds, Cash Credit, Advances against goods, Bills Purchased, Discounted, Advances against documents of title of goods, Advances against supply of bills, Term Loans Inter Corporate Deposits Certificate of Deposits Public Deposits
II	**Investment Decisions : Capital Budgeting** **(15 lectures)**	• Introduction • Capital Budgeting Process • Types of Capital Investment • Decisions Project Cash Flows and Net profit Approval • Basic Principle of Measuring Project Cash Flows

		• Increment principle, Long Term Funds Principle, Exclusion of Financial Cost Principle, Post Tax Principle • Probability technique for measurement of cash flow • Capital Budgeting Techniques : Net Return Value; Internal Rate of Return; Profitability Index Methods • A Comparison; Project Selection Under Capital Rationing (Note: Problems on computation of cash flow, ranking of projects on various techniques, selection and analysis with / without capital rationing. Comparison of IRR with Required rate of return i.e. cut off rate, IRR and mutually exclusive projects with unequal lives, multiple IRR • Sensitivity Analysis
III	**Management of Working Capital** **(15 lectures)**	• Meanings, Concepts and policies of working capital Management of working capital Issues in working capital Estimating working capital needs (only Theory) Operating or working capital cycle (only Theory) Management of components of working capital • Management of Cash and Marketable Securities: Motives for Holding Cash; Objectives of Cash Management; Factors Determining Cash Needs; Basic Strategies of Cash Management; Cash Management Techniques / Processes; Marketable Securities; and Cash Management Practices in India. • Receivable Management: Objectives; Credit Policies; Credit Terms; and Collection Policies. • Inventory Management: Objectives; and Techniques
IV	**Financial Planning, Financial Policy and Corporate Strategy** **(15 lectures)**	• Meaning of strategic financial management • Strategic financialdecision making framework • Functions of Strategic Financial Management • Financial Planning

11) References:

- Fundamentals of Financial Management by Bhabotosh Banerjee, PHI Learning Pvt. Ltd., New Delhi
- Fundamentals of Financial Management by Vyuptakesh Sharma, Pearson Education, New Delhi
- Fundamentals of Financial Management by J.C. Van Horne, Prentice Hall of India, New Delhi
- Financial Management: Text and Problems by M.Y. Khan and P.K. Jain, Tata McGraw Hill, New Delhi
- Production and Operations Management –ProfL.C.Jhamb, Event Publishing House.
- Production Planning & Control- ProfL.C.Jhamb, Event Publishing House
- Production & Operation Management (Text & Cases)- K.Ashwathappa&G.Sudeshana Reddy, Himalaya Publication.

COURSE DETAILS

1) **Title of the Course: International Financial Reporting Standards**
2) **Specialization :** Advanced Accounting, Corporate Accounting and Financial Management (Accountancy)
3) **Course Code :** MCM-IV-AC-IFRS

4) **Course Objective:** The Course will help the learner –

- To understand IFRS and Indian Accounting Standards
- To know the importance and need of having IFRS and Accounting Standards

5) **Course Outcome (CO) :**

CO1 – The learner will get acquainted with IFRS and Indian Accounting Standards

CO2 – The learner will be in a position to give the effect IFRS and Indian Accounting Standards to the current applicable businesses

CO3 – The learner will understand the importance of Financial Reporting

6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 06 credits
9) **Evaluation Pattern** :
   a. **Total Marks** 100 Marks
   b. **Passing Criteria :** 40 % Marks **(4 Grade Points)**
   c. **Marking Scheme** : **60:40 Pattern**

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
1) Semester End Exam (S.E.E.) : Written Exam	60 Marks	24 Marks
2) Continuous Internal Assessment (C.I.A.) : Subject Oriented	40 Marks	16 Marks
TOTAL :	**100 marks**	**40 Marks**

   d. **Mode of Evaluation of Answer-book :** Online/Offline

e. Paper Pattern of Theory / Practical – Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Type of Question	Total Marks
Q.1.	Objectives : FIB/MCQ/T or F/MTC	**12 Marks**
Q.2.	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**
Q.3.	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**
Q.4.	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**
Q.5	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments Case Studies	15 Marks
Class participation & Attendance	05 Marks

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Conceptual Foundations of Financial Statements** **(15 lectures)**	• The objective of financial reporting; • The main assumptions; • Qualitative characteristics of financial reporting; • Elements of Financial Statements: recognition and measurement
II	**Presentation of financial statements** **(15 lectures)**	• Presentation of financial statements Accounting standards: Role/objectives of accounting standards, Development of accounting standards in India - Requirements of international accounting standards -International organizations engaged in accounting harmonization - IASB - FASB - Role of IASB in developing IFRS • IFRS :- Introduction, scope • Indian Accounting standards (Ind AS) : Introduction, Road map, Comparison of Ind AS, IFRS and AS, Conceptual framework, definition of financial elements, Principles of recognition, measurements, presentation and disclosure. (Theory

		and Practical)
III	**Indian Accounting Standards for Assets, Liabilities and Revenue** **(15 lectures)**	• Valuation of Inventories • Cash flow statement • Accounting for tangible non-current assets • Accounting for intangible assets • Accounting for impairment of assets • Accounting for borrowing costs • Investment property • Revenue from contracts with customers • Income tax • Employee benefits • Provisions, contingent liabilities and contingent assets (Theory and Practical)
IV	**Presentation of Single Entity Financial Statements Covered by IFRS Convergence** **(15 lectures)**	• Ind AS 1): Accounting policies, accounting estimates (IAS 8 and Ind AS 8) - Events after reporting date (IAS 10 and Ind AS 10) - Structure and contents of financial statements • - Preparation of financial statements: Statement of Financial Position (SOFP) Statement of Profit or Loss (SOPL) - Statement of Changes in Equity (SOCE) – Cash Flow Statement (SOCF) (IAS 7 and Ind AS 7). (Theory and Practical)

11) References:

- Indian Accounting Standards, Ashish Bhattacharya, Tata Mc. Grow Hill and Co. Ltd., Mumbai

COURSE DETAILS

1) **Title of the Course: Personal Financial Planning**
2) **Specialization :** Advanced Accounting, Corporate Accounting and Financial Management (Accountancy)
3) **Course Code** : MCM-IV-AC-PFP
4) **Course Objective:**

The Course will help the learner –

- To provide an overview of various aspects related to personal financial planning
- To study the relevance and importance of personal financial planning

5) **Course Outcome (CO) :**

CO1 – The learner will understand various components of personal financial planning

CO2 – The learner will in a position to make his / her personal financial planning in an effective way and also can provide guidance to other on it

6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 06 credits
9) **Evaluation Pattern** :

a. Total Marks 100 Marks

b. Passing Criteria : 40 % Marks **(4 Grade Points)**

c. Marking Scheme : **60:40 Pattern**

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
1) Semester End Exam (S.E.E.) : Written Exam	60 Marks	24 Marks
2) Continuous Internal Assessment (C.I.A.) : Subject Oriented	40 Marks	16 Marks
TOTAL :	**100 marks**	**40 Marks**

d. Mode of Evaluation of Answer-book : Online/Offline

e. Paper Pattern of Theory / Practical – Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Type of Question	Total Marks
Q.1.	Objectives : FIB/MCQ/T or F/MTC	**12 Marks**
Q.2.	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**
Q.3.	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**
Q.4.	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR	**12 Marks**

	B. Practical Question (may be divided into 2 sub questions of 06 marks each)	
Q.5	A. Practical Question (may be divided into 2 sub questions of 06 marks each) OR B. Practical Question (may be divided into 2 sub questions of 06 marks each)	**12 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments Case Studies	15 Marks
Class participation & Attendance	05 Marks

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Understanding Personal Finance** **(15 lectures)**	• Introduction • Time value of money applications • Personal financial statements, Cash flow and debt management, tools and budgets Money Management • Tax planning • Managing Checking and Savings Accounts • Maintaining Good Credit • Credit Cards and Consumer Loans • Vehicle and Other Major Purchases • Obtaining Affordable Housing • Income and Asset Protection • Managing Property and Liability Risk • Managing Health Expenses
II	**Risk Analysis & Insurance Planning** **(15 lectures)**	• Risk management and insurance decision in personal financial planning, Various Insurance Policies and Strategies for General Insurance, Life Insurance, Motor Insurance, and Medical Insurance.
III	**Retirement Planning & Employees Benefits** **(15 lectures)**	• Retirement need analysis techniques, Development of retirement plan, Various retirement schemes such as Employees Provident Fund (EPF), Public Provident Fund (PPF), Superannuation Fund, Gratuity, Other Pension Plan and Post-retirement counseling
IV	**Investment Planning** **(15 lectures)**	• Risk Return Analysis Investing in Stocks and Bonds, Mutual Fund, Derivatives, Investing in Real Estate, Asset Allocation, Investment strategies and Portfolio construction and management.

11) References:

- Harold Evensky, Wealth Management, McGraw Hill Publication
- NCFM, CFP, IIBF, etc, Wealth Management modules
- Harold Evensky, The new wealth Management, CFA Institute Investment Series Publication

- Thomas S. Coleman, Quantitative Risk Management : A Practical Guide to Financial Risk
- Steve Peterson, Investment Theory and Risk Management
- Risk Management , M/s Macmillan India Limited
- Theory & Practice of Treasury Risk Management: M/s Taxman Publications Ltd.
- Sim Segal, Corporate Value of ERM
- Dr. G Kotreshwar, Risk Management : Insurance and Derivatives, Himalaya Publishing House
- Wealth Management- Dun & Brastreet, Tata McGrawHill
- Wealth Management- S.K .Bagachi, Jaico publishing house
- Wealth Management- Suyash Bhat, Excel Books
- Wealth Management- Harold Evensky, Tata McGrawHill
- Investment Analysis & Portfolio Management- Prasanna Chandra, Tata McGrawHill
- NCFM- Module of wealth management

COURSE DETAILS

1) **Title of the Course: Supply chain management and logistics**
2) **Specialization :** Business Studies (Management)
3) **Course Code :** MCM-IV-MG-SCM
4) **Course Objective:**

The Course will help the learner –

- To provide Learners with basic understanding of concepts of logistics and supply chain management.
- To provide an insight in to the nature of supply chain, its functions and supply chain systems.
- To understand global trends in logistics and supply chain management

5) **Course Outcome (CO) :**

CO1 – The learner will learn the basic concept of logistics and supply chain management.

CO2 – This will help the learner to evaluate the demand forecasting.

CO3 – It will help the learner to understand global trends in logistics and supply chain management.

6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 06 credits
9) **Evaluation Pattern** :
   a. **Total Marks** 100 Marks
   b. **Passing Criteria :** 40 % Marks **(4 Grade Points)**
   c. **Marking Scheme** : **60:40 Pattern**

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
1) Semester End Exam (S.E.E.) : Written Exam	60 Marks	24 Marks
2) Continuous Internal Assessment (C.I.A.) : Subject Oriented	40 Marks	16 Marks
TOTAL :	**100 marks**	**40 Marks**

   d. **Mode of Evaluation of Answer-book :** Online/Offline
   e. **Paper Pattern of Theory / Practical – Semester End Exam (S.E.E.): 60 Marks Classification**

Question No.	Type of Question	Total Marks
Q.1.	Objectives : FIB/MCQ/T or F/MTC	**12 Marks**
Q.2.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.3.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.4.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.5	Attempt any 2 out of 3 Questions	**12 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments Case Studies	15 Marks
Class participation & Attendance	05 Marks

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Supply Chain Management (SCM)** **(15 lectures)**	•Supply Chain Management: Concept, Features, Evolution, Importance, Process and Barriers of Supply Chain Management. •Principles and Strategies: Principles, Supply Chain Strategies – Organizations, Coordination, Innovation and Forecasting. • Participants in SCM: Supply chain intermediaries- Concept and Types, Channels of Distribution for Industrial Goods and Consumer Goods, Channel of Distribution at Services Level, Factors for selectionof suitable channels.
II	**Perspectives of Supply Chain Management** **(15 lectures)**	• Global perspectives: Measuring and analyzing the value and efficiency of global Supply Chain Networks, Global market forces, Types of global supply chain. • Indian Perspectives: Measuring and Analyzing the value and efficiency of domestic Supply Chain Networks, Economic effects ofsupply chains. • Customer Perspectives: Customer values, Role of customers andWays of improving customer services in SCM, **Enterprise Resource Planning (ERP)**
III	**Introduction to Logistics** **(15 lectures)**	• Logistics Management: Concept and Process, Competitive Advantages and Three C's, Changing Logistics Environment, ReverseLogistics, Importance of Inventory Control, Bull-whip effect, **Careers in Logistic Department.** • Transportation and Warehousing: Transport Functions and Participants in Transportation Decisions, Transport Infrastructure-Forms, Warehouse Functions and Operations • Packaging and Materials Management- Consumer and Industrial Goods Packaging - Importance, Factors influencing Materials Planning, Preservation Safety and Measures of Materials Handling
IV	**Design of SCM, Logistics and Use of Internet** **(15 lectures)**	• SCM Plan- Demand Planning, Source of Procurement, Production or Assembly Steps, Sales return of defective or excess goods • Use of Internet in SCM- E-market places, E-procurement, E-logistics,E-fulfilment, • Operative Systems in SCM,Performance Modelling of supply chains using Markov chains, Inventory Control, Importance, Pareto's Law, Information Technology Infrastructure in Logistics & Modern Logistics Infrastructure.

11) References:

- Christopher Martin, Logistics and Supply Chain Management: Creating Value – Adding Networks, 2 nd Edition, FT Prentice Hall, 2002.
- David Simchi Levi, Philip Kaminshy, Edith Simchi Levi, Designing & Managing the Supply Chain - Concepts, Strategies and Case Studies Logistics
- Dalmia Sanjay, Financial Supply Chain Management, McGraw Hill Publishing Co. Pvt. Ltd, 2010.
- Donald J Bowersox & David J Closs, Logistic Management - The Integrated Supply Chain Process.
- Waters Donald , Logistics: Introduction to Supply Chain Management, Palgrave Macmillan, 2003

COURSE DETAILS

1) **Title of the Course: Advertising and Sales Management**
2) **Specialization :** Business Studies (Management)
3) **Course Code :** MCM-IV-MG-ADV
4) **Course Objective:**

The Course will help the learner –

- The objective of the course is to provide students with detailed knowledge on Advertisement as a Promotional Tool and its agencies.
- The course also has the objective of giving students detail knowledge about types of advertisements and methods of doing sales promotion

5) **Course Outcome (CO) :**

CO1 – The learner will be able to identify key players in the advertisement industry and also different kinds of advertisements

CO2 - The learner will be able to identify ethics in advertisement and will be able to make decisions regarding the most feasible advertising appeal and media mix.

CO3- The leaner will be able to identify dealer oriented promotion techniques, customer oriented promotion techniques and the salesmen oriented promotion techniques.

6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 06 credits
9) **Evaluation Pattern** :

a. **Total Marks** 100 Marks
b. **Passing Criteria :** 40 % Marks **(4 Grade Points)**
c. **Marking Scheme** : **60:40 Pattern**

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
1) Semester End Exam (S.E.E.) : Written Exam	60 Marks	24 Marks
2) Continuous Internal Assessment (C.I.A.) : Subject Oriented	40 Marks	16 Marks
TOTAL :	**100 marks**	**40 Marks**

d. **Mode of Evaluation of Answer-book :** Online/Offline
e. **Paper Pattern of Theory / Practical – Semester End Exam (S.E.E.): 60 Marks Classification**

Question No.	Type of Question	Total Marks
Q.1.	Objectives : FIB/MCQ/T or F/MTC	**12 Marks**
Q.2.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.3.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.4.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.5	Attempt any 2 out of 3 Questions	**12 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments Case Studies	15 Marks
Class participation & Attendance	05 Marks

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Advertising Fundamentals and Media** **(15 lectures)**	• Basics of Advertising : Concept and Features, Significance, Classification of Advertising, Integrated Marketing Communication (IMC) - Elements, Behavioural Model (E.K. Strong AIDA), DAGMAR Model (Russell Colley), Hierarchy of Effects (Lavidge and Steiners) • Ad Agency : Various Functional Department, Types, Measures for gaining and reasons for loosing clients, Evaluation Criteria for Selecting an Advertising Agency, • Media: New Media Options, Forms of Digital Media, Media Objectives, Criteria for Selecting Suitable Media, Methods of Setting Advertising Budget, **Social Media Advertising as an emerging trend.**
II	**Creativity, Social and Regulatory Framework of Advertising** **(15 lectures)**	• Creativity &Research: Developing advertising copy - print, broadcast and digital media, Pre-test and post-test methods. **Criticisms of advertising.** • **Professional courses and careers in the field of advertising, Digital Advertising.** • Regulatory framework of advertising: Legal Framework of Advertising, Role of Information and Broadcasting Ministry (IBM), Self-Regulatory Bodies – Advertising Standards Council of India(ASCI) and Indian Broadcasting Foundation(IBF)
III	**Sales Management** **(15 lectures)**	• Introduction: Sales Management - Features, Functions and Importance, Art of Selling – Types, Process, Qualities of an Effective **Sales professional.** • Sales force management: Selection Procedure, Training Methods, Motivational Factors and Compensation methods of **Sales professional.** • Sales organisation: Concept, Objectives, Structure and Steps in Developing a Sales Organisation**, Tele-Sales.**
IV	**Sales Planning and Controlling** **(15 lectures)**	• Sales planning: Concept, Process, Sales Forecasting - Methods and Limitations, **Sales Promotion: Techniques, Push & Pull Strategies.** • Sales controlling : Concept of Sales Budget and Sales Audit, Sales Quota - Methods and Types, Objectives and Factors Determining and Designing Sales Territory • Recent trends - Importance of Customer Feedback, Sales Management - Role of IT.

11) References:

- Davar: Salesmanship and Advertising
- Pillai and Bagavathi: Salesmanship
- Ramasamy : V S Marketing Management, Macmillan
- Richard R Still and Edward W Gundiff- Sales management- Prentice Hall

COURSE DETAILS

1) **Title of the Course: Retail Management**
2) **Specialization :** Business Studies (Management)
3) **Course Code :** MCM-IV-MG-RTL
4) **Course Objective:** The Course will help the learner –

- To study retail management concepts and operations.
- To provide understanding of retail management and types of retailers.
- To develop an understanding of retail management terminology including merchandize management, store management and retail strategy.

5) **Course Outcome (CO) :**

CO1 –The learner will understand concept and operation of retail management

CO2 - The learner will get to know different types of retailers and the career opportunities in retail management.

6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 06 credits
9) **Evaluation Pattern** :

a. Total Marks 100 Marks

b. Passing Criteria : 40 % Marks **(4 Grade Points)**

c. Marking Scheme : **60:40 Pattern**

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
1) Semester End Exam (S.E.E.) : Written Exam	60 Marks	24 Marks
2) Continuous Internal Assessment (C.I.A.) : Subject Oriented	40 Marks	16 Marks
TOTAL :	**100 marks**	**40 Marks**

d. Mode of Evaluation of Answer-book : Online/Offline

e. Paper Pattern of Theory / Practical – Semester End Exam (S.E.E.): 60 Marks Classification

Question No.	Type of Question	Total Marks
Q.1.	Objectives : FIB/MCQ/T or F/MTC	**12 Marks**
Q.2.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.3.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.4.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.5	Attempt any 2 out of 3 Questions	**12 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments Case Studies	15 Marks
Class participation & Attendance	05 Marks

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Retail Management** **(15 lectures)**	• Retailing: Concept, Scope and Importance of Retailing and Retail Management, Retail Formats, Theories of Retail change, Retail Environment Economic, Legal, Technological & Competitive • Retail sector in India: Size, and Drives of Retail changes, FDI in Retailing in Indian Context • Recent Trends in Retailing: Modern Retail Formats, Mall System, Challenges Faced by the Retail Sector, Ethics in Retailing.
II	**Retail Management Strategy** **(15 lectures)**	• Retail Strategies: Promotional Strategies, Retail Planning Process, Retail - Market Segmentation - Concept and Significance • Relationship Marketing Strategies: CRM in Retailing, Retail Value Chain, Retail life Cycle, HRM in retailing- Growing importance of HR and Challenges faced by HR in retailing • Consumer Strategies: Consumer Behaviour in Retail Context, Buying Decision Process, Customer Service as a Part of Retail Strategy.
III	**Retail Location, Layout and Merchandising** **(15 lectures)**	• Retail Location& Merchandising: Importance, Types, Steps involved in choosing a Retail Location. • Merchandising: Concept and Merchandising Planning Process, Retail Branding, Merchandising Buying, Visual Merchandising • Store Design and Layout: Store Design - Elements, Store Layout - Importance, Steps for Designing
IV	**Use of Technology and Career options** **(15 lectures)**	• Technologies: Use of Technologies in retailing - Electronic Data Interchange (EDI), Radio Frequency Identification (RFI), Data Base Management system • E-Retailing: Formats, Challenges, Green Retailing - Concept and Importance • Retail as a Career: Various Career Options, Responsibilities of Store Manager, Functions of Merchandising Manager

11) References:

- Bajaj, Chetan, Tuli, Rajnish and Srivastava, Nidhi; Retail Management; OUP; New
- Berman, Barry & Evans, Joel R.; Retail Management – A strategic approach; Pearson 1. Education/Prentice Hall of India; New Delhi
- Dunne, Patrick M., Lusch, Robert F & Griffith, David A.; Retailing; Thomson Asia Pvt. Ltd; ND
- Lamba, A.J.; The Art of Retailing; Tata McGraw Hill; New Delhi.
- Levy, Michael & Weitz, Barton A.; Retailing Management; Tata McGraw Hill; New Delhi
- Newman, Andrew J. & Cullen, Peter; Retailing – Environment and Operations; Thomson Asia Pvt. Ltd.; New Delhi
- Pradhan, Swapna; Retaling Management; Tata McGraw Hill; New Delhi

COURSE DETAILS

1) **Title of the Course: Tourism Management**
2) **Specialization :** Business Studies (Management)
3) **Course Code :** MCM-IV-MG-TOUR
4) **Course Objective:** The Course will help the learner –

- To impart knowledge to learners about types of tourism.
- To understand basic concepts and strategies of tourism management
- To familiarize learners with tourism marketing and trends in tourism

5) **Course Outcome (CO) :**

CO1 – The learner will learn about tourism and its management techniques

CO2 – Various strategies of tourism marketing and management will help the learner to grow his career in tourism sector

6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 06 credits
9) **Evaluation Pattern** :

a. **Total Marks** 100 Marks
b. **Passing Criteria :** 40 % Marks **(4 Grade Points)**
c. **Marking Scheme** : **60:40 Pattern**

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
1) Semester End Exam (S.E.E.) : Written Exam	60 Marks	24 Marks
2) Continuous Internal Assessment (C.I.A.) : Subject Oriented	40 Marks	16 Marks
TOTAL :	**100 marks**	**40 Marks**

d. **Mode of Evaluation of Answer-book :** Online/Offline
e. **Paper Pattern of Theory / Practical – Semester End Exam (S.E.E.): 60 Marks Classification**

Question No.	Type of Question	Total Marks
Q.1.	Objectives : FIB/MCQ/T or F/MTC	**12 Marks**
Q.2.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.3.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.4.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.5	Attempt any 2 out of 3 Questions	**12 Marks**

f. **Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification**

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments Case Studies	15 Marks
Class participation & Attendance	05 Marks

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Tourism Management** **(15 lectures)**	• Tourism – Concept, Characteristics Importance and Types of Tourism • Tourism Industry: Concept, Nature, Structure and Components, Career options in Tourism. • Tourism Destination: Concept, Elements, Tourism Destination Planning – Process and Importance.
II	**Tourism Marketing** **(15 lectures)**	• Tourism Product: Concept, Characteristics, Types, Tourism Product Planning- Need and Importance. • Tourism Pricing: Influencing factors, Pricing objectives, Tourism Pricing Policies • Tourism Promotion: Importance, Elements of Tourism Promotion, Role of Advertising, Promotional Plan – Implementation Procedure
III	**Tourism Practices** **(15 lectures)**	• Travel Intermediaries: Travel Agency and Tour operators – Definition and Differentiation, Types, Importance and Functions. • Setting up of Travel Agency and Tour Operations and their Approval: Business setting Procedure and process, Types of organization to be set up- Proprietorship, • Partnership, Franchise, Approval from Ministry of Tourism and IATA • International Tourism: Concept, Importance, Role of Institutions and organizations in promoting International Tourism -WTTC , IATO, TAAI, ITDC.
IV	**Tourism Development** **(15 lectures)**	• Sustainable Tourism Development: Concept, Principles, Approaches to Sustainable Tourism, Code of Conduct for safe and sustainable Tourism in India • Government Policies: National Action Plan, National Tourism Policy, Government incentives for Tourism Development and Promotion. • Future Growth and Development of Indian Tourism - Factors influencing growth of Tourism Industry in India, Major Tourism schemes of Government of India- Visa on Arrival (VoA), PRASAD Scheme, HRIDAY Scheme, Travel Circuits; Incredible India Campaign.

11) References:

- S.M.Jha, Tourism Marketing, Himalaya Publishing House, Second Edition, 2011
- Prasanna Kumar, Marketing of Hospitality and Tourism Services, Tata McGraw Hill, 2010
- Kshitiz Sharma, Introduction to Tourism Management, McGraw Hill Education (India) Pvt. Ltd, 2014
- Sunil Kabia, , Tourism and the developing countries, Mohit Publications, First edition, 2005
- M.V.Kulkarni, Tourism marketing, Everest Publishing House, First edition, 2005
- Alan A. Lew, A companion to tourism, Blackwell Publishing
- Krishnan K Kamra, Tourism: An Overview

COURSE DETAILS

1) **Title of the Course: Management of Business Relations**
2) **Specialization :** Business Studies (Management)
3) **Course Code :** MCM-IV-MG-MBR
4) **Course Objective:**

The Course will help the learner –

- To familiarize with the aspects and importance of business relations
- To learn the different methods and strategies of building business relations with various stakeholders of the business organisation

5) **Course Outcome (CO) :**

CO1 – The learner will understand the nature and importance of business relations

CO2 – Different management strategies of building good business relations will help the to be a leader in the corporate

6) **Semester :** IV
7) **Total Hours:** 60 hours
8) **Total Credits:** 06 credits
9) **Evaluation Pattern** :

a. **Total Marks** 100 Marks
b. **Passing Criteria :** 40 % Marks **(4 Grade Points)**
c. **Marking Scheme** : **60:40 Pattern**

MARKING SCHEME	TOTAL MARKS	PASSING MARKS
1) Semester End Exam (S.E.E.) : Written Exam	60 Marks	24 Marks
2) Continuous Internal Assessment (C.I.A.) : Subject Oriented	40 Marks	16 Marks
TOTAL :	**100 marks**	**40 Marks**

d. **Mode of Evaluation of Answer-book :** Online/Offline
e. **Paper Pattern of Theory / Practical – Semester End Exam (S.E.E.): 60 Marks Classification**

Question No.	Type of Question	Total Marks
Q.1.	Objectives : FIB/MCQ/T or F/MTC	**12 Marks**
Q.2.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.3.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.4.	Attempt any 2 out of 3 Questions	**12 Marks**
Q.5	Attempt any 2 out of 3 Questions	**12 Marks**

f. Paper Pattern of Continuous Internal Assessment (C.I.A.) : 40 Marks Classification

ASSESSMENT	MARKS
Internal Written Exam	20 Marks
Subject Oriented Activities – • PPT Presentations • Assignments Case Studies	15 Marks
Class participation & Attendance	05 Marks

10) Modules / Units :

MODULE NO.	TOPIC	CONTENTS COVERED
I	**Introduction to Management of Business Relations** **(15 lectures)**	• Business Relations - Need, Importance of Business relations, Business Relationship Management (BRM) Competencies. • Business Relation Manager- Role, qualities, Skills. • Business Relations- Principles, Steps, Trends, Impact of Communication on Business Relations.
II	**Customer and Channel Relationship Management** **(15 lectures)**	• Customer Relations Management: Concept, Characteristics of an empowered customer, Approaches &Types, Role of Customer Relations Manager. • Designing and developing customer Value- Turning customers to loyal clients, Strategic Framework for CRM, E-CRM: Concept and Benefits, Steps, Successful CRM implementation. • Channel Relationship - Concept, importance , Challenges, Elements contributing to effective channel relationships
III	**Employee Relationship Management** **(15 lectures)**	• Employee Relationship Management - Concept, Objectives of Employee Relations , Approaches to Employee Relations, • Role of Employee Relations Manager, Prospects & Importance of Industrial Relations, Problems & Challenges of Employee Relations, Key Drivers for shifting from Industrial Relations to Employee Relations, • Strategic Framework for ERM, Factors influencing ERM, Essentials of an effective ERM, ERM strategy.
IV	**Supplier, Investors and Community Relationship Management** **(15 lectures)**	• Supplier Relations – Concept, Supplier Segmentation Pyramid, Supplier Improvement Process for better relations, Challenges. • Investors Relations –Concept, Focus, Keys to successful investor's relations, Enhancing shareholders loyalty and retention. • Stakeholder relations- Types of stakeholders, Role of business in social development, strategies to improve community relations, impact of community relations on business.

11) References:

- Personnel Management and Industrial relations – P. C. Shejwalkar and S. B. Malegaonkar
- Labour Management relations in India – K.M. Subramanian
- Trade Unionism Myth and Reality, New Delhi, Oxford University Press, 1982
- Dynamic Personnel Administration – Prof. M.N. Rudrabasavraj.
- Alok Kumar Rai, "Customer Relationship Management – Concepts and Cases", PHI Learning Private Ltd, New Delhi

- Berry, Leonard L. (1995),“Relationship marketing of services – competing throughQuality”, free press, New York
- Berson, A and S J Smith, K Thearling (1999), “Building Data Mining Applications for CRM”, McGraw-Hill, New York.
- Chaturvedi, Kapil and Amit Bhatia (2001), “e-CRM: Deriving value of customer Relationship”, CRM: Emerging Concepts, tools and Application, in J N Sheth, A
- McKenna, Regis (1991), “Relationship Marketing: Successful Strategies for the Age of The Customer”, Addison-Wesley, New York.
- Madhavi Garikaparthi, “ E-CRM – Concepts and Cases” , The ICFAI University Press.
- Graham Roberts , Phelps, “Customer Relationship Management” , Thorogood Publishers Limited, UK

SEMESTER – III & SEMESTER- IV (PROJECT WORK)

Guidelines:

- The project topic may be undertaken in any area of Elective Courses.
- Each of the students has to undertake a Project individually under the supervision of a teacher-guide.
- The student shall decide the topic in consultation with the teacher-guide concerned.
- University/college should allot P G Teacher for guidance to the students based on her / his specialization.
- There shall be double valuation of project by the teacher- guide concerned and an external examiner appointed by the University/College with equal weightage.
- The teacher-guide along with the external examiner appointed by the University/College for the valuation of project shall conduct viva voce examination with equal weightage.
- The date of viva voce shall be intimated to the students by the Department well in advance.

• The project report shall be prepared as per the broad guidelines given below:

a. Project Report shall be typed in Times New Roman with one and half line spacing in 12 Font Size and 1.5 spacing.

b. The size of the Project Report shall be with a minimum of 25,000 words and a maximum of 40,000 words.

c. Project Report shall be printed on both sides of the paper.

d. The Project Report shall be bounded. Evaluation: The Project Report evaluation is for 60 Marks and the Viva –Voce examination is for 40 Marks (without presentation). No marks will be allotted on the Project Report unless a candidate appears at the Viva-Voce Examination. Similarly, no marks will be allotted on Viva-Voce Examination unless a candidate submits his/her Project Report. Project Report (60 marks): Introduction and other areas covered – 20 marks Presentation, Analysis & Findings -- 30 marks Conclusion & Recommendations -- 10 marks Viva-Voce (40 marks): In course of Viva-Voce Examination, the question may be asked in the following areas: Importance / relevance of the Study, Objective of the Study, Methodology of the Study/ Mode of Enquiry -- 10 marks Ability to explain the analysis, findings, concluding observations, recommendation, limitations of the Study -- 20 marks Overall Impression (including Communication Skill) -- 10

Passing:

- Minimum of Grade E in the project component
- In case of failing in the project work, the same project can be revised for ATKT examination.
- Absence of student for viva voce: If any student fails to appear for the viva voce on the date and time fixed by the department such student shall appear for the viva voce on the date and time fixed by the Department, such student shall appear for the viva voce only along with students of the next batch

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Credit Structure of the Program (Sem I, II) - NEP

(M.Sc (Information Technology))

<table>
<tr><th rowspan="2">Year</th><th rowspan="2">Level</th><th rowspan="2">Sem</th><th colspan="4">Major</th><th rowspan="2">RM</th><th rowspan="2">OJT/FP</th><th rowspan="2">RP</th><th rowspan="2">Cum. Cr.</th></tr>
<tr><th colspan="3">Mandatory</th><th>Electives</th></tr>
<tr><td rowspan="6">1</td><td rowspan="6">6.0</td><td rowspan="5">Sem I</td><td colspan="3">2*4+2*2 + 2</td><td>4</td><td>4</td><td rowspan="6">-</td><td rowspan="6">-</td><td rowspan="6">22</td></tr>
<tr><td>Data Science (MITMJ101)</td><td>TH</td><td>4</td><td rowspan="5">Security Breaches and Countermeasures (MITELP104) (PR)
(OR)
Data Center Technologies (MITEL105)
(OR)
Image Processing (MITEL106)</td><td rowspan="5">Research Methodology (MITRM107)</td></tr>
<tr><td>Data Science Practical (MITMJP101)</td><td>PR</td><td>2</td></tr>
<tr><td>Soft Computing Techniques (MITMJ102)</td><td>TH</td><td>4</td></tr>
<tr><td>Soft Computing Techniques Practical (MITMJP102)</td><td>PR</td><td>2</td></tr>
<tr><td>Cloud Computing (MITMN103)</td><td>TH</td><td>2</td></tr>
<tr><td rowspan="6">Sem II</td><td colspan="3">2*4+2*2 + 2</td><td>4</td><td rowspan="6">-</td><td rowspan="6">MITMJP207</td><td rowspan="6">-</td><td rowspan="6">22</td></tr>
<tr><td>Big Data Analytics (MITMJ201)</td><td>TH</td><td>4</td><td rowspan="5">Malware Analysis (PR) (MITELP204)
(OR)
Cloud Management (PR) (MITELP205)
(OR)
Computer Vision (PR) (MITELP206)</td></tr>
<tr><td>Big Data Analytics Practical (MITMJ201)</td><td>PR</td><td>2</td></tr>
<tr><td>Modern Networking (MITMJ202)</td><td>TH</td><td>4</td></tr>
<tr><td>Modern Networking Practical (MITMJP202)</td><td>PR</td><td>2</td></tr>
<tr><td>Microservices Architecture (MITMN203)</td><td>TH</td><td>2</td></tr>
<tr><td colspan="3">Cum. Cr. For PG Diploma</td><td colspan="3">28</td><td>8</td><td>4</td><td>4</td><td></td><td>44</td></tr>
</table>

Syllabus

M.Sc(Information Technology)

(Sem. I & II)

M.Sc(Information Technology)

Semester I

Programme Code : _____ Programme Name:M. Sc (Information Technology)

Course Code: MITMJ101 **Total Credits:** 04 (60 Lecture Hrs) **External assessment:** 50 marks	**Course Name:** Data Science **Total Marks:** 100 marks **College/Department assessment:** 50 marks

Pre requisite:

Basic understanding of statistics

Course Objectives (COs)

To enable the students to:

CO1 : Develop in depth understanding of the key technologies in data science and business analytics: data mining, machine learning, visualization techniques, predictive modeling, and statistics.

CO2 : Practice problem analysis and decision-making.

CO3 : Gain practical, hands-on experience with statistics programming languages and big data tools through coursework and applied research experiences.

MODULE I:	**(2 CREDITS)**
Unit 1: Data Science Introduction & Basics a. **Data Science Technology Stack:** Rapid Information Factory Ecosystem, Data Science Storage Tools, Data Lake, Data Vault, Data Warehouse Bus Matrix, Data Science Processing Tools ,Spark, Mesos, Akka , Cassandra, Kafka, Elastic Search, R ,Scala, Python, MQTT, The Future. b. **Layered Framework:** Definition of Data Science Framework, Cross-Industry Standard Process for Data Mining (CRISP-DM), Homogeneous Ontology for Recursive Uniform Schema, The Top Layers of a Layered Framework, Layered Framework for High-Level Data Science and Engineering c. **Business Layer:** Business Layer, Engineering a Practical Business Layer d. **Utility Layer:** Basic Utility Design, Engineering a Practical Utility Layer	15 Hrs [OC1, OC2, OC3]
Unit 2: Statistics for Data Science a. **Three Management Layers:** Operational Management Layer, Processing-Stream Definition and Management, Audit, Balance, and Control Layer, Balance, Control, Yoke Solution, Cause-and-Effect, Analysis System, Functional Layer, Data Science Process b. **Retrieve Superstep:** Data Lakes, Data Swamps, Training the Trainer Model, Understanding the Business Dynamics of the Data Lake, Actionable Business Knowledge from Data Lakes, Engineering a Practical Retrieve Superstep, Connecting to Other Data Sources. c. **Assess Superstep:** Assess Superstep, Errors, Analysis of Data, Practical Actions, Engineering a Practical Assess Superstep	15 Hrs [OC4, OC5, OC6]
MODULE II :	**(2 CREDITS)**
Unit 3: Data Analysis with Python & Data Visualization a. **Process Superstep :** Data Vault, Time-Person-Object-Location-Event Data Vault, Data Science Process, Data Science,	15 Hrs [OC7, OC8,

b. **Transform Superstep :** Transform Superstep, Building a Data Warehouse, Transforming with Data Science, Hypothesis Testing, Overfitting and Underfitting, Precision-Recall, Cross-Validation Test.	OC9, OC10]
Unit 4: Machine Learning for Data Science a. **Transform Superstep:** Univariate Analysis, Bivariate Analysis, Multivariate Analysis, Linear Regression, Logistic Regression, Clustering Techniques, ANOVA, Principal Component Analysis (PCA), Decision Trees, Support Vector Machines, Networks, Clusters, and Grids, Data Mining, Pattern Recognition, Machine Learning, Bagging Data,Random Forests, Computer Vision (CV) , Natural Language Processing (NLP), Neural Networks, TensorFlow. b. **Organize and Report Supersteps :** Organize Superstep, Report Superstep, Graphics, Pictures, Showing the Difference	15 Hrs [OC11,OC12, OC13, OC14]

Books and References:

Sr. No.	Title	Author/s	Publisher	Edition	Year
1	Practical Data Science	Andreas François Vermeulen	APress		2018
2	Principles of Data Science	Sinan Ozdemir	PACKT		2016
3	Data Science from Scratch	Joel Grus	O'Reilly		2015
4	Data Science from Scratch first Principle in python	Joel Grus	Shroff Publishers		2017
5	Experimental Design in Data science with Least Resources	N C Das	Shroff Publishers		2018

Course Outcomes(OCs)

Upon completing this course, the student will be able to:

1. Apply quantitative modeling and data analysis techniques to the solution of real world business problems, communicate findings, and effectively present results using data visualization techniques.
2. Recognize and analyze ethical issues in business related to intellectual property, data security, integrity, and privacy.
3. Apply ethical practices in everyday business activities and make well-reasoned ethical business and data management decisions.
4. Demonstrate knowledge of statistical data analysis techniques utilized in business decision making.
5. Apply principles of Data Science to the analysis of business problems.
6. Use data mining software to solve real-world problems.
7. Employ cutting edge tools and technologies to analyze Big Data.
8. Apply algorithms to build machine intelligence.
9. Demonstrate use of team work, leadership skills, decision making and organization theory.

Course Code: MITMJP101 **Total Credits:** 02 (60 Lecture Hrs) **External assessment:** 25 marks	**Course Name:** Data Science Practical **Total Marks:** 50 marks **College/Department assessment:** 25 marks

Pre requisites:

Basic understanding of statistics and basic programming logic

Course Objectives (OCs)

To enable the students to:

CO1 To Develop statistical and analytical modelling using data science concepts

CO2 To develop data visualization

CO3 To Gain practical, hands-on experience with statistics programming languages and big data tools through coursework and applied research experiences

Units	Sr No.	Name of Practical	Lecture Hrs (2 credits)
I	1	Creating and using database in Cassandra	15 Hrs (OC1-OC4)
	2	Write the programs for the following:	
	2a	Text Delimited CSV to HORUS format	
	2b	XML to HORUS format	
	2c	JSON to HORUS format	
	2d	MySql database to HORUS format	
	2e	Picture(JPEG) to HORUS format	
	2f	Video to HORUS format	
	2g	Audio to HORUS format	
	3a	Fixers Utilities	
	3b	Data Binning or Bucketing	
	3c	Averaging of data	
	3d	Outlier Detection	
	3e	Logging	
II	4a	Perform following data processing using R	20 Hrs (OC5-OC7)
	4b	Program retrieve different attributes of data	
	4c	Data pattern	
	4d	Loading IP_DATA_ALL	
	5a	Perform error management on the given data using pandas package	
	5b	Write python/R program to create the network routing diagram from the given data on routers	
	5c	Write a python/R program to build acyclic graph	
	5d	Write python/R program to pick the content for BillBoards from the given data	
	5e	Write a python/R program to generate GML file from given csv file	
	5f	Write python/R program to plan location of warehouse from the given data	
	5g	Write python/R program using data science via clustering to determine new warehouse using the given data	
	5h	Using the given data Write python/R program to plan the shipping routers from best-fit international logistics	
	5i	Write python/R program to delete the best packing option to ship in container from the given data	
	5j	Write python program to create delivery route using the given data	
	5k	Write python program to crate simple forex trading planner from the given data	

	5l	Write python program to process the balance sheet to ensure the only good data is processing	
	5m	Write python program to generate payroll from the given data	
III	6	Build the time hub, links and satellites	15 Hrs (OC8-OC9)
	7	Transforming data	
	8	Organizing data	
	9	Generating data	
	10	Data visualisation using power Bi	

Course Outcomes(OCs)

Upon completing this course, the student will be able to:

OC 1. Apply quantitative modeling and data analysis techniques to the solution of real world business problems, communicate findings, and effectively present results using data visualization techniques.
OC 2. Recognize and analyze ethical issues in business related to intellectual property, data security, integrity, and privacy.
OC 3. Apply ethical practices in everyday business activities and make well-reasoned ethical business and data management decisions.
OC 4. Demonstrate knowledge of statistical data analysis techniques utilized in business decision making.
OC 5. Apply principles of Data Science to the analysis of business problems.
OC 6. Use data mining software to solve real-world problems.
OC 7. Employ cutting edge tools and technologies to analyze Big Data.
OC 8. Apply algorithms to build machine intelligence.
OC 9. Demonstrate use of team work, leadership skills, decision making and organization theory.

Course Code: MITMJ102 **Total Credits:** 04 (60 Lecture Hrs) **External assessment:** 50 marks	**Course Name:** Soft Computing Techniques **Total Marks:** 100 marks **College/Department assessment:** 50 marks

Pre-requisite: Basic **Knowledge** on AI

Course Objectives (COs):

To enable the students to:

- **CO1:** Soft computing concepts like fuzzy logic, neural networks and genetic algorithm, where Artificial Intelligence is mother branch of all.
- **CO2** All these techniques will be more effective to solve the problem efficiently **:**

MODULE I:	**(2 CREDITS)**
Unit I **a) Introduction of soft computing -** soft computing vs. hard computing, various types of soft computing techniques, Fuzzy Computing, Neural Computing, Genetic Algorithms, Associative Memory, Adaptive Resonance Theory, Classification, Clustering, Bayesian Networks, Probabilistic reasoning, applications of soft computing. **b) Artificial Neural Network -** Fundamental concept, Evolution of Neural Networks, Basic Models, McCulloh-Pitts Neuron, Linear Separability, Hebb Network**.** **c) Supervised Learning Network -** Perceptron Networks, Adaptive Linear Neuron, Multiple Adaptive Linear Neurons, Backpropagation Network, Radial Basis Function, Time Delay Network, Functional Link Networks, Tree Neural Network	15 Hrs [OC1-OC3]
Unit II **a) Associative Memory Networks -** Training algorithm for pattern Association, Autoassociative memory network, hetroassociative memory network, bi-directional associative memory, Hopfield networks, iterative autoassociative memory networks, temporal associative memory networks. Kohonen self-organizing feature maps, learning vectors quantization, counter propogation networks, adaptive resonance theory networks. **b) Special Networks -** Simulated annealing, Boltzman machine, Gaussian Machine, Cauchy Machine, Probabilistic neural net, cascade correlation network, cognition network, neo-cognition network, cellular neural network, optical neural network **c) Third Generation Neural Networks -** Spiking Neural networks, convolutional neural networks, deep learning neural networks, extreme learning machine model. **d) UnSupervised Learning Networks -** Fixed weight competitive nets	15 Hrs [OC4-OC5]
MODULE II:	**(2 CREDITS)**
Unit III **a) Introduction to Fuzzy Logic, Classical Sets and Fuzzy sets -** Classical sets, Fuzzy sets. **b) Classical Relations and Fuzzy Relations -** Cartesian Product of relation, classical relation, fuzzy relations, tolerance and equivalence relations, non-iterative fuzzy sets.	15 Hrs OC6

c) Membership Function - features of the membership functions, fuzzification, methods of membership value assignments. **d) Defuzzification -** Lambda-cuts for fuzzy sets, Lambda-cuts for fuzzy relations, Defuzzification methods. **e) Fuzzy Arithmetic and Fuzzy measures -** fuzzy arithmetic, fuzzy measures, measures of fuzziness, fuzzy integrals.	
Unit IV **a) Fuzzy Rule base and Approximate reasoning -** Fuzzy proportion, formation of rules, decomposition of rules, aggregation of fuzzy rules, fuzzy reasoning, fuzzy inference systems, Fuzzy logic control systems, control system design, architecture and operation of FLC system, FLC system models and applications of FLC System. **b) Genetic Algorithm -** Biological Background, Traditional optimization and search techniques, genetic algorithm and search space, genetic algorithm vs. traditional algorithms, basic terminologies, simple genetic algorithm, general genetic algorithm, operators in genetic algorithm, stopping condition for genetic algorithm flow, constraints in genetic algorithm, problem solving using genetic algorithm, the schema theorem, classification of genetic algorithm, Holland classifier systems, genetic programming, advantages and limitations and applications of genetic algorithm.Differential Evolution Algorithm, Hybrid soft computing techniques – neuro – fuzzy hybrid, genetic neuro-hybrid systems, genetic fuzzy hybrid and fuzzy genetic hybrid systems.	15 Hrs [OC7-OC8]

Books and References:

Sr. No.	Title	Author/s	Publisher	Edition	Year
1.	Artificial Intelligence and Soft Computing	Anandita Das Battacharya	SPD	3rd	2018
2.	Principles of Soft computing	S.N.Sivanandam S.N.Deepa	Wiley	3rd	2019
3.	Neuro-Fuzzy and Soft Computing	J.S.R.Jang, C.T.Sun and E.Mizutani	Prentice Hall of India		2004
4.	Neural Networks, Fuzzy Logic and Genetic Algorithms: Synthesis & Applications	S.Rajasekaran, G. A. Vijayalakshami	Prentice Hall of India		2004
5.	Fuzzy Logic with Engineering Applications	Timothy J.Ross	McGraw-Hill		1997
6.	Genetic Algorithms: Search, Optimization and Machine Learning	Davis E.Goldberg	Addison Wesley		1989
7.	Introduction to AI and Expert System	Dan W. Patterson	Prentice Hall of India		2009

Course Outcomes(OCs)

Upon completing this course, the student will be able to:

OC1 Gain a solid understanding of the fundamental concepts underlying soft computing, including the differences between soft computing and traditional hard computing methods.

OC2 Familiarize with a variety of soft computing techniques such as fuzzy logic, neural networks, genetic algorithms, swarm intelligence, and probabilistic reasoning.

OC3 Apply soft computing techniques to solve real-world problems from various domains such as engineering, finance, healthcare, and more.

OC4 Formulate problems in a way that lends itself to the application of soft computing techniques, taking into account the uncertainties and imprecisions present in real-world data.

OC5 Understnad of how fuzzy logic works and its applications in modeling and decision-making under uncertainty.

OC6 Gain knowledge of neural network architectures, training algorithms, and their applications in pattern recognition, regression, and classification tasks.

OC7 Understand genetic algorithms, their components, and their use in optimization problems and search spaces.

OC8 Familiarize with swarm intelligence algorithms such as ant colony optimization and particle swarm optimization, and their applications in optimization and search problems.

Course Code: MITMJP102 **Total Credits:** 02 (60 Lecture Hrs) **External assessment:** 25 marks	**Course Name:** Soft Computing Techniques Practical **Total Marks:** 50 marks **College/Department assessment:** 25 marks

Pre requisites:

Basic understanding of statistics and basic programming logic with AI basics

Course Objectives (COs)

CO1. Hands-On Implementation
CO2. Algorithm Understanding
CO3. Real-World Applications
CO4. Develop students' programming skills by experimenting with soft computing algorithms.
CO5. Train students to visualize and interpret the results of soft computing techniques effectively.

Units	Sr. No.	Details	Lecture Hrs 2 Credits
I	**1**	Implement the following:	20 Hrs [OC1-OC2]
	A	Design a simple linear neural network model.	
	B	Calculate the output of neural net using both binary and bipolar sigmoidal function.	
	2	Implement the following:	
	A	Generate AND/NOT function using McCulloch-Pitts neural net.	
	B	Generate XOR function using McCulloch-Pitts neural net.	
	3	Implement the Following	
	A	Write a program to implement Hebb's rule.	
	B	Write a program to implement of delta rule.	
II	**4**	Implement the Following	20 Hrs [OC3-OC5]
	A	Write a program for Back Propagation Algorithm	
	B	Write a program for error Backpropagation algorithm.	
	5.	Implement the Following	
	A	Write a program for Hopfield Network.	
	B	Write a program for Radial Basis function	
	6.	Implement the Following	
	A	Kohonen Self organizing map	
	B	Adaptive resonance theory	
III	**7.**	Implement the Following	20 Hrs [OC6-OC7]
	A	Write a program for Linear separation.	
	B	Write a program for Hopfield network model for associative memory	
	8.	Implement the Following	
	A	Membership and Identity Operators | in, not in,	
	b.	Membership and Identity Operators is, is not	
	9.	Implement the Following	
	A	Find ratios using fuzzy logic	
	B	Solve Tipping problem using fuzzy logic	
	10.	Implement the Following	

	A	Implementation of Simple genetic algorithm	
	B	Create two classes: City and Fitness using Genetic algorithm	

Course Outcomes(COs)

Upon completing this course, the student will be able to:

OC 1: Identify and describe soft computing techniques and their roles in building intelligent machines

OC 2: Recognize the feasibility of applying a soft computing methodology for a particular problem

OC 3: Apply fuzzy logic and reasoning to handle uncertainty and solve engineering problems

OC 4: Apply genetic algorithms to combinatorial optimization problems

OC 5: Apply neural networks for classification and regression problems

OC 6: Effectively use existing software tools to solve real problems using a soft computing approach

OC 7: Evaluate and compare solutions by various soft computing approaches for a given problem.

Course Code: MITMN103 **Total Credits:** 04 (60 Lecture Hrs) **External assessment:** 50 marks	**Course Name:** Cloud Computing **Total Marks:** 100 marks **College/Department assessment:** 50 marks

Pre requisite: Basic knowledge of Computer Networks, Operating Systems

Course Objectives(COs)

CO1. To learn how to use Cloud Services.

CO2. To implement Virtualization.

CO3. To implement Task Scheduling algorithms.

CO4. Apply Map-Reduce concept to applications.

CO5. To build Private Cloud.

CO6. Broadly educate to know the impact of engineering on legal and societal issues involved.

Units	S.No	Details	Lecture Hrs 2 Credits
I	a) b) c)	**Introduction to Cloud Computing -** Introduction, Historical developments, Building Cloud Computing Environments, **Principles of Parallel and Distributed Computing -** Eras of Computing, Parallel v/s distributed computing, Elements of Parallel Computing, Elements of distributed computing, Technologies for distributed computing. **Virtualization -** Introduction, Characteristics of virtualized environments, Taxonomy of virtualization techniques, Virtualization and cloud computing, Pros and cons of virtualization, Technology examples. Logical Network Perimeter, Virtual Server, Cloud Storage Device, Cloud usage monitor, Resource replication, Ready-made environment.	**15Hrs** **[OC1-OC3]**
II	a) b) c)	**Cloud Computing Architecture:** Introduction, Fundamental concepts and models, Roles and boundaries, Cloud Characteristics, Cloud Delivery models, Cloud Deployment models, Economics of the cloud, Open challenges. **Fundamental Cloud Security:** Basics, Threat agents, Cloud security threats, additional considerations. **Industrial Platforms and New Developments:** Amazon Web Services, Google App Engine, Microsoft Azure.	**15 Hrs** **[OC4-OC6]**

Books and References:					
Sr. No.	**Title**	**Author/s**	**Publisher**	**Edition**	**Year**
1.	Mastering Cloud Computing Foundations and Applications Programming	Rajkumar Buyya, Christian Vecchiola, S. Thamarai Selvi	Elsevier	-	2013
2.	Cloud Computing Concepts, Technology & Architecture	Thomas Erl, Zaigham Mahmood, and Ricardo Puttini	Prentice Hall	-	2013
3.	Distributed and Cloud Computing, From Parallel Processing to the Internet of Things	Kai Hwang, Jack Dongarra, Geoffrey Fox	MK Publishers	--	2012

Course Outcomes(COs)

Upon completing this course, the student will be able to:

- OC1 Analyze the Cloud computing setup with its vulnerabilities and applications using different architectures.
- OC2 Design different workflows according to requirements and apply map reduce programming model.
- OC3 Apply and design suitable Virtualization concept, Cloud Resource Management and design scheduling algorithms.
- OC4 Create combinatorial auctions for cloud resources and design scheduling algorithms for computing cloud.
- OC5 Assess cloud Storage systems and Cloud security, the risks involved, its impact and develop cloud application
- OC6 Broadly educate to know the impact of engineering on legal and societal issues involved in addressing the security issues of cloud computing.

Course Code: MITELP104 **Total Credits:** 04 (120 Lecture Hrs) **External assessment:** 50 marks	**Course Name:** Security Breaches and Countermeasures Practical **Total Marks:** 100 marks **College/Department assessment:** 50 marks

Prerequisite:

Basic Networking and Security concepts

Course Objectives(COs):

- To get the insight of the security loopholes in every aspect of computing.
- To understand the threats and different types of attacks that can be launched on computing systems.
- To know the countermeasures that can be taken to prevent attacks on computing systems.
- To test the software against attacks.

Units	Sr. No	Details	Lecture Hrs 2 Credits
I	a)	1. Use the following tools to perform footprinting and reconnaissance	20 Hrs [OC1]
		2. Recon-ng (Using Kali Linux)	
		3. FOCA Tool	
		4. Windows Command Line Utilities	
		5. Ping	
	b)	6. Tracert using Ping	
		7. Tracert	
		8. NSLookup	
		9. Website Copier Tool – HTTrack	
		10. Metasploit (for information gathering)	
	c)	11. Whois Lookup Tools for Mobile – DNS Tools, Whois, Ultra Tools Mobile	
		12. Smart Whois	
		13. eMailTracker Pro	
		14. Tools for Mobile – Network Scanner, Fing – Network Tool, Network Discovery Tool, Port Droid Tool	
	d)	a. Scan the network using the following tools:	
		i. Hping2 / Hping3	
		ii. Advanced IP Scanner	
		iii. Angry IP Scanner	
	e)	iv. Masscan	
		v. NEET	
		vi. CurrPorts	
		vii. Colasoft Packet Builder	
		viii. The Dude	
	f)	ix.	
		b. Use Proxy Workbench to see the data passing through it and save the data to file.	
		c. Perform Network Discovery using the following tools:	

	g)	i. Solar Wind Network Topology Mapper	
		ii. OpManager	
		iii. Network View	
		iv. LANState Pro	
		d. Use the following censorship circumvention tools:	
		i. Alkasir	
	h)	ii. Tails OS	
		e. Use Scanning Tools for Mobile – Network Scanner, Fing – Network Tool, Network Discovery Tool, Port Droid Tool	
II	a)	a. Perform Enumeration using the following tools:	20 Hrs [OC2-OC3]
		i. Nmap	
		ii. NetBIOS Enumeration Tool	
		iii. SuperScan Software	
		iv. Hyena	
		v. SoftPerfect Network Scanner Tool	
		vi. OpUtils	
		vii. SolarWinds Engineer's Toolset	
		viii. Wireshark	
	b)	b. Perform the vulnerability analysis using the following tools:	
		i. Nessus	
		ii. OpenVas	
		a. Perform mobile network scanning using NESSUS.	
		b. Perform the System Hacking using the following tools:	
		i. Winrtgen	
		ii. PWDump	
		iii. Ophcrack	
		iv. Flexispy	
	d)	v. NTFS Stream Manipulation	
		vi. ADS Spy	
		vii. Snow	
		viii. Quickstego	
		ix. Clearing Audit Policies	
	e)	x. Clearing Logs	
		a. Use wireshark to sniff the network.	
		b. Use SMAC for MAC Spoofing.	
		c. Use Caspa Network Analyser.	
		d. Use Omnipeek Network Analyzer.	
		a. Use Social Engineering Toolkit on Kali Linux to perform Social Engineering using Kali Linux.	
		b. Perform the DDOS attack using the following tools:	
III	a)	i. HOIC	20 Hrs [OC4-OC5]
		ii. LOIC	
		iii. HULK	
		iv. Metasploit	

		c. Using Burp Suite to inspect and modify traffic between the browser and target application.	
	b)	a. Perform Web App Scanning using OWASP Zed Proxy.	
		b. Use droidsheep on mobile for session hijacking	
		c. Demonstrate the use of the following firewalls:	
		i. Zonealarm and analyse using Firewall Analyzer.	
		ii. Comodo Firewall	
		d. Use HoneyBOT to capture malicious network traffic.	
	c)	e. Use the following tools to protect attacks on the web servers:	
		i. ID Server	
		ii. Microsoft Baseline Security Analyzer	
		iii. Syhunt Hybrid	
		a. Protect the Web Application using dotDefender.	
		b. Demonstrate the following tools to perform SQL Injection:	
	d)	i. Tyrant SQL	
		ii. Havij	
		iii. BBQSQL	
		Use Aircrack-ng suite for wireless hacking and countermeasures.	
		Use the following tools for cryptography	
		i. HashCalc	
	e)	ii. Advanced Encryption Package	
		iii. MD5 Calculator	
		iv. TrueCrypt	
		v. CrypTool	

Books and References:					
Sr. No.	Title	Author/s	Publisher	Edition	Year
1.	CEHv10, Certified Ethical Hacker Study Guide	Ric Messier	Sybex - Wiley	-	2019
2.	All in One, Certified Ethical Hacker	Matt Walker	Tata McGraw Hill	-	2012
3.	CEH V10: EC-Council Certified Ethical Hacker Complete Training Guide	I.P. Specialist	IPSPECIALIST	-	2018

Course Outcome(OCs)
Upon completing this course, the student will be able to:

OC 1: The student should be able to identify the different security breaches that can occur. The student should be able to evaluate the security of an organization and identify the loopholes. The student should be able to perform enumeration and network scanning.

OC 2: The student should be able to identify the vulnerability in the systems, breach the security of the system, identify the threats due to malware and sniff the network. The student should be able to do the penetration testing to check the vulnerability of the system towards malware and network sniffing.

OC 3: The student should be able to perform social engineering and educate people to be careful from attacks due to social engineering, understand and launch DoS and DDoS attacks, hijack and active session and evade IDS and Firewalls. This should help the students to make the organization understand the threats in their systems and build robust systems.

OC 4: The student should be able to identify the vulnerabilities in the Web Servers, Web Applications, perform SQL injection and get into the wireless networks. The student should be able to help the organization aware about these vulnerabilities in their systems.

OC 5: The student should be able to identify the vulnerabilities in the newer technologies like mobiles, IoT and cloud computing. The student should be able to use different methods of cryptography.

Course Code: MITEL105 **Total Credits:** 04 (60 Lecture Hrs) **External assessment:** 50 marks	**Course Name:** Data Center Virtualization **Total Marks:** 100 marks **College/Department assessment:** 50 marks

Pre requisites:

Basic knowledge of Computer Networks and Cloud Computing

Course Objectives(COs):

- Identify important requirements to design and support a data center.
- Determine a data center environment's requirement including systems and network architecture as well as services.
- Evaluate options for server farms, network designs, high availability, load balancing, data center services, and trends that might affect data center designs.
- Assess threats, vulnerabilities and common attacks, and network security devices available to protect data centers.
- Design a data center infrastructure integrating features that address security, performance, and availability.
- Measure data center traffic patterns and performance metrics.

Units	Details	Lectures 4 Credits
	Module I	
I	**a) Virtualization -** Virtualization History and Definitions **b) Virtualization and Network Technologies – I -** Data Center Network Evolution Beginning of Network Virtualization **c) Virtualization and Network Technologies – II -** Ace Virtual Contexts Virtual Device Contexts	**15** **[OC1]**
II	**a) Fooling Spanning Tree** **b) Virtualized Chassis with Fabric Extenders -** History of Data Centers **c) Virtualization in Storage Technologies – I -** Storage Evolution	**15** **[OC2]**
	Module II	
III	**a) Virtualization in Storage Technologies – II -** Islands in SAN **b) Secret Identities** One Cable to Unite Us All **c) Server Evolution**	**15** **[OC3]**
IV	**a) Changing Personalities** **b) Transcending the Rack -** Moving Targets **c) End to End Virtualization -** Virtual Data Center and Cloud Computing	**15** **[OC4-OC5]**

Books and References:					
Sr. No.	Title	Author/s	Publisher	Edition	Year
1.	Data Center Virtualization Fundamentals	Gustavo Alessandro Andrade Santana	Cisco Press	1st	2014

Course Outcomes(OCs):

After completion of the course, a student should be able to:

OC 1: Understand basic concepts in Virtualization.
OC 2: Use concepts of Load Balancing and Aggregation /virtual switching
OC 3: Configure Data center Migration and Fabric Building
OC 4: Understand various Changes in Server Architecture
OC 5: Use the concepts of Cloud computing and how to move towards a cloud computing technology.

Course Code: MITEL106 **Total Credits:** 04 (60 Lecture Hrs) **External assessment:** 50 marks	**Course Name:** Image Processing **Total Marks:** 100 marks **College/Department assessment:** 50 marks

Prerequisites:
Fundamental knowledge of graphics and Mathematics
Course Objectives(COs):

CO1. Review the fundamental concepts of a digital image processing system.
CO2. Analyze images in the frequency domain using various transforms.
CO3. Evaluate the techniques for image enhancement and image restoration.
CO4. Categorize various compression techniques.
CO5. Interpret Image compression standards.
CO6. Interpret image segmentation and representation techniques.

Units	Sr. No	Module I	Lecture Hrs 4 Credits
I	**a)** **b)** **c)**	**Introduction:** Digital Image Processing, Origins of Digital Image Processing, Applications and Examples of Digital Image Processing, Fundamental Steps in Digital Image Processing, Components of an Image Processing System, **Digital Image Fundamentals:** Elements of Visual Perception, Light and the Electromagnetic Spectrum, Image Sensing and Acquisition, Image Sampling and Quantization, Basic Relationships Between Pixels, Basic Mathematical Tools Used in Digital Image Processing, **Intensity Transformations and Spatial Filtering:** Basics, Basic Intensity Transformation Functions, Basic Intensity Transformation Functions, Histogram Processing, Fundamentals of Spatial Filtering, Smoothing (Lowpass) Spatial Filters, Sharpening (Highpass) Spatial Filters, Highpass, Bandreject, and Bandpass Filters from Lowpass Filters, Combining Spatial Enhancement Methods, Using Fuzzy Techniques for Intensity Transformations and Spatial Filtering	**15**
II	**a)** b)	**Filtering in the Frequency Domain:** Background, Preliminary Concepts, Sampling and the Fourier Transform of Sampled Functions, The Discrete Fourier Transform of One Variable, Extensions to Functions of Two Variables, Properties of the 2-D DFT and IDFT, Basics of Filtering in the Frequency Domain, Image Smoothing Using Lowpass Frequency Domain Filters, Image Sharpening Using Highpass Filters, Selective Filtering, Fast Fourier Transform **Image Restoration and Reconstruction:** A Model of the Image Degradation/Restoration Process, Noise Models, Restoration in the Presence of Noise Only Spatial Filtering, Periodic Noise Reduction Using Frequency Domain Filtering, Linear, Position-Invariant Degradations, Estimating the Degradation Function,	**15**

	c)	Inverse Filtering, Minimum Mean Square Error (Wiener) Filtering, Constrained Least Squares Filtering, Geometric Mean Filter, Image Reconstruction from Projections **Wavelet and Other Image Transforms:** Preliminaries, Matrix-based Transforms, Correlation, Basis Functions in the Time-Frequency Plane, Basis Images, Fourier-Related Transforms, Walsh-Hadamard Transforms, Slant Transform, Haar Transform, Wavelet Transforms	
		Module II	
III	**a)** b) c)	**Color Image Processing:** Color Fundamentals, Color Models, Pseudocolor Image Processing, Full-Color Image Processing, Color Transformations, Color Image Smoothing and Sharpening, Using Color in Image Segmentation, Noise in Color Images, Color Image Compression. **Image Compression and Watermarking:** Fundamentals, Huffman Coding, Golomb Coding, Arithmetic Coding, LZW Coding, Run-length Coding, Symbol-based Coding, 8 Bit-plane Coding, Block Transform Coding, Predictive Coding, Wavelet Coding, Digital Image Watermarking, **Morphological Image Processing:** Preliminaries, Erosion and Dilation, Opening and Closing, The Hit-or-Miss Transform, Morphological Algorithms, Morphological Reconstruction, Morphological Operations on Binary Images, Grayscale Morphology	**15**
IV	**a)** **b)** **c)**	**Image Segmentation I: Edge Detection, Thresholding, and Region Detection:** Fundamentals, Thresholding, Segmentation by Region Growing and by Region Splitting and Merging, Region Segmentation Using Clustering and Superpixels, Region Segmentation Using Graph Cuts, Segmentation Using Morphological Watersheds, Use of Motion in Segmentation **Image Segmentation II: Active Contours: Snakes and Level Sets:** Background, Image Segmentation Using Snakes, Segmentation Using Level Sets. **Feature Extraction:** Background, Boundary Preprocessing, Boundary Feature Descriptors, Region Feature Descriptors, Principal Components as Feature Descriptors, Whole-Image Features, Scale-Invariant Feature Transform (SIFT)	**15**

Books and References:					
Sr. No.	**Title**	**Author/s**	**Publisher**	**Edition**	**Year**
1.	Digital Image Processing	Gonzalez and Woods	Pearson/Prentice Hall	Fourth	2018
2.	Fundamentals of Digital Image Processing	A K. Jain	PHI		
3.	The Image Processing Handbook	J. C. Russ	CRC	Fifth	2010

OC 1: Understand the relevant aspects of digital image representation and their practical implications.

OC 2: Have the ability to design pointwise intensity transformations to meet stated specifications.

OC 3: Understand 2-D convolution, the 2-D DFT, and have the abitilty to design systems using these concepts.

OC 4: Have a command of basic image restoration techniques.

OC 5: Understand the role of alternative color spaces, and the design requirements leading to choices of color space.

OC 6: Appreciate the utility of wavelet decompositions and their role in image processing systems.

OC 7: Have an understanding of the underlying mechanisms of image compression, and the ability to design systems using standard algorithms to meet design specifications.

Course Code: MITRM107 **Total Credits:** 04 (60 Lecture Hrs) **External assessment:** 50 marks	**Course Name:** Research Methodology **Total Marks:** 100 marks **College/Department assessment:** 50 marks

Pre requisites	Basic knowledge of statistical methods. Analytical and logical thinking.

Course Objectives(COs)

CO1. To be able to conduct business research with an understanding of all the latest theories.

CO2. To develop the ability to explore research techniques used for solving any real world or innovate problem.

Units	Details	Lecture Hrs (4 Credits)
	Module I	
I	a) **Introduction:** Role of Business Research, Information Systems and Knowledge Management, Theory Building, Organization ethics and Issues b) **Beginning Stages of Research Process:** Problem definition, Qualitative research tools, Secondary data research	**15 [OC1-OC2]**
II	a) **Research Methods and Data Collection:** Survey research, communicating with respondents, Observation methods, Experimental research	**15 [OC3-OC4]**
	Module II	
III	a) **Measurement Concepts, Sampling and Field work:** Levels of Scale measurement, attitude measurement, questionnaire design, sampling designs and procedures, determination of sample size	**15 [OC5-OC6]**
IV	a) **Data Analysis and Presentation:** Editing and Coding, Basic Data Analysis, Univariate Statistical Analysis and Bivariate Statistical analysis and differences between two variables. Multivariate Statistical Analysis.	**15 [OC7-OC8]**

Books and References:

Sr. No.	Title	Author/s	Publisher	Edition	Year
1.	Business Research Methods	William G.Zikmund, B.J Babin, J.C. Carr, Atanu Adhikari, M.Griffin	Cengage	8e	2016
2.	Business Analytics	Albright Winston	Cengage	5e	2015

3.	Research Methods for Business Students Fifth Edition	Mark Saunders			2011
4.	Multivariate Data Analysis	Hair	Pearson	7e	2014

Course Outcomes(OCs)

A learner will be able to:

OC 1: solve real world problems with scientific approach.
OC 2: develop analytical skills by applying scientific methods.
OC 3: recognize, understand and apply the language, theory and models of the field of business analytics
OC 4: foster an ability to critically analyze, synthesize and solve complex unstructured business problems
OC 5: understand and critically apply the concepts and methods of business analytics
OC 6: identify, model and solve decision problems in different settings
OC 7: interpret results/solutions and identify appropriate courses of action for a given managerial situation whether a problem or an opportunity
OC 8: create viable solutions to decision making problems

M.Sc(Information Technology)

SEMESTER II

Course Code:MITMJ201 **Total Credits:** 04 (60 Lecture Hrs) **External assessment:** 50 marks	**Course Name:** Big Data Analytics **Total Marks:** 100 marks **College/Department assessment:** 50 marks

Prerequistes:
Fundamental knowledge of Databases

Course Objectives:

- To provide an overview of an exciting growing field of big data analytics.
- To introduce the tools required to manage and analyze big data like Hadoop, NoSql MapReduce.
- To teach the fundamental techniques and principles in achieving big data analytics with scalability and streaming capability.
- To enable students to have skills that will help them to solve complex real-world problems in for decision support.

Units	Details	Lecture Hrs 4 credits
	Module I	
I	Introduction to Big Data, Characteristics of Data, and Big Data Evolution of Big Data, Definition of Big Data, Challenges with big data, Why Big data? Data Warehouse environment, Traditional Business Intelligence versus Big Data. State of Practice in Analytics, Key roles for New Big Data Ecosystems, Examples of big Data Analytics. Big Data Analytics, Introduction to big data analytics, Classification of Analytics, Challenges of Big Data, Importance of Big Data, Big Data Technologies, Data Science, Responsibilities, Soft state eventual consistency. Data Analytics Life Cycle	**12 [OC1-OC2]**
II	Analytical Theory and Methods: Clustering and Associated Algorithms, Association Rules, Apriori Algorithm, Candidate Rules, Applications of Association Rules, Validation and Testing, Diagnostics, Regression, Linear Regression, Logistic Regression, Additional Regression Models. Analytical Theory and Methods: Classification, Decision Trees, Naïve Bayes, Diagnostics of Classifiers, Additional Classification Methods, Time Series Analysis, Box Jenkins methodology, ARIMA Model, Additional methods. Text Analysis, Steps, Text Analysis Example, Collecting Raw Text, Representing Text, Term Frequency-Inverse Document Frequency (TFIDF), Categorizing Documents by Topics, Determining Sentiments	**12 [OC3-OC4]**
	Module II	
III	Data Product, Building Data Products at Scale with Hadoop, Data Science Pipeline and Hadoop Ecosystem, Operating System for Big Data, Concepts, Hadoop Architecture, Working	**12[OC5-OC6]**

	with Distributed file system, Working with Distributed Computation, Framework for Python and Hadoop Streaming, Hadoop Streaming, MapReduce with Python, Advanced MapReduce. In-Memory Computing with Spark, Spark Basics, Interactive Spark with PySpark, Writing Spark Applications,	
IV	**Unit 4** Distributed Analysis and Patterns, Computing with Keys, Design Patterns, Last-Mile Analytics, Data Mining and Warehousing, Structured Data Queries with Hive, HBase, Data Ingestion, Importing Relational data with Sqoop, Injesting stream data with flume. Analytics with higher level APIs, Pig, Spark's higher level APIs.	**12** **OC7**

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Books and References:					
Sr. No.	**Title**	**Author/s**	**Publisher**	**Edition**	**Year**
1.	Big Data and Analytics	Subhashini Chellappan Seema Acharya	Wiley	First	
2.	Data Analytics with Hadoop *An Introduction for Data Scientists*	*Benjamin Bengfort and Jenny Kim*	O'Reilly		2016
3.	Big Data and Hadoop	V.K Jain	Khanna Publishing	First	2018

Course Outcomes(OCs)

Upon completion of this course the Students will be able to:

OC1 Understand Big Data Concepts

OC2 Do Data Collection and Integration

OC3 Develop Data Storage and Management

OC4 Perform Data Preprocessing and Cleaning

OC5 Understand Data Transformation and Feature Engineering

OC6 Perform Exploratory Data Analysis (EDA)

OC7 Use Big Data Analytics Tools

Course Code: MITMJP201 **Total Credits:** 02 (60 Lecture Hrs) **External assessment:** 25 marks	**Course Name:** Big Data Analytics Practical **Total Marks:** 50 marks **College/Department assessment:** 25 marks

Prerequisites: Conceptual understanding of Big Data and DBMS

Course Objectives:

To teach the students the implementation of Big data analytic as per the concepts learnt

Units	Sr. No	Details	Lecture Hrs 2 credits
I	**1**	Install, configure and run Hadoop and HDFS ad explore HDFS.	30 Hrs [OC1-OC2]
	2	Implement word count / frequency programs using MapReduce	
	3	Implement an MapReduce program that processes a weather dataset.	
	4	Implement an application that stores big data in Hbase / MongoDB and manipulate it using R / Python	
	5	Implement the program in practical 4 using Pig.	
	6	Configure the Hive and implement the application in Hive.	
	7	Write a program to illustrate the working of Jaql.	
	8	Implement the following:	
	9	Implement Decision tree classification techniques	
II	**10**	Implement SVM classification techniques	30 Hrs [OC3-OC54
	11	Solve the following:	
	12	REGRESSION MODEL Import a data from web storage. Name the dataset and now do Logistic Regression to find out relation between variables that are affecting the admission of a student in an institute based on his or her GRE score, GPA obtained and rank of the student. Also check the model is fit or not. require (foreign), require(MASS).	
	13	MULTIPLE REGRESSION MODEL Apply multiple regressions, if data have a continuous independent variable. Apply on above dataset.	
	14	Solve the Following:	
	15	CLASSIFICATION MODEL a. Install relevant package for classification. b. Choose classifier for classification problem. c. Evaluate the performance of classifier.	
	16	CLUSTERING MODEL a. Clustering algorithms for unsupervised classification. b. Plot the cluster data using R visualizations.	

OC 1: Understand the key issues in big data management and its associated applications in intelligent business and scientific computing.

OC 2: Acquire fundamental enabling techniques and scalable algorithms like Hadoop, Map Reduce and NO SQL in big data analytics.

OC 3: Interpret business models and scientific computing paradigms, and apply software tools for big data analytics.

OC 4: Achieve adequate perspectives of big data analytics in various applications like recommender systems, social media applications etc.

Course Code: MITMJ202 **Total Credits:** 02 (60 Lecture Hrs) **External assessment:** 50 marks	**Course Name:** Modern Networking **Total Marks:** 100 marks **College/Department assessment:** 50 marks

Pre requisites	Fundamentals of Networking

Course Objectives(COs)

CO1. To understand the state-of-the-art in network protocols, architectures and applications.
CO2. Analyze existing network protocols and networks.
CO3. Develop new protocols in networking
CO4. To understand how networking research is done
CO5. To investigate novel ideas in the area of Networking via term-long research projects.

Unit	Details	Lecture Hrs
	Module I	**2 credits**
I	Modern Networking Elements of Modern Networking The Networking Ecosystem ,Example Network Architectures,Global Network Architecture,A Typical Network Hierarchy Ethernet Applications of Ethernet Standards Ethernet Data Rates Wi-Fi Applications of Wi-Fi,Standards Wi-Fi Data Rates 4G/5G Cellular First Generation Second Generation, Third Generation Fourth Generation Fifth Generation, Cloud Computing Cloud Computing Concepts The Benefits of Cloud Computing Cloud Networking Cloud Storage, Internet of Things Things on the Internet of Things, Evolution Layers of the Internet of Things, Network Convergence Unified Communications, Requirements and Technology Types of Network and Internet Traffic,Elastic Traffic,Inelastic Traffic, Real-Time Traffic Characteristics Demand: Big Data, Cloud Computing, and Mobile TrafficBig Data Cloud Computing,,Mobile Traffic, Requirements: QoS and QoE,,Quality of Service,Quality of Experience, Routing Characteristics, Packet Forwarding, Congestion Control ,Effects of Congestion,Congestion Control Techniques, SDN and NFV Software-Defined Networking,Network Functions Virtualization Modern Networking Elements	**30 Hrs**
	Software-Defined Networks SDN: Background and Motivation, Evolving Network Requirements	

	Demand Is Increasing,Supply Is IncreasingTraffic Patterns Are More ComplexTraditional Network Architectures are Inadequate, The SDN Approach Requirements SDN Architecture Characteristics of Software-Defined Networking, SDN- and NFV-Related Standards Standards-Developing Organizations Industry Consortia Open Development Initiatives, SDN Data Plane and OpenFlow SDN Data Plane, Data Plane Functions Data Plane Protocols OpenFlow Logical Network Device Flow Table Structure Flow Table Pipeline, The Use of Multiple Tables Group Table OpenFlow Protocol, SDN Control Plane SDN Control Plane Architecture Control Plane Functions, Southbound Interface Northbound InterfaceRouting, ITU-T Model, OpenDaylight OpenDaylight Architecture OpenDaylight Helium, REST REST Constraints Example REST API, Cooperation and Coordination Among Controllers, Centralized Versus Distributed Controllers, High-Availability Clusters Federated SDN Networks, Border Gateway Protocol Routing and QoS Between Domains, Using BGP for QoS Management IETF SDNi OpenDaylight SNDi SDN Application Plane SDN Application Plane Architecture Northbound Interface Network Services Abstraction Layer Network Applications, User Interface, Network Services Abstraction Layer Abstractions in SDN, Frenetic Traffic Engineering PolicyCop Measurement and Monitoring Security OpenDaylight DDoS Application Data Center Networking, Big Data over SDN Cloud Networking over SDN Mobility and Wireless Information-Centric Networking CCNx, Use of an Abstraction Layer	
II	Virtualization, Network Functions Virtualization: Concepts and Architecture, Background and Motivation for NFV, Virtual Machines The Virtual Machine Monitor, Architectural Approaches Container Virtualization, NFV Concepts Simple Example of the Use of NFV, NFV Principles High-Level NFV Framework, NFV Benefits and Requirements NFV Benefits, NFV Requirements, NFV Reference Architecture NFV Management and Orchestration, Reference Points Implementation, NFV Functionality, NFV Infrastructure,Container Interface,Deployment of NFVI Containers,Logical Structure of NFVI Domains,Compute Domain, Hypervisor Domain,Infrastructure Network Domain, Virtualized Network Functions, VNF Interfaces,VNFC to VNFC Communication,VNF Scaling, NFV Management and Orchestration, Virtualized Infrastructure Manager,Virtual Network Function	**30 Hrs**

	Manager,NFV Orchestrator, Repositories, Element Management, OSS/BSS, NFV Use Cases Architectural Use Cases, Service-Oriented Use Cases, SDN and NFV Network Virtualization, Virtual LANs ,The Use of Virtual LANs,Defining VLANs, Communicating VLAN Membership,IEEE 802.1Q VLAN Standard, Nested VLANs, OpenFlow VLAN Support, Virtual Private Networks, IPsec VPNs,MPLS VPNs, Network Virtualization, Simplified Example, Network Virtualization Architecture, Benefits of Network Virtualization, OpenDaylight's Virtual Tenant Network, Software-Defined Infrastructure,Software-Defined Storage, SDI Architecture	
	Defining and Supporting User Needs, Quality of Service, Background, QoS Architectural Framework, Data Plane, Control Plane, Management Plane, Integrated Services Architecture, ISA Approach ISA Components, ISA Services, Queuing Discipline, Differentiated Services, Services, DiffServ Field, DiffServ Configuration and Operation, Per-Hop Behavior, Default Forwarding PHB, Service Level Agreements, IP Performance Metrics, OpenFlow QoS Support, Queue Structures, Meters, QoE: User Quality of Experience, Why QoE?,Online Video Content Delivery, Service Failures Due to Inadequate QoE Considerations QoE-Related Standardization Projects, Definition of Quality of Experience, Definition of Quality, Definition of Experience Quality Formation Process, Definition of Quality of Experience, QoE Strategies in Practice, The QoE/QoS Layered Model Summarizing and Merging the ,QoE/QoS Layers, Factors Influencing QoE, Measurements of QoE, Subjective Assessment, Objective Assessment, End-User Device Analytics, Summarizing the QoE Measurement Methods, Applications of QoE Network Design Implications of QoS and QoE Classification of QoE/ QoS Mapping Models, Black-Box Media-Based QoS/QoE Mapping Models, Glass-Box Parameter-Based QoS/QoE Mapping Models,Gray-Box QoS/QoE Mapping Models, Tips for QoS/QoE Mapping Model Selection,IP-Oriented Parameter-Based QoS/QoE Mapping Models,Network Layer QoE/QoS Mapping Models for Video Services, Application Layer QoE/QoS Mapping Models for Video Services Actionable QoE over IP-Based Networks, The System-Oriented Actionable QoE Solution, The Service-Oriented Actionable QoE Solution, QoE Versus QoS Service Monitoring, QoS Monitoring Solutions, QoE Monitoring Solutions, QoE-Based Network and Service Management, QoE-Based Management of VoIP Calls, QoE-	**15**

	Based Host-Centric Vertical Handover, QoE-Based Network-Centric Vertical Handover	

Books and References:					
Sr. No.	**Title**	**Author/s**	**Publisher**	**Edition**	**Year**
1.	Foundations of Modern Networking: SDN, NFV, QoE, IoT, and Cloud	William Stallings	Addison-Wesley Professional		October 2015
2.	SDN and NFV Simplified A Visual Guide to Understanding Software Defined Networks and Network Function Virtualization	**Jim Doherty**	Pearson Education, Inc		
3.	Network Functions Virtualization (NFV) with a Touch of SDN	Rajendra Chayapathi Syed Farrukh Hassan	Addison-Wesley		
4.	CCIE and CCDE Evolving Technologies Study Guide	Brad dgeworth, Jason Gooley, Ramiro Garza Rios	Pearson Education, Inc		2019

Course Outcomes(OCs)

OC1 Understand the modern networking concepts and implement

Course Code: MITMJP202 **Total Credits:** 02 (60 Lecture Hrs) **External assessment:** 25 marks	**Course Name:** Modern Networking Practical **Total Marks:** 50 marks **College/Department assessment:** 25 marks

Prerequisite: Concepts of Modern Networking

Course Objectives: To gain practical knowledge in Modern networking
All practical are expected to be performed on GNS3/EVE-Ng network Emulator/MININET

Units	Sr. No	Details	Lecture Hrs 2 credits
I	**1**	Configure IP SLA Tracking and Path Control Topology	30 hrs [OC1-OC2]
	2	Using the AS_PATH Attribute	
	3	Configuring IBGP and EBGP Sessions, Local Preference, and MED	
	4	Secure the Management Plane	
	5	Configure and Verify Path Control Using PBR	
II	**6**	IP Service Level Agreements and Remote SPAN in a Campus Environment	30 Hrs [OC2-OC3]
	7	Inter-VLAN Routing	
	8	Simulating MPLS environment and Simulating VRF	
	9	Simulating SDN with • OpenDaylight SDN Controller with the Mininet Network Emulator • OFNet SDN network emulator	
	10	Simulating OpenFlow Using MININET	

OC 1: Demonstrate in-depth knowledge in the area of Computer Networking.

OC 2: To demonstrate scholarship of knowledge through performing in a group to identify, formulate and solve a problem related to Computer Networks

OC 3: Prepare a technical document for the identified Networking System Conducting experiments to analyze the identified research work in building Computer Networks

Course Code: MITMN203 **Total Credits:** 02 (30 Lecture Hrs) **External assessment:** 25 marks	**Course Name:** Microservices Architecture **Total Marks:** 50 marks **College/Department assessment:** 25 marks

Prerequisites: Networking, cloud concepts

Course Objectives(COs)

CO1. Gain a thorough understanding of the philosophy and architecture of Web applications using ASP.NET Core MVC;
CO2. Gain a practical understanding of.NET Core;
CO3. Acquire a working knowledge of Web application development using ASP.NET Core MVC 6 and Visual Studio
CO4. Persist data with XML Serialization and ADO.NET with SQL Server
CO5. Create HTTP services using ASP.NET Core Web API;
CO6. Deploy ASP.NET Core MVC applications to the Windows Azure cloud.

Units	Details	Lectures
I	**Microservices:** Understanding Microservices, Adopting Microservices, The Microservices Way. **Microservices Value Proposition:** Deriving Business Value, defining a Goal-Oriented, Layered Approach, Applying the Goal-Oriented, Layered Approach. **Designing Microservice Systems:** The Systems Approach to Microservices, A Microservices Design Process, Establishing a Foundation**:** Goals and Principles, Platforms, Culture.	**15 [OC1]**
II	**Unit 2** **Service Design:** Microservice Boundaries, API design for Microservices, Data and Microservices, Distributed Transactions and Sagas, Asynchronous Message-Passing and Microservices, dealing with Dependencies, **System Design and Operations:** Independent Deployability, More Servers, Docker and Microservices, Role of Service Discovery, Need for an API Gateway, Monitoring and Alerting. **Adopting Microservices in Practice:** Solution Architecture Guidance, Organizational Guidance, Culture Guidance, Tools and Process Guidance, Services Guidance.	**15 [OC2]**

Books and References:					
Sr. No.	**Title**	**Author/s**	**Publisher**	**Edition**	**Year**
1.	Microservice Architecture: *Aligning Principles, Practices, and Culture*	Irakli Nadareishvili, Ronnie Mitra, Matt McLarty, and Mike Amundsen	O'Reilly	First	2016
2.	Building Microservices with ASP.NET Core	Kevin Hoffman	O'Reilly	First	2017
3.	Building Microservices: Designing Fine-Grained Systems	Sam Newman	O'Reilly	First	
4.	Production-ready Microservices	Susan J. Fowler	O'Reilly		2016

Course Outcomes:

OC 1: Develop web applications using Model View Controller.

OC 2: Think and apply the microservices way to software development.

Course Code: MITELP204 **Total Credits:** 04 **External assessment:** 50 marks	**Course Name:** Malware Analysis Practical **Total Marks:** 100 marks **College/Department assessment:** 50 marks

Prerequisites:

Basic security concepts

Course Objectives(COs)

CO1. Possess the skills necessary to carry out independent analysis of modern malware samples using both static and dynamic analysis techniques.
CO2. Have an intimate understanding of executable formats, Windows internals and API, and analysis techniques.
CO3. Extract investigative leads from host and network-based indicators associated with a malicious program.
CO4. Apply techniques and concepts to unpack, extract, decrypt, or bypass new anti-analysis techniques in future malware samples.
CO5. Achieve proficiency with industry standard tools including IDA Pro, OllyDbg, WinDBG, PE Explorer, ProcMon etc.

Course Outcomes:

After completion of the course, a student should be able to:

OC 1: Understand various introductory techniques of malware analysis and creating the testing environment

OC 2: Perform advanced dynamic analysis and recognize constructs in assembly code.

OC 3: Perform Reverse Engineering using OLLYDBG and WINDBG and study the behaviours and functions of malware

OC 4: Understand data encoding, various techniques for anti-disassembly and anti-debugging

OC 5: Understand various anti virtual machine techniques and perform shellcode analysis of various languages along with x64 architecture.

List of Practical as per Annexure I for a total duration of 120 hrs with course outcomes of able to completely perform identification, detection and performing removal and protections process of malware analysis

Course Code: MITELP205 **Total Credits:** 04 (120 Lecture Hrs) **External assessment:** 50 marks	**Course Name:** Cloud Management Practical **Total Marks:** 100 marks **College/Department assessment:** 50 marks

Prerequistes: Basic cloud knowledge
Course Objectives:

- Understand System Center 2019 and its different components.
  Each unit of 30 hrs duration

List of Practical:	
Unit I	a. Create and Manage Cloud using SCVMM 2019
	b. Deploy a guarded host fabric using Microsoft SCVMM 2019
	a. Deploy and manage SDN Infra structure using SCVMM 2019
	b. Deploy and Manage Storage Space Direct (S2D) using SCVMM 2019
	a. Deploy Service Manager 2019 and install on 4 Computer Scenario
	b. Setup SQL Server reporting Service using Service Manager 2019
	a. User Connectors to import data: i. Import data from Active Directory Domain Services ii. Import data and alerts from Operations Manager iii. Import data from Configuration Manager iv. Import runbooks from Orchestrator v. Import data from VMM vi. Use a CSV file to import data
II	b. Automate IT processes with workflows vii. Add or remove workflow activities viii. Configure the way activities manage and pass information ix. Deploy a workflow to Service Manager using the Authoring Tool x. Configure the Activities Toolbox in the Authoring Tool
III	a. Managing devices with Configuration Manager
	b. Design a hierarchy of sites using Microsoft End Point Configuration manager.
	a. Data transfers between sites i. Types of data transfer ii. File-based replication iii. Database replication
	b. Configure sites and hierarchies i. Add site system roles ii. Install site system roles iii. Install cloud-based distribution points iv. Configuration options for site system roles v. Database replicas for management points
	a. Install Orchestrator.
	b. Create and test a monitor runbook
	a. Manage Orchestrator Servers – 1 i. Runbook permissions

	ii. Back up Orchestrator iii. Bench mark iv. Optimize performance of .Net activities v. Configure runbook throttling vi. Recover a database
IV	b. Manage Orchestrator Servers – 2 i. Recover web components ii. Add an integration pack iii. View Orchestrator data with PowerPivot iv. Change Orchestrator user groups v. Common activity properties vi. Computer groups
	Install and Deploy DPM i. Install DPM ii. Deploy the DPM protection agent iii. Deploy protection groups iv. Configure firewall settings
	Protect Workloads i. Back up Hyper-V virtual machines ii. Back up SQL Server with DPM iii. Back up file data with DPM iv. Backup system state and bare metal v. Backup and restore VMware servers vi. Backup and restore VMM servers

Course Outcomes:
After completion of the course, a student should be able to:

OC 1: Understand the concepts of VMM, SDN, NAS , HyperV etc.
OC 2: Understand and use of Service manager with various deployments that can be performed using it.
OC 3: Understand and use SCCM and Demonstrate the use of Configuration Manager
OC 4: Use automation with runbooks and demonstrate the use of Windows Orchestrator
OC 5: Use Data Protection Manager

Course Code: MITELP206 **Total Credits:** 04 (120 Lecture Hrs) **External assessment:** 50 marks	**Course Name:** Computer Vision Practical **Total Marks:** 100 marks **College/Department assessment:** 50 marks

Prerequisites: Knowledge of Digital Image Processing

Course Objectives:

CO1. To develop the student's understanding of the issues involved in trying to define and simulate perception.

CO2. To familiarize the student with specific, well known computer vision methods, algorithms and results.

Each Unit of 30 hrs duration

Units	Details
I	Perform Geometric transformations
	Perform Image Stitching
	Perform Camera Calibration
II	Perform the following: a. Face detection b. Object detection c. Pedestrian detection d. Face recognition
	Construct 3D model from images
	Implement object detection and tracking from video
III	Perform Feature extraction using RANSAC
	Perform Colorization
IV	Perform Text detection and recognition
	Perform Image matting and Composting

Books and References:

Sr. No.	Title	Author/s	Publisher	Edition	Year
1.	Computer Vision: Algorithms and Applications	Richard Szeliski	Springer	1st Edition	2010

Course Outcomes:

After completion of the course, a student should be able to:
OC 1: Understand the basics of computer vision
OC 2: Understand and analyse various structure form motion and various estimates of Dense Motion
OC 3: Apply various motion models to images and understand computation photography techniques
OC 4: Apply Epipolar geometry , Rectification and various other 3D correspondence and Stereo reconstruction techniques
OC 5: Understand image-based rendering and reconstruction.

(to be implemented in a cloud environment.)

Malware Analysis Practical List Annexure I

List of Practical:	
1.	a. Files: *Lab01-01.exe* and *Lab01-01.dll*.
	i. Upload the files to *http://www.VirusTotal.com/* and view the reports. Does either file match any existing antivirus signatures?
	ii. When were these files compiled?
	iii. Are there any indications that either of these files is packed or obfuscated? If so, what are these indicators?
	iv. Do any imports hint at what this malware does? If so, which imports are they?
	v. Are there any other files or host-based indicators that you could look for on infected systems?
	vi. What network-based indicators could be used to find this malware on infected machines?
	vii. What would you guess is the purpose of these files?
	b. Analyze the file *Lab01-02.exe*.
	i. Upload the *Lab01-02.exe* file to *http://www.VirusTotal.com/*. Does it match any existing antivirus definitions?
	ii. Are there any indications that this file is packed or obfuscated? If so, what are these indicators? If the file is packed, unpack it if possible.
	iii. Do any imports hint at this program's functionality? If so, which imports are they and what do they tell you?
	iv. What host- or network-based indicators could be used to identify this malware on infected machines?
	c. Analyze the file Lab01-03.exe.
	i. Upload the *Lab01-03.exe* file to *http://www.VirusTotal.com/*. Does it match any existing antivirus definitions?
	ii. Are there any indications that this file is packed or obfuscated? If so, what are these indicators? If the file is packed, unpack it if possible.
	iii. Do any imports hint at this program's functionality? If so, which imports are they and what do they tell you?
	iv. What host- or network-based indicators could be used to identify this malware on infected machines?
	d. Analyze the file Lab01-04.exe.
	i. Upload the *Lab01-04.exe* file to *http://www.VirusTotal.com/*. Does it match any existing antivirus definitions?
	ii. Are there any indications that this file is packed or obfuscated? If so, what are these indicators? If the file is packed, unpack it if possible.
	iii. When was this program compiled?

	iv. Do any imports hint at this program's functionality? If so, which imports are they and what do they tell you?
	v. What host- or network-based indicators could be used to identify this malware on infected machines?
	vi. This file has one resource in the resource section. Use Resource Hacker to examine that resource, and then use it to extract the resource. What can you learn from the resource?

	e. Analyze the malware found in the file Lab03-01.exe using basic dynamic analysis tools.
	i. What are this malware's imports and strings?
	ii. What are the malware's host-based indicators?
	iii. Are there any useful network-based signatures for this malware? If so, what are they?
	f. Analyze the malware found in the file Lab03-02.dll using basic dynamic analysis tools.
	i. How can you get this malware to install itself?
	ii. How would you get this malware to run after installation?
	iii. How can you find the process under which this malware is running?
	iv. Which filters could you set in order to use procmon to glean information?
	v. What are the malware's host-based indicators?
	vi. Are there any useful network-based signatures for this malware?
	g. Execute the malware found in the file Lab03-03.exe while monitoring it using basic dynamic analysis tools in a safe environment
	i. What do you notice when monitoring this malware with Process Explorer?
	ii. Can you identify any live memory modifications?
	iii. What are the malware's host-based indicators?
	iv. What is the purpose of this program?
	h. Analyze the malware found in the file Lab03-04.exe using basic dynamic analysis tools.
	i. What happens when you run this file?
	ii. What is causing the roadblock in dynamic analysis?
	iii. Are there other ways to run this program?
2.	a. Analyze the malware found in the file Lab05-01.dll using only IDA Pro. The goal of this lab is to give you hands-on experience with IDA Pro. If you've already worked with IDA Pro, you may choose to ignore these questions and focus on reverse-engineering the malware.
	i. What is the address of DllMain?
	ii. Use the Imports window to browse to gethostbyname. Where is the import located?
	iii. How many functions call gethostbyname?
	iv. Focusing on the call to gethostbynamelocated at 0x10001757, can you fig- ure out which DNS request will be made?
	v. How many local variables has IDA Pro recognized for the subroutine at 0x10001656?
	vi. How many parameters has IDA Pro recognized for the subroutine at 0x10001656?
	vii. Use the Strings window to locate the string \cmd.exe /c in the disassembly. Where is it located?
	viii. What is happening in the area of code that references \cmd.exe/c?
	ix. In the same area, at 0x100101C8, it looks like dword_1008E5C4 is a global variable that helps decide which path to take. How does the malware set dword_1008E5C4? (Hint: Use dword_1008E5C4's cross-references.)
	x. A few hundred lines into the subroutine at 0x1000FF58, a series of com- parisons use memcmp to compare strings. What happens if the string compar- ison to robotwork is successful (when memcmpreturns 0)?
	xi. What does the export PSLISTdo?
	xii. Use the graph mode to graph the cross-references from sub_10004E79. Which API functions could be called by entering this function? Based on the API functions alone, what could you rename this function?
	xiii. How many Windows API functions does DllMaincall directly? How many at a depth of 2?
	xiv. At 0x10001358, there is a call to Sleep (an API function that takes one parameter containing the number of milliseconds to sleep). Looking backward through the code, how long will the program sleep if this code executes?
	xv. At 0x10001701 is a call to socket. What are the three parameters?
	xvi. Using the MSDN page for socketand the named symbolic constants func- tionality in IDA Pro, can you make the parameters more meaningful? What are the parameters after you applychanges?
	xvii. Search for usage of the in instruction (opcode 0xED). This instruction is used with a magic string VMXh to perform VMware detection. Is that in use in this malware? Using the cross-

		references to the function that executes the in instruction, is there further evidence of VMware detection?
	xviii.	Jump your cursor to 0x1001D988. What do you find?
	xix.	If you have the IDA Python plug-in installed (included with the com- mercial version of IDA Pro), run *Lab05-01.py*, an IDA Pro Python script provided with the malware for this book. (Make sure the cursor is at 0x1001D988.) What happens after you run the script?
	xx.	With the cursor in the same location, how do you turn this data into a single ASCII string?
	xxi.	Open the script with a text editor. How does it work?
	b.	analyze the malware found in the file Lab06-01.exe.
	i.	What is the major code construct found in the only subroutine called by main?
	ii.	What is the subroutine located at 0x40105F?
	iii.	What is the purpose of this program?
	c.	Analyze the malware found in the file Lab06-02.exe.
	i.	What operation does the first subroutine called by mainperform?
	ii.	What is the subroutine located at 0x40117F?
	iii.	What does the second subroutine called by maindo?
	iv.	What type of code construct is used in this subroutine?
	v.	Are there any network-based indicators for thisprogram?
	vi.	What is the purpose of this malware?
	d.	analyze the malware found in the file Lab06-03.exe.
	i.	Compare the calls in mainto Lab 6-2's mainmethod. What is the new function called from main?
	ii.	What parameters does this new function take?
	iii.	What major code construct does this function contain?
	iv.	What can this function do?
	v.	Are there any host-based indicators for this malware?
	vi.	What is the purpose of this malware?
	e.	analyze the malware found in the file Lab06-04.exe.
	i.	What is the difference between the calls made from the main method in Labs 6-3 and 6-4?
	ii.	What new code construct has been added to main?
	iii.	What is the difference between this lab's parse HTML function and those of the previous labs?
	iv.	How long will this program run? (Assume that it is connected to the Internet.)
	v.	Are there any new network-based indicators for this malware?
	vi.	What is the purpose of this malware?
3.	a.	Analyze the malware found in the file Lab07-01.exe.
	i.	How does this program ensure that it continues running (achieves per- sistence) when the computer is restarted?
	ii.	Why does this program use a mutex?
	iii.	What is a good host-based signature to use for detecting this program?
	iv.	What is a good network-based signature for detecting this malware?
	v.	What is the purpose of this program?
	vi.	When will this program finish executing?
	b.	Analyze the malware found in the file Lab07-02.exe.
	i.	How does this program achieve persistence?
	ii.	What is the purpose of this program?
	iii.	When will this program finish executing?
	c.	For this lab, we obtained the malicious executable, Lab07-03.exe, and DLL, Lab07-03.dll, prior to executing. This is important to note because the mal- ware might change once it runs. Both files were found in the same directory on the victim machine. If you run the program, you should ensure that both files are in the same directory on the analysis machine. A visible IP string beginning with 127 (a loopback address) connects to the local machine. (In the real version of this malware, this address connects to a remote machine, but we've set it to connect to localhost to protect you.)
	i.	How does this program achieve persistence to ensure that it continues running when the computer is restarted?

	ii. What are two good host-based signatures for this malware?
	iii. What is the purpose of this program?
	iv. How could you remove this malware once it is installed?
	d. Analyze the malware found in the file Lab09-01.exe using OllyDbg and IDA Pro to answer the following questions. This malware was initially analyzed in the Chapter 3 labs using basic static and dynamic analysis techniques.
	i. How can you get this malware to install itself?
	ii. What are the command-line options for this program? What is the pass- word requirement?
	iii. How can you use OllyDbg to permanently patch this malware, so that it doesn't require the special command-line password?
	iv. What are the host-based indicators of thismalware?
	v. What are the different actions this malware can be instructed to take via the network?
	vi. Are there any useful network-based signatures for this malware?
	e. Analyze the malware found in the file Lab09-02.exe using OllyDbg to answer the following questions.
	i. What strings do you see statically in the binary?
	ii. What happens when you run this binary?
	iii. How can you get this sample to run its malicious payload?
	iv. What is happening at 0x00401133?
	v. What arguments are being passed to subroutine 0x00401089?
	vi. What domain name does this malware use?
	vii. What encoding routine is being used to obfuscate the domain name?
	viii. What is the significance of the CreateProcessAcall at 0x0040106E?
	f. Analyze the malware found in the file Lab09-03.exe using OllyDbg and IDA Pro. This malware loads three included DLLs (DLL1.dll, DLL2.dll, and DLL3.dll) that are all built to request the same memory load location. Therefore, when viewing these DLLs in OllyDbg versus IDA Pro, code may appear at different memory locations. The purpose of this lab is to make you comfortable with finding the correct location of code within IDA Pro when you are looking at code in OllyDbg
	i. What DLLs are imported by *Lab09-03.exe*?
	ii. What is the base address requested by *DLL1.dll*, *DLL2.dll*, and *DLL3.dll*?
	iii. When you use OllyDbg to debug *Lab09-03.exe*, what is the assigned based address for: *DLL1.dll*, *DLL2.dll*, and *DLL3.dll*?
	iv. When *Lab09-03.exe* callsan importfunctionfrom *DLL1.dll*, whatdoes this import function do?
	v. When *Lab09-03.exe* calls WriteFile, what is the filename it writes to?
	vi. When *Lab09-03.exe* creates a job using NetScheduleJobAdd, where does it get the data for the second parameter?
	vii. While running or debugging the program, you will see that it prints out three pieces of mystery data. What are the following: DLL 1 mystery data 1, DLL 2 mystery data 2, and DLL 3 mystery data 3?
	viii. How can you load *DLL2.dll* into IDA Pro so that it matches the load address used by OllyDbg?
4.	a. This lab includes both a driver and an executable. You can run the executable from anywhere, but in order for the program to work properly, the driver must be placed in the C:\Windows\ System32 directory where it was origi- nally found on the victim computer. The executable is Lab10-01.exe, and the driver is Lab10-01.sys.
	i. Does this program make any direct changes to the registry? (Use procmon to check.)
	ii. The user-space program calls the ControlService function. Can you set a breakpoint with WinDbg to see what is executed in the kernel as a result of the call to ControlService?
	iii. What does this program do?
	b. The file for this lab is Lab10-02.exe.
	i. Does this program create any files? If so, what are they?
	ii. Does this program have a kernel component?
	iii. What does this program do?

	c. This lab includes a driver and an executable. You can run the executable from anywhere, but in order for the program to work properly, the driver must be placed in the C:\Windows\System32 directory where it was originally found on the victim computer. The executable is Lab10-03.exe, and the driver is Lab10-03.sys.
	i. What does this program do?
	ii. Once this program is running, how do you stop it?
	iii. What does the kernel component do?
5.	a. Analyze the malware found in Lab11-01.exe
	i. What does the malware drop to disk?
	ii. How does the malware achieve persistence?
	iii. How does the malware steal user credentials?
	iv. What does the malware do with stolen credentials?
	v. How can you use this malware to get user credentials from your test environment?
	b. Analyze the malware found in *Lab11-02.dll*. Assume that a suspicious file named *Lab11-02.ini* was also found with this malware.
	i. What are the exports for this DLLmalware?
	ii. What happens after you attempt to install this malware using
	iii. *rundll32.exe*?
	iv. Where must *Lab11-02.ini* reside in order for the malware to install properly?
	v. How is this malware installed for persistence?
	vi. What user-space rootkit technique does this malware employ?
	vii. What does the hooking code do?
	viii. Which process(es) does this malware attack and why?
	ix. What is the significance of the *.ini* file?
	c. Analyze themalware found in *Lab11-03.exe* and *Lab11-03.dll*. Makesurethat both files are in the same directory duringanalysis
	i. What interesting analysis leads can you discover using basic static analysis?
	ii. What happens when you run this malware?
	iii. How does *Lab11-03.exe* persistently install *Lab11-03.dll*?
	iv. Which Windows system file does the malware infect?
	v. What does *Lab11-03.dll* do?
	vi. Where does the malware store the data it collects?
6.	a. Analyze the malware found in the file *Lab12-01.exe* and *Lab12-01.dll*. Make sure that these files are in the same directory when performing the analysis.
	i. What happens when you run the malware executable?
	ii. What process is being injected?
	iii. How can you make the malware stop the pop-ups?
	iv. How does this malware operate?
	b. Analyze the malware found in the file *Lab12-02.exe.*
	i. What is the purpose of this program?
	ii. How does the launcher program hide execution?
	iii. Where is the malicious payload stored?
	iv. How is the malicious payload protected?
	v. How are strings protected?
	c. Analyze the malware extracted during the analysis of Lab 12-2, or use the file *Lab12-03.exe*.
	i. What is the purpose of this malicious payload?
	ii. How does the malicious payload inject itself?
	iii. What filesystem residue does this program create?
	d. Analyze the malware found in the file *Lab12-04.exe.*
	i. What does the code at 0x401000 accomplish?
	ii. Which process has code injected?
	iii. What DLL is loaded using LoadLibraryA?
	iv. What is the fourth argument passed to the CreateRemoteThread call?
	v. What malware is dropped by the main executable?
7.	a. Analyze the malware found in the file *Lab13-01.exe.*

	i. Compare the strings in the malware (from the output of the stringscommand) with the information available via dynamic analysis. Based on this comparison, which elements might be encoded?
	ii. Use IDA Pro to look for potential encoding by searching for the string xor. What type of encoding do you find?
	iii. What is the key used for encoding and what content does it encode?
	iv. Use the static tools FindCrypt2, Krypto ANALyzer (KANAL), and the IDA Entropy Plugin to identify any other encoding mechanisms. What do you find?
	v. What type of encoding is used for a portion of the network traffic sent by the malware?
	vi. Where is the Base64 function in the disassembly?
	vii. What is the maximum length of the Base64-encoded data that is sent? What is encoded?
	viii. In this malware, would you ever see the padding characters (=or ==) in the Base64-encoded data?
	ix. What does this malware do?
	b. Analyze the malware found in the file *Lab13-02.exe*.
	i. Using dynamic analysis, determine what this malware creates.
	ii. Use static techniques such as an xor search, FindCrypt2, KANAL, and the IDA Entropy Plugin to look for potential encoding. What do you find?
	iii. Based on your answer to question 1, which imported function would be a good prospect for finding the encoding functions?
	iv. Where is the encoding function in thedisassembly?
	v. Trace from the encoding function to the source of the encoded content. What is the content?
	vi. Can you find the algorithm used for encoding? If not, how can you decode the content?
	vii. Using instrumentation, can you recover the original source of one of the encoded files?
	c. Analyze the malware found in the file *Lab13-03.exe*.
	i. Compare the output of strings with the information available via dynamic analysis. Based on this comparison, which elements might be encoded?
	ii. Use static analysis to look for potential encoding by searching for the string xor. What type of encoding do you find?
	iii. Use static tools like FindCrypt2, KANAL, and the IDA Entropy Plugin to identify any other encoding mechanisms. How do these findings com- pare with the XOR findings?
	iv. Which two encoding techniques are used in thismalware?
	v. For each encoding technique, what is the key?
	vi. For the cryptographic encryption algorithm, is the key sufficient? What else must be known?
	vii. What does this malware do?
	viii. Create code to decrypt some of the content produced during dynamic analysis. What is this content?
8.	a. Analyze the malware found in file *Lab14-01.exe*. This program is not harmful to your system.
	i. Which networking libraries does the malware use, and what are their advantages?
	ii. What source elements are used to construct the networking beacon, and what conditions would cause the beacon to change?
	iii. Why might the information embedded in the networking beacon be of interest to the attacker?
	iv. Does the malware use standard Base64 encoding? If not, how is the encoding unusual?
	v. What is the overall purpose of this malware?
	vi. What elements of the malware's communication may be effectively detected using a network signature?
	vii. What mistakes might analysts make in trying to develop a signature for this malware?
	viii. What set of signatures would detect this malware (and future variants)?
	b. Analyze the malware found in file *Lab14-02.exe*. This malware has been configured to beacon to a hard-coded loopback address in order to prevent it from harming your system, but imagine that it is a hard-coded external address.
	i. What are the advantages or disadvantages of coding malware to use direct IP addresses?

	ii. Which networking libraries does this malware use? What are the advantages or disadvantages of using these libraries?
	iii. What is the source of the URL that the malware uses for beaconing? What advantages does this source offer?
	iv. Which aspect of the HTTP protocol does the malware leverage to achieve its objectives?
	v. What kind of information is communicated in the malware's initial beacon?
	vi. What are some disadvantages in the design of this malware's communication channels?
	vii. Is the malware's encoding scheme standard?
	viii. How is communication terminated?
	ix. What is the purpose of this malware, and what role might it play in the attacker's arsenal?
	c. This lab builds on Practical 8 a. Imagine that this malware is an attempt by the attacker to improve his techniques. Analyze the malware found in file *Lab14-03.exe*.
	i. What hard-coded elements are used in the initial beacon? What elements, if any, would make a good signature?
	ii. What elements of the initial beacon may not be conducive to a longlasting signature?
	iii. How does the malware obtain commands? What example from the chapter used a similar methodology? What are the advantages of this technique?
	iv. When the malware receives input, what checks are performed on the input to determine whether it is a valid command? How does the attacker hide the list of commands the malware is searching for?
	v. What type of encoding is used for command arguments? How is it different from Base64, and what advantages or disadvantages does it offer?
	vi. What commands are available to this malware?
	vii. What is the purpose of this malware?
	viii. This chapter introduced the idea of targeting different areas of code with independent signatures (where possible) in order to add resiliency to network indicators. What are some distinct areas of code or configuration data that can be targeted by network signatures?
	ix. What set of signatures should be used for this malware?
	d. Analyze the sample found in the file Lab15-01.exe. This is a command-line program that takes an argument and prints "Good Job!" if the argument matches a secret code.
	i. What anti-disassembly technique is used in this binary?
	ii. What rogue opcode is the disassembly tricked into disassembling?
	iii. How many times is this technique used?
	iv. What command-line argument will cause the program to print "Good Job!"?
	e. Analyze the malware found in the file Lab15-02.exe. Correct all anti-disassembly countermeasures before analyzing the binary in order to answer the questions.
	i. What URL is initially requested by the program?
	ii. How is the User-Agent generated?
	iii. What does the program look for in the page it initially requests?
	iv. What does the program do with the information it extracts from the page?
	f. Analyze the malware found in the file *Lab15-03.exe*. At first glance, this binary appears to be a legitimate tool, but it actually contains more functionality than advertised.
	i. How is the malicious code initially called?
	ii. What does the malicious code do?
	iii. What URL does the malware use?
	iv. What filename does the malware use?
9.	a. Analyze the malware found in *Lab16-01.exe* using a debugger. This is the same malware as *Lab09-01.exe*, with added anti-debugging techniques.
	i. Which anti-debugging techniques does this malwareemploy?
	ii. What happens when each anti-debugging technique succeeds?
	iii. How can you get around these anti-debugging techniques?
	iv. How do you manually change the structures checked during runtime?
	v. Which OllyDbg plug-in will protect you from the anti-debugging tech- niques used by this malware?

	b. Analyze the malware found in *Lab16-02.exe* using a debugger. The goal of this lab is to figure out the correct password. The malware does not drop a mali- cious payload.
	i. What happens when you run *Lab16-02.exe* from the command line?
	ii. What happens when you run *Lab16-02.exe* and guess the command-line parameter?
	iii. What is the command-line password?
	iv. Load *Lab16-02.exe* into IDA Pro. Where in the mainfunction is strncmp
	v. found?
	vi. What happens when you load this malware into OllyDbg using the default settings?
	vii. What is unique about the PE structure of *Lab16-02.exe*?
	viii. Where is the callback located? (Hint: Use CTRL-E in IDA Pro.)
	ix. Which anti-debugging technique is the program using to terminate immediately in the debugger and how can you avoid this check?
	x. What is the command-line password you see in the debugger after you disable the anti-debugging technique?
	xi. Does the password found in the debugger work on the command line?
	c. Analyze the malware in *Lab16-03.exe* using a debugger. This malware is similar to *Lab09-02.exe*, with certain modifications, including the introduction of anti-debugging techniques.
	i. Which strings do you see when using static analysis on the binary?
	ii. What happens when you run this binary?
	iii. How must you rename the sample in order for it to runproperly?
	iv. Which anti-debugging techniques does this malwareemploy?
	v. For each technique, what does the malware do if it determines it is running in a debugger?
	vi. Why are the anti-debugging techniques successful in this malware?
	vii. What domain name does this malware use?
	d. Analyze the malware found in *Lab17-01.exe* inside VMware. This is the same malware as *Lab07-01.exe*, with added anti-VMware techniques.
	i. What anti-VM techniques does this malware use?
	ii. If you have the commercial version of IDA Pro, run the IDA Python script from Listing 17-4 in Chapter 17 (provided here as *findAntiVM.py*). What does it find?
	iii. What happens when each anti-VM technique succeeds?
	iv. Which of these anti-VM techniques work against your virtual machine?
	v. Why does each anti-VM technique work or fail?
	vi. How could you disable these anti-VM techniques and get the malware to run?
	e. Analyze the malware found in the file *Lab17-02.dll* inside VMware. After answering the first question in this lab, try to run the installation exports using *rundll32.exe* and monitor them with a tool like procmon. The following is an example command line for executing the DLL: rundll32.exe Lab17-02.dll,InstallRT (or InstallSA/InstallSB)
	i. What are the exports for this DLL?
	ii. What happens after the attempted installation using *rundll32.exe*?
	iii. Which files are created and what do theycontain?
	iv. What method of anti-VM is in use?
	v. How could you force the malware to install during runtime?
	vi. How could you permanently disable the anti-VMtechnique?
	vii. How does each installation export function work?
	f. Analyze the malware *Lab17-03.exe* inside VMware.
	i. What happens when you run this malware in a virtual machine?
	ii. How could you get this malware to run and drop its keylogger?
	iii. Which anti-VM techniques does this malware use?
	iv. What system changes could you make to permanently avoid the anti-VM techniques used by this malware?
	v. How could you patch the binary in OllyDbg to force the anti-VM techniques to permanently fail?

10.	a. Analyze the file *Lab19-01.bin* using *shellcode_launcher.exe*
	i. How is the shellcode encoded?
	ii. Which functions does the shellcode manually import?
	iii. What network host does the shellcode communicate with?
	iv. What filesystem residue does the shellcode leave?
	v. What does the shellcode do?
	b. The file *Lab19-02.exe* contains a piece of shellcode that will be injected into another process and run. Analyze this file.
	i. What process is injected with the shellcode?
	ii. Where is the shellcode located?
	iii. How is the shellcode encoded?
	iv. Which functions does the shellcode manually import?
	v. What network hosts does the shellcode communicatewith?
	vi. What does the shellcode do?
	c. Analyze the file *Lab19-03.pdf*. If you get stuck and can't find the shellcode, just skip that part of the lab and analyze file *Lab19-03_sc.bin* using *shellcode_launcher.exe*.
	i. What exploit is used in this PDF?
	ii. How is the shellcode encoded?
	iii. Which functions does the shellcode manually import?
	iv. What filesystem residue does the shellcode leave?
	v. What does the shellcode do?
	d. The purpose of this first lab is to demonstrate the usage of the thispointer. Analyze the malware in *Lab20-01.exe*.
	i. Does the function at 0x401040 take any parameters?
	ii. Which URL is used in the call to URLDownloadToFile?
	iii. What does this program do?
	e. Analyze the malware In Lab20-02.exe.
	i. What can you learn from the interesting strings in this program?
	ii. What do the imports tell you about this program?
	iii. What is the purpose of the object created at 0x4011D9? Does it have any virtual functions?
	iv. Which functions could possibly be called by the call[edx]instruction at 0x401349?
	v. How could you easily set up the server that this malware expects in order to fully analyze the malware without connecting it to the Internet?
	vi. What is the purpose of this program?
	vii. What is the purpose of implementing a virtual function call in this program?
	f. Analyze the malware in Lab20-03.exe.
	i. What can you learn from the interesting strings in this program?
	ii. What do the imports tell you about this program?
	iii. At 0x4036F0, there is a function call that takes the string Config error, followed a few instructions later by a call to CxxThrowException. Does the function take any parameters other than the string? Does the function return anything? What can you tell about this function from the context in which it's used?
	iv. What do the six entries in the switch table at 0x4025C8 do?
	v. What is the purpose of this program?
	g. Analyze the code in *Lab21-01.exe*
	i. What happens when you run this program without any parameters?
	ii. Depending on your version of IDA Pro, main may not be recognized automatically. How can you identify the call to the main function?
	iii. What is being stored on the stack in the instructions from 0x0000000140001150 to 0x0000000140001161?
	iv. How can you get this program to run its payload without changing the filename of the executable?
	v. Which two strings are being compared by the call to strncmp at 0x0000000140001205?
	vi. Does the function at 0x00000001400013C8 take any parameters?

	vii.	How many arguments are passed to the call to CreateProcess at 0x0000000140001093? How do you know?
	h. Analyze the malware found in *Lab21-02.exe* on both x86 and x64 virtual machines.	
	i.	What is interesting about the malware's resource sections?
	ii.	Is this malware compiled for x64 or x86?
	iii.	How does the malware determine the type of environment in which it is running?
	iv.	What does this malware do differently in an x64 environment versus an x86 environment?
	v.	Which files does the malware drop when running on an x86 machine? Where would you find the file orfiles?
	vi.	Which files does the malware drop when running on an x64 machine? Where would you find the file orfiles?
	vii.	What type of process does the malware launch when run on an x64 system?
	viii.	What does the malware do?

Evaluation Scheme

Theory courses of 4 credits: Total marks 100. Out of the total, 50 % each for internal and external evaluation.

A. **Internal Evaluation (30m + 10m + 10m = 50 Marks)**

The internal assessment marks shall be awarded as follows:

1. **30 marks (Any one of the following):**
   a. Written Test of 30 Marks
   b. SWAYAM (Advanced Course) of minimum 20 hours and certification exam completed or
   c. NPTEL (Advanced Course) of minimum 20 hours and certification exam completed or
   d. Valid International Certifications (Prometric, Pearson, Certiport, Coursera, Udemy and the like)
   e. Certification marks of one completed exam shall be awarded to one course only. For four courses, the students will have to complete four certifications.
   (Note: Only those certification/courses suggested by the department shall be deemed valid, Student cannot do any certification on their own)
2. **10 marks**
   10 marks from every course (Two 4 credits mandatory courses, one 2 credits mandatory course, one 4 credits elective course) coming to a total of 40 marks, shall be awarded on publishing of research paper in UGC approved / Other Journal with plagiarism less than 15%. The marks can be awarded as per the impact factor of the journal, quality of the paper, importance of the contents published, social value.
3. **10 marks**
   Open Book examination based on problem solving related to the respective subject.

i. **Suggested format of Question paper of 30 marks for the written test.**

Q1.	Attempt *any two* of the following:	16 marks
a.		
b.		
c.		
d.		
Q2.	Attempt *any two* of the following:	14 marks
a.		
b.		
c.		
d.		

B. **External Examination: (50 marks) Duration : 2 hrs**

	All questions are compulsory	
Q1	(Based on all units) Attempt *any two* of the following:	10 marks
a.	Unit 1	
b.	Unit 2	
c.	Unit 3	
d.	Unit 4	
Q2	(Based on Unit 1) Attempt *any two* of the following:	10 marks
Q3	(Based on Unit 2) Attempt *any two* of the following:	10 marks
Q4	(Based on Unit 3) Attempt *any two* of the following:	10 marks
Q5	(Based on Unit 4) Attempt *any two* of the following:	10 marks

Theory courses of 2 credits: Total marks 50. Out of the total, 50 % each for internal and external evaluation.

A. **Internal Evaluation (25 Marks)**

The internal assessment marks shall be awarded as follows:

1. 10 marks from every course (Two 4 credits mandatory courses, One 2 credits mandatory course, One 4 credits elective course) coming to a total of 40 marks, shall be awarded on publishing of research paper in UGC approved / Other Journal with plagiarism less than 15%. The marks can be awarded as per the impact factor of the journal, quality of the paper, importance of the contents published, social value.
2. 10 marks - Open Book examination based on problem solving related to the respective subject.
3. 5 marks - Assignment/Group discussion.

B. **External Examination: (25 marks) Duration : 1 hr**

	All questions are compulsory	
Q1	(Based on Unit 1) Attempt *any two* of the following:	13 marks
Q2	(Based on Unit 2) Attempt *any two* of the following:	12 marks

Practical courses of 2 credits: Total marks 50. Out of the total, 50 % each for internal and external evaluation.

A. **Practical Evaluation Internal (25 marks)**

1.	Performance during all practical sessions	10
2.	Problem solving with the acquired programming skills	10
3.	Viva Voce	5

B. **Practical Evaluation External (25 marks)**

A Certified copy of hard-bound journal is essential to appear for the practical examination.

1.	Practical Question	15
2.	Journal	5
3.	Viva Voce	5

Master of Science in Information Technology

[MSc. I.T. PART - II]

Semester – III

M.Sc. I.T. Sem- III

Course Code	Course Type	Course Title	Credits
MITMJ301	Major Mandatory	Modern Networking	4
MITMJP301	Major Mandatory Practical	Modern Networking Practical	2
MITMJ302	Major Mandatory	Machine Learning	4
MITMJP302	Major Mandatory Practical	Machine Learning -Practical	2
MITMP303	Minor Mandatory Practical	Ethical Hacking	2
MITEL304	Elective	ADBMS Practical	4
MITEL305	Elective	Security Operation Center	4
MITELP306	Elective	Server Virtualization on VMWare Platform Practical	4
MITOJT307	OJT	Research Project	4
		Total Credits	22

COURSE STRUCTURE

1. **Title of the Course:** Modern Networking
2. **Semester**: III
3. **Course Code:** **For Theory:** MITMJ301
   For Practical: MITMJP301
4. **Course Objective:**

This course aims

a. To understand the state-of-the-art in network protocols, architectures and applications.
b. Analyze existing network protocols and networks.
c. Develop new protocols in networking.
d. To understand how networking research is done.
e. To investigate novel ideas in the area of Networking via term-long research projects.

5. **Category of Course**: Major Mandatory
6. **Total Hours**: 60
7. **Total Credits**: 06 Credits (04 Credits for Theory & 02 Credits for Practical)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
MITMJ301	Modern Networking	4	2	4	2	6

Module	Detailed Content	Hours
1	Modern Networking : Elements of Modern Networking The Networking Ecosystem ,Example Network Architectures, Global Network Architecture, A Typical Network Hierarchy Ethernet Applications of Ethernet Standards Ethernet Data Rates Wi-Fi Applications of Wi-Fi, Standards Wi-Fi DataRates4G/5GCellularFirst Generation Second Generation, Third Generation Fourth Generation Fifth Generation, Cloud Computing Cloud Computing Concepts The Benefits of Cloud Computing Cloud Networking Cloud Storage, Internet of Things, Things on the Internet of Things, Evolution Layers of the Internet of Things, Network Convergence Unified Communications, Requirements and Technology Types of Network and Internet Traffic, Elastic Traffic, Inelastic Traffic, Real-Time Traffic Characteristics Demand: Big Data, Cloud Computing, and Mobile Traffic Big Data Cloud Computing, Mobile Traffic, Requirements: QoS and QoE, Quality of Service, Quality of Experience, Routing Characteristics, Packet Forwarding, Congestion Control ,Effects of Congestion, Congestion Control Techniques, SDN and NFV Software Defined Networking, Network Functions Virtualization Modern Networking Elements.	12

2	**Software-Defined Networks SDN:** Background and Motivation, Evolving Network Requirements Demand Is Increasing, Supply Is Increasing Traffic Patterns Are More Complex Traditional Network Architectures are Inadequate, The SDN Approach Requirements SDN Architecture Characteristics of Software Defined Networking, SDN- and NFV-Related Standards Standards Developing Organizations Industry Consortia Open Development Initiatives, SDN Data Plane and OpenFlow SDN Data Plane, Data Plane Functions Data Plane Protocols OpenFlow Logical Network Device Flow Table Structure Flow Table Pipeline, The Use of Multiple Tables Group Table OpenFlow Protocol, SDN Control Plane SDN Control Plane Architecture Control Plane Functions, Southbound Interface Northbound Interface Routing, ITU-T Model, OpenDaylight OpenDaylight Architecture OpenDaylight Helium, REST REST Constraints Example REST API, Cooperation and Coordination Among Controllers, Centralized Versus Distributed Controllers, High Availability Clusters Federated SDN Networks, Border Gateway Protocol Routing and QoS Between Domains, Using BGP for QoS Management IETF SDNi OpenDaylight SNDi SDN Application Plane SDN Application Plane Architecture Northbound Interface Network Services Abstraction Layer Network Applications, User Interface, Network Services Abstraction Layer Abstractions in SDN, Frenetic Traffic Engineering PolicyCop Measurement and Monitoring Security OpenDaylight DDoS Application Data Center Networking, Big Data over SDN Cloud Networking over SDN Mobility and Wireless Information-Centric Networking CCNx, Use of an Abstraction Layer.	**12**
3	**Virtualization, Network Functions Virtualization:** Concepts and Architecture, Background and Motivation for NFV, Virtual Machines The Virtual Machine Monitor, Architectural Approaches Container Virtualization, NFV Concepts Simple Example of the Use of NFV, NFV Principles High-Level NFV Framework, NFV Benefits and Requirements NFV Benefits, NFV Requirements, NFV Reference Architecture NFV Management and Orchestration, Reference Points Implementation, NFV Functionality, NFV Infrastructure, Container Interface, Deployment of NFVI Containers, Logical Structure of NFVI Domains, Compute Domain, Hypervisor Domain, Infrastructure Network Domain, Virtualized Network Functions, VNF Interfaces, VNFC to VNFC Communication, VNF Scaling, NFV Management and Orchestration, Virtualized Infrastructure Manager Virtual Network Function Manager, NFV Orchestrator, Repositories, Element Management, OSS/BSS, NFV Use Cases Architectural Use Cases, Service-Oriented Use Cases, SDN and NFV Network Virtualization, Virtual LANs ,The Use of Virtual LANs, Defining VLANs, Communicating VLAN Membership, IEEE 802.1Q VLAN Standard, Nested VLANs, OpenFlow VLAN	**12**

	Support, Virtual Private Networks, IPsec VPNs, MPLS VPNs, Network Virtualization, Simplified Example, Network Virtualization Architecture, Benefits of Network Virtualization, Open Daylight's Virtual Tenant Network, Software-Defined Infrastructure, Software Defined Storage, SDI Architecture.	
4	**Defining and Supporting User Needs, Quality of Service** Background, QoS Architectural Framework, Data Plane ,Control Plane, Management Plane, Integrated Services Architecture, ISA Approach ISA Components, ISA Services, Queuing Discipline, Differentiated Services, Services, DiffServ Field, DiffServ Configuration and Operation, Per-Hop Behavior, Default Forwarding PHB, Service Level Agreements, IP Performance Metrics, OpenFlow QoS Support, Queue Structures, Meters, QoE: User Quality of Experience, Why QoE?, Online Video Content Delivery, Service Failures Due to Inadequate QoE Considerations QoE-Related Standardization Projects, Definition of Quality of Experience, Definition of Quality, Definition of Experience Quality Formation Process, Definition of Quality of Experience, QoE Strategies in Practice, The QoE/QoS Layered Model Summarizing and Merging the ,QoE/QoS Layers, Factors Influencing QoE, Measurements of QoE, Subjective Assessment, Objective Assessment, End-User Device Analytics, Summarizing the QoE Measurement Methods, Applications of QoE Network Design Implications of QoS and QoE Classification of QoE/ QoS Mapping Models, Black-Box Media-Based QoS/QoE Mapping Models, GlassBox Parameter-Based QoS/QoE Mapping Models, Gray-Box QoS/QoE Mapping Models, Tips for QoS/QoE Mapping Model Selection, IP- Oriented Parameter-Based QoS/QoE Mapping Models, Network Layer QoE/QoS Mapping Models for Video Services, Application Layer QoE/QoS Mapping Models for Video Services Actionable QoE over IP-Based Networks, The System-Oriented Actionable QoE Solution, The Service-Oriented Actionable QoE Solution, QoE Versus QoS Service Monitoring, QoS Monitoring Solutions, QoE Monitoring Solutions, QoE-Based Network and Service Management, QoE-Based Management of VoIP Calls, QoE-Based Host-Centric Vertical Handover, QoE-Based Network-Centric Vertical Handover.	**12**

5	**Modern Network Architecture:** Clouds and Fog, Cloud Computing, Basic Concepts, Cloud Services, Software as a Service, Platform as a Service, Infrastructure as a Service, Other Cloud Services, XaaS, Cloud Deployment Models, Public Cloud Private Cloud Community Cloud, Hybrid Cloud, Cloud Architecture, NIST Cloud Computing Reference Architecture, ITU-T Cloud Computing Reference Architecture, SDN and NFV, Service Provider Perspective Private Cloud Perspective, ITU-T Cloud Computing Functional Reference Architecture. **The Internet of Things:** Components The IoT Era Begins, The Scope of the Internet of Things Components of IoT-Enabled Things, Sensors, Actuators, Microcontrollers, Transceivers, RFID, The Internet of Things: Architecture and Implementation, IoT Architecture, ITU-T IoT Reference Model, IoT World Forum Reference Model, IoT Implementation, IoTivity, Cisco IoT System, ioBridge, Security Security Requirements, SDN Security Threats to SDN, Software- Defined Security, NFV Security, Attack Surfaces, ETSI Security Perspective, Security Techniques, Cloud Security, Security Issues and Concerns, Cloud Security Risks and Countermeasures, Data Protection in the Cloud, Cloud Security as a Service, Addressing Cloud Computer Security Concerns, IoT Security, The Patching Vulnerability, IoT Security and Privacy Requirements Defined by ITU-T An IoT Security Framework, Conclusion.	**12**
	Total	**60**

Sr. No.	**List of Practical**
1.	Configure IP SLA Tracking and Path Control Topology
2.	Using the AS_PATH Attribute
3.	Configuring IBGP and EBGP Sessions, Local Preference, and MED
4.	Secure the Management Plane
5.	Configure and Verify Path Control Using PBR
6.	IP Service Level Agreements and Remote SPAN in a Campus Environment
7.	Inter-VLAN Routing
8.	Simulating MPLS environment
9.	Simulating VRF
10.	Simulating SDN with • OpenDaylight SDN Controller with the Mininet Network Emulator • OFNet SDN network emulator
11.	Simulating OpenFlow Using MININET

9. Evaluation Pattern:

a. **Total Marks:** 150 Marks (10 Point Grading)

b. **Passing Criteria**: 40 % (4 Grade Points)

c. **Marking Scheme:** 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books:**Offline

10. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class tests of 20 marks. The class test is to be conductedwhen approx. 40% syllabus is completed. Test will be of 45 Minutes.
- Students have to submit assignment after completion of each module which willcarry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination:

Question No.	Description	Marks
1	Answer any two Questions (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.1 to Q.6 will include total 3 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	30+10 Marks	10 Marks	50 Marks

11. Course Outcome:

On successful completion of this course, the Learner should be able to:

CO1: Understand the modern networking concepts and implementation.

CO2: Demonstrate in-depth knowledge in the area of Computer Networking.

CO3: To demonstrate scholarship of knowledge through performing in a group to identify, formulate and solve a problem related to Computer Networks.

CO4: Prepare a technical document for the identified Networking System.

CO5: Conducting experiments to analyze the identified research work in building Computer Networks.

12. References:

1. Foundations of Modern Networking: SDN, NFV, QoE, IoT and Cloud by William Stallings Addison- Wesley Professional October 2015
2. SDN and NFV Simplified A Visual Guide to Understanding Software Defined Networks and Network Function Virtualization by Jim Doherty, Pearson Education, Inc
3. Network Functions Virtualization (NFV) with a Touch of SDN by Rajendra Chayapathi Syed Farrukh Hassan, Addison-Wesley
4. CCIE and CCDE Evolving Technologies Study Guide by Brad dgeworth, Jason Gooley, Ramiro Garza Rios, Pearson Education, Inc.2019

COURSE STRUCTURE

1. **Title of the Course :** Machine Learning
2. **Semester** : III
3. **Course Code: For Theory :** MITMJ302
   For Practical: MITMJP302

4. Course Objective:

a. To The objective of this course is to introduce machine learning fundamentals to students.
b. This course provides introductory concepts of various machine learning techniques to students which will help to build foundation for further understanding.
c. This course also aims to provide details of various steps involved in machine learning pipeline such as data collection, pre- processing, feature engineering etc.
d. This course also introduce popular tools used in the area of machine learning

5. **Category of Course** : Major mandatory
6. **Total Hours**: 60
7. **Total Credits**: 06 Credits (04 Credits for Theory & 02 Credits for Practical)

8. Modules:

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
MITMJ302	Machine Learning	4	2	4	2	6

Module	Detailed Content	Hours
1	**Giving computers the ability to learn from Data:** Building intelligent machines to transform data into knowledge The three different types of machine learning Introduction to the basic terminology and notations A roadmap to building machine learning systems Using Python for machine learning **Training simple machine learning algorithms for classification:** Artificial neurons- a brief glimpse into the early history of machine learning Implementation of perceptron learning algorithm in python Adaptive linear neurons and the convergence of learning	12
2	A **tour of machine learning classifiers using scikit-learn:** Choosing a classification algorithmFirst steps with scikit learn – training a perceptron Modelling class probabilities via logistic regression Maximum margin classification with support vector machines Solving non-linear problems using a kernel SVM, Decision tree learning	12

	K-nearest neighbors- a lazy learning algorithm **Building good training sets – Data preprocessing:** Dealing with missing data, Handling categorical data Partitioning a dataset into separate training and test sets Bringing features onto the same scale, Selecting meaningful features, Assessing feature importance with random forests	
3	**Compressing Data via dimensionality reduction:** Unsupervised dimensionality reduction via principal component analysis Supervised data compression via linear discriminant analysis Using kernel principal component analysis for nonlinear mappings **Learning best practices for model evaluation and hyper parameter tuning:**Streamlining workflows with pipelines Using k-fold cross-validation to assess model performance Debugging algorithms with learning and validation curves Fine-tuning machine learning models via grid search Looking at different performance evaluation metrics Dealing with class imbalance	12
4	**Combining different models for ensemble learning:** Learning with ensembles Combining classifiers via majority vote Bagging- building an ensemble of classifiers from bootstrap samplesLeverage weak learners via adaptive boosting **Applying machine learning to sentiment analysis:** Prepare the IMDB movie review data for text processing Introducing the bag of words model Training a logistic regression model for document classification Working with bigger data- online algorithms and out of core learning Topic modelling with Latent Dirichlet Allocation **Predicting continuous target variables with regression analysis:** Introducing linear regression Exploring the housing dataset Implementing an ordinary least square linear regression model Fitting a robust regression model using RANSAC Evaluating the performance of linear regression models Using regularization methods for regression Turning a linear regression model into a curve- polynomial regression Dealing with nonlinear relationship using random forests	12
5	**Working with Unlabeled data – clustering analysis:** Grouping objects by similarity using k-means Organizing clusters as a hierarchical tree Locating regions of high density via DBSCAN **Implementing a multilayer artificial neural network from scratch:** Modelling, complex functions with artificial neural networks**,** Classifying handwritten digits**,**Training an artificial neural network.About the convergence in neural networks**,** A few words about the neural network implementation **Parallelizing neural network training with TensorFlow:**	12

	TensorFlow and training performance, Training neural network efficiently with high-level TensorFlow APIs, Choosing activation functions for multilayer networks	
	Total	60

List of Practical:

10 practical covering the entire syllabus must be performed. The detailed list of practical will be circulated later in the official workshop

9. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** : Offline

10. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination :

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	30+10Marks	10 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, students should be able to develop application

CO1: Understand the various processes involve in machine learning.
CO2: Perform data cleaning and pre-processing
CO3: Decide and classify the problem as classification, prediction or clustering
CO4: Train and test machine learning algorithms

12. References:

1. Understanding machine learning: From theory to algorithms, by Shalev-Shwartz, Shai,and Shai Ben-David, 2014.
2. Practical machine learning tools and techniques, by Ian H., et al. 2016

COURSE STRUCTURE

1. **Title of the Course :** Ethical Hacking
2. **Semester** : III
3. **Course Code**: For Practical: MITMP303
4. **Course Objective:**
   - Discover and understand the weaknesses in computer systems, networks, and applications.
   - Protect Systems: Develop skills to secure and safeguard computer systems, networks, and data from unauthorized access and attacks.
5. **Category of Course** : Minor Mandatory
6. **Total Hours**: 60
7. **Total Credits**: 02 Credits (02 Credits for Practical)
8. **Module:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
MITMP303	Eithical Hacking	0	2	0	2	2

Module	Detailed Content	Hours
1	**Module: Introduction to ethical Hacking:** What is ethical hacking? Types of hacking, advantages, disadvantages and purpose of hacking, Types of hackers, Code of ethics, Types of attacks and attack vector types, Prevention from hackers, The Indian IT Act 2000 and Amendments to the Indian ITAct(2008) ,Phases of hacking. **Self-Learning Topics:** ethical hacking tools	12
2	**Module:Footprinting and Reconnaissance.** What is footprinting? Active and passive footprinting, purpose of footprinting, objectives of footprinting, footprinting threats, Types of footprinting, footprinting countermeasures. **Self-Learning Topics:** footprintingtools	12

3	**Module: Scanning networks, Enumeration and sniffing: Scanning networks:** Network scanning and its types, objectives of network scanning, scanning live systems, scanning techniques-TCP Connect / Full Open Scan, Types of Stealth scans, port scanning countermeasures, IDS evasion techniques, Banner grabbing and its tools, vulnerability scanning, proxy servers, anonymizers, IP spoofing and its countermeasures. **Enumeration and Sniffing:** What is Enumeration? Enumeration techniques, Enumeration types, Enumeration countermeasures, what is sniffing? Wiretrapping and its types, packet sniffing, sniffing threats, how sniffers work?, sniffing methods-ARP spoofing and MAC flooding, active and passive sniffing, types of sniffing attacks, sniffing countermeasures,sniffing detection techniques **Self Learning Topics:** Study of EMS and MIS	12
4	**Module: Trojans and other Attacks:** Worms, viruses, Trojans, Types of worms, viruses and worms, Preventing malware attacks, types of attacks: (DoS / DDoS), Waterhole attack, brute force, phishing and fake WAP, Eavesdropping, Man-in-the-middle, buffer overflow, DNS poisoning, ARP poisoning, Identity Theft, IoT Attacks, BOTs and BOTNETs, Steganography - text, image and audio and video, types of Social Engineering: Physical social engineering, Remotesocial engineering and hybrid social engineering. **Self Learning Topics:** Case studies, malware tools and steganographic tools..	12
5	**Module: Hacking web servers, web applications and sql injection:** **Session hijacking:** What is session hijacking? , why session hijacking is successful? session hijacking techniques, session hijacking process, Types of session hijacking, session hijacking countermeasures: protecting and preventing, **Hacking web servers and web applications:** Causes of webservers being compromised, web server attacks, stages of web server attacks, defending against web server attacks, web application components, its working, architecture, web server attack vectors, web application threats and counter measures **SQL Injection:** What is SQL injection, SQL injection threats, SQL injection attacks,SQL injection detection, Types of SQL injection, SQL injection methodology, SQL injection prevention and countermeasures. **Self-Learning Topics:** tools of session hijacking, web servers and applications and SQL injection.	12
	Total	60

9. Evaluation Pattern:

a. **Total Marks** : 100 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 50:50 Pattern

- 50 Marks - Written/Semester End Exam (Passing = 20 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** :Offlin

10. Paper Pattern:

- **Internal Assessment:**
    - Assessment consists of a class tests of 20 marks. The class test is to be conductedwhen approx. 40% syllabus is completed. Test will be of 45 Minutes.
    - Students have to submit assignment after completion of each module which willcarry 15 marks and 5 marks are for attendance.
- **Semester End Theory Examination :**

Question No.	**Description**	**Marks**
1	Answer any two Questions (Descriptive based on module 1)	10
2	Answer any two Questions (Descriptive based on module 2)	10
3	Answer any two Questions (Descriptive based on module 3)	10
4	Answer any two Questions (Descriptive based on module 4)	10
5	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.1 to Q.5 will include total 3 sub questions having 5 marks each

- **Semester End Practical Examination:**

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	30+10 Marks	10 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, Learner should be able to:

CO1: Outline the vulnerabilities in a system or network.

CO2: Analyze and critically evaluate techniques used to break into an insecure web application and identify relevant countermeasures.

12. References:

1. .Hacking: A Beginners' Guide to Computer Hacking, Basic Security, And Penetration Testing by John Slavio
2. Hands-on Ethical Hacking and Network Defense by James Corley, Kent Backman, and Michael Simpson

COURSE STRUCTURE

1. **Title of the Course :** Advanced Database Management System (P)
2. **Semester** : III
3. **Course Code:** MITELP304
4. **Course Objective:**
   a. Understand relational and object oriented database technology for building applications for the
   b. current trend.
   c. Evaluate a business situation and designing & building a database applications.
   d. Explore non-relational database systems and structures.
   e. To learn and experiment advanced database models and provide them knowledge to take
   f. decisions concerning implementation issues.
5. **Category of Course**: Elective
6. **Total Hours**: 100
7. **Total Credits**: 04 Credits
8. Modules:

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/	Theory	Practical/	Total
MITELP304	Advanced Database Management System		Tutorial		Tutorial	
		-	4	-	4	4

Sr. No.	List of Practical
1	Horizontal fragmentation of database.
2	Vertical fragmentation of database
3	Creating Replica of database.
4	Create Temporal Database.
5	Inserting and retrieving multimedia objects in database (Image / Audio /Video).
6	Implement Active database using Triggers
7	Create ORDBMS Application
8	Implement and retrieve records from a Spatial Database
9	Create XML Parser

10	Using XML DOM Traverse XML Document
11	Create an XML Application using database and any programming language (Java / VB.NET - ASP.NET, C#-ASP.NET).

9. Evaluation Pattern:

a. **Total Marks** : 100 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 100

- 50 Marks- Internal Assessment (As per university)
- 50 Marks –Semester End Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** :Offline

10. Paper Pattern:

a. **Semester End Practical Examination:**

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	30+10 Marks	10 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, students should be able to:

CO1: Analyze compare and evaluate alternative database architectures and models in different application contexts.
CO2: Get promising research direction in advanced topics and techniques.
CO3: Use various database tools and software's for designing database applications.

12. References:

1. Elmasri and Navathe, “Fundamentals of Database Systems”, Pearson Education, 6th edition.
2. Raghu Ramakrishnan, Johannes Gehrke, “Database Management Systems”, McGraw-Hill,3rd edition
3. Korth, Silberchatz, Sudarshan , “Database System Concepts”, McGraw-Hill, 6th edition.
4. Peter Rob and Coronel, “Database Systems, Design, Implementation and Management”, Thomson Learning, 8th edition.
5. C.J.Date, Longman, “Introduction To Database Systems”, Pearson Education, 8th edition.

COURSE STRUCTURE

1. **Title of the Course:** Security Operation Centre
3. **Semester**: III
4. **Course Code: For Theory:** MITEL305
5. **Course Objective:**

- The SOC (Security Operations Centre) allows an organization to enforce and test its security policies, processes, procedures and activities through one central platform thatmonitors and evaluates the effectiveness of the individual elements and the overall security system of the organization.
- This will also allow the learners to configure various use cases and detect various attacks across the network and report them in real time and also take appropriate actions.
- This course will cover the design, deployment and operation of the SOC.
- Once this course is completed, students will have the skills to perform your SOC responsibilities effectively.

6. **Category of Course**: Elective
7. **Total Hours**: 60
8. **Total Credits**: 04 Credits (04 Credits for Theory)
9. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
MITEL305	Security Operation Centre	4	0	4	0	4

Module	Detailed Content	Hours
1	**Introduction to Security Operations Management** Foundation Topics Introduction to Identity and Access Management Phases of the Identity and Access Lifecycle Registration and Identity Validation Privileges Provisioning Access Review Access Revocation Password Management Password Creation PasswordStorage and Transmission Password Reset Password Synchronization Directory Management Single Sign-On Kerberos Federated SSO Security Assertion MarkupLanguage OAuth OpenID Connect Security Events and Logs Management Logs Collection, Analysis, and Disposal Syslog Security Information and Event Manager Assets Management Assets Inventory Assets Ownership Assets Acceptable Use and Return Policies Assets Classification Assets Labeling Assets and Information Handling Media Management Introduction to Enterprise Mobility Management MobileDevice	12

	Management Configuration and Change Management Configuration Management Change Management Vulnerability Management Vulnerability Identification Finding Information about a Vulnerability Vulnerability Scan PenetrationAssessment Product Vulnerability Management Vulnerability Analysis and Prioritization Vulnerability Remediation Patch Management References and Additional Readings **Fundamentals of Cryptography and Public Key Infrastructure** (PKI) Cryptography Ciphers and Keys Ciphers Keys Block and Stream CiphersSymmetric and Asymmetric Algorithms Symmetric Algorithms Asymmetric Algorithms HashesHashed Message Authentication Code Digital Signatures Digital Signatures in Action Key Management Next-Generation Encryption Protocols IPsec and SSL IPsec SSL Fundamentals of PKI Public and Private Key Pairs RSA Algorithm, the Keys, and Digital Certificates Certificate Authorities Root and Identity Certificates Root Certificate Identity Certificate X.500 and X.509v3Certificates Authenticating and Enrolling with the CAPublic Key Cryptography Standards Simple Certificate Enrollment Protocol Revoking Digital Certificates Using Digital CertificatesPKI Topologies Single Root CA Hierarchical CA with Subordinate CAs Cross-certifying CAs Exam Preparation Tasks Review All Key Topics Complete Tables and Lists from Memory **Introduction to Virtual Private Networks (VPNs)** What Are VPNs? Site-to-site vs. Remote-Access VPNsAn Overview of IPsec IKEv1 Phase 1 IKEv1 Phase 2IKEv2 SSL VPNs SSL VPN Design Considerations User ConnectivityVPN Device Feature Set Infrastructure Planning Implementation Scope	
2	**Windows-Based Analysis** Process and Threads Memory Allocation Windows Registration Windows Management Instrumentation Handles Services Windows Event Logs Exam Preparation Tasks**Linux- and Mac OS X–Based Analysis** Processes Forks Permissions Symlinks Daemons UNIX-Based Syslog Apache Access Logs **Endpoint Security Technologies** Antimalware and Antivirus Software Host-Based Firewalls and Host-Based Intrusion Prevention Application-Level Whitelisting and Blacklisting System-Based Sandboxing	12

3	**Threat Analysis** What Is the CIA Triad: Confidentiality, Integrity, and Availability? Confidentiality Integrity Availability Threat Modeling Defining and Analyzing the Attack Vector Understanding the Attack Complexity Privileges and User Interaction The Attack Scope Exam Preparation Tasks **Forensics** Introduction to Cybersecurity Forensics The Role of Attribution in a Cybersecurity InvestigationThe Use of Digital Evidence Defining Digital Forensic Evidence Understanding Best, Corroborating, and Indirect or Circumstantial Evidence Collecting Evidence from Endpoints and Servers Collecting Evidence from Mobile Devices Collecting Evidence from Network Infrastructure Devices Chain ofCustody Fundamentals of Microsoft Windows Forensics Processes, Threads, and Services Memory Management Windows Registry The Windows File System Master Boot Record (MBR) The Master File Table (MFT) Data Area and Free Space FAT NTFS MFT Timestamps, MACE, and Alternate Data Streams EFI Fundamentals of Linux Forensics Linux Processes Ext4 Journaling Linux MBR and Swap File SystemExam Preparation Tasks **Fundamentals of Intrusion Analysis** Common Artifact Elements and Sources of SecurityEvents False Positives, False Negatives, True Positives,and True Negatives Understanding Regular Expressions Protocols, Protocol Headers, and Intrusion Analysis Using Packet Captures for Intrusion Analysis Mapping Security Event Types to Source Technologies	12

4	**Introduction to Incident Response and the Incident Handling Process** **Introduction to Incident Response** What Are Events and Incidents? The Incident ResponsePlan The Incident Response Process The Preparation Phase The Detection and Analysis Phase Containment, Eradication, and Recovery Post-Incident Activity (Postmortem) Information Sharing and Coordination Incident Response Team Structure TheVocabulary for Event Recording and Incident Sharing (VERIS) **Incident Response Teams** Computer Security Incident Response Teams (CSIRTs) Product Security Incident Response Teams (PSIRTs) Security Vulnerabilities and Their Severity VulnerabilityChaining Role in Fixing Prioritization Fixing TheoreticalVulnerabilities Internally Versus Externally Found Vulnerabilities National CSIRTs and Computer Emergency Response Teams (CERTs) Coordination Centers Incident Response Providers and Managed Security Service Providers (MSSPs) **Compliance Frameworks** Payment Card Industry Data Security Standard (PCIDSS) PCI DSS Data Health Insurance Portability and Accountability Act (HIPAA) HIPAA Security Rule HIPAA Safeguards Administrative Safeguards Physical Safeguards Technical Safeguards Sarbanes-Oxley (SOX) Section302 Section 404 Section 409 SOX Auditing Internal Controls **Network and Host Profiling** Network Profiling Throughput Measuring Throughput Used Ports Session Duration Critical Asset Address Space Host Profiling Listening Ports Logged-in Users/Service AccountsRunning Processes Applications	12
5	**The Art of Data and Event Analysis** Normalizing Data Interpreting Common Data Values into a Universal Format Using the 5-Tuple Correlation toRespond to Security Incidents Retrospective Analysis and Identifying Malicious Files Identifying a Malicious File Mapping Threat Intelligence with DNS and Other Artifacts Deterministic Versus Probabilistic Analysis **Intrusion Event Categories** Diamond Model of Intrusion Cyber Kill Chain Model Reconnaissance Weaponization Delivery Exploitation	12

	Installation Command and Control Action and Objectives **Types of Attacks and Vulnerabilities** Types of Attacks Reconnaissance Attacks Social Engineering Privilege Escalation Attacks Backdoors Code Execution Man-in-the Middle Attacks Denial-of-Service Attacks Direct DDoS Botnets Participating in DDoS AttacksReflected DDoS Attacks Attack Methods for Data Exfiltration ARP Cache Poisoning Spoofing Attacks Route Manipulation Attacks Password Attacks Wireless Attacks Types of Vulnerabilities **Security Evasion Techniques** Key Encryption and Tunneling Concepts Resource Exhaustion Traffic Fragmentation Protocol-Level Misinterpretation Traffic Timing, Substitution, and Insertion Pivoting	
	Total	60

10. Evaluation Pattern:

- **Total Marks:** 100 Marks (10 Point Grading)
- **Passing Criteria**: 40 % (4 Grade Points)
- **Marking Scheme:** 60:40 Pattern
    i. 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
    ii. 40 Marks - Internal Assessment (Passing = 16 Marks)
- **Mode of Evaluation of Answer-books:**Offline

11. Paper Pattern:

- **Internal Assessment:**
    i. Assessment consists of a class tests of 20 marks. The class test is to be conductedwhen approx. 40% syllabus is completed. Test will be of 45 Minutes.
    ii. Students have to submit assignment after completion of each module which willcarry 15 marks and 5 marks are for attendance.
- **Semester End Theory Examination :**

Question No.	Description	Marks
1	Answer any two Questions (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.1 to Q.6 will include total 3 sub questions having 5 marks each

12. Course Outcome:

After completion of the course, a student should be able to:

CO1: Understanding basics of SOC, Cryptography and managing and deploying VPNs.

CO2: Analyse Windows and Linux based logs along with logs generated by endpoints.

CO3: Understand and analyze various forms of intrusions, threats and perform forensicanalysis on them.

CO4: Understand the incident response process and handle incidents by adhering to compliance policies and standards set by the organization.

CO5: Understand the various types of attacks and vulnerabilities, categorize events andperform incident analysis.

13. References:

1. CCNA Cyber Ops SECOPS 210-255 Official Cert Guide, Omar Santos, Joseph Muniz, CISCO, 1st Edition, 2017.
2. CCNA Cyber Ops SECFND 210-250 Official Cert Guide, Omar Santos, Joseph Muniz, CISCO, 1st Edition, 2017.
3. CCNA Cyber security Operations Companion Guide, CISCO, 1st Edition, 2018.

COURSE STRUCTURE

1. **Title of the Course:** Server Virtualization on VMWare
2. **Semester**: III
3. **Course Code: For Theory:** MITELP306
4. **Course Objective**:

   This course aims
   1. Artificial intelligence of things (AIoT) is the combination of artificial intelligence (AI) technologies and the internet of things (IoT) infrastructure.
   2. Create more efficient IoT operations, improve human-machine interactions and enhance data management and analytics.
5. **Category of Course**: Elective
6. **Total Hours**: 60

7 Total Credits: 04 Credits

8. Modules:

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
MITELP306	Server Virtualization on VMWare	-	4		4	4

Practical List
1 a. Configure and use vCenter Server Appliance. b. Assign roles and permissions to Active Directory users to perform functions in vCenter Server Appliance. 2 a. Create a standard switch and a port group. b. Configure access to an iSCSI datastore. 3 a. Create and manage VMFS datastores. b. Configure access to an NFS datastore. c. Deploy a new virtual machine from a template and clone a virtual machine. 4 a. Create a content library to clone and deploy virtual machines. b. Modify a virtual machine's hardware and add a raw LUN to a virtual machine. 5 Use vSphere vMotion and vSphere Storage vMotion to migrate virtual machines

6 Perform virtual machine management tasks. 7 a. In vCenter Server, create and use resource pools on an ESXi host. b. Use the system monitoring tools to reflect the CPU workload. 8 Use the vCenter Server Appliance alarm feature. 9 Use vSphere HA functionality. 10 a. Implement a vSphere DRS cluster. b. Install, configure, and use vSphere Update Manager.

9. Evaluation Pattern:

a. **Total Marks** : 100 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 100

   i. 50 Marks- Internal Assessment (As per university)

   ii. 50 Marks –Semester End Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** :Offline

10. Course Outcome:

After completion of the course, a student should be able to:

OC 1: Install and configure virtualization technology such as VMware
OC 2: Configure and manage virtual network and storage such as vCenter server or ESxi
OC 3: Deploy, manage and migrate virtual machines.
OC 4: Describe a system backup and restoration

11. References:

1. Advanced Server VirtualizationVMware and Microsoft Platforms in the Virtual Data Center By David Marshall, Wade A. Reynolds, Dave McCrory, 2006
2. VMware vSAN 7.0 U3 Deep Dive By Duncan Epping

MSC.IT SEM IV	

Subject Code	Subject Name	Credit
MITMJ401	Block Chain	4
MITMJP401	Block Chain Practical	2
MITMJ402	Cyber Forensis	4
MITMJP402	Cyber Forensis Practical	2
MITEL403	Data Science	4
MITELP403	Data Science PR	2
MITEL404	Cyber Security	4
MITELP404	Cyber Security PR	2
MITEL405	Adacnaced IOT	2
MITELP405	Adacnaced IOT PR	2
MITOJT406	Project - 6	6

COURSE STRUCTURE

1. **Title of the Course:** Blockchain
2. **Semester**: IV
3. **Course Code: For Theory: MITMJ401**

   For Practical: MITMJP401

4. Course Objective:

a. Develop in depth understanding of the key technologies in data science and business To provide conceptual understanding of the function of Blockchain as a method of securing distributed ledgers, how consensus on their contents is achieved, and the newapplications that they enable.

b. To cover the technological underpinnings of blockchain operations as distributed data structures and decision-making systems, their functionality and different architecture types.

c. To provide a critical evaluation of existing "smart contract" capabilities and platforms, and examine their future directions, opportunities, risks and challenges.

a. Category of Course: Major

5. **Total Hours**: 60
6. **Total Credits**: 06Credits (04 Credits for Theory & 02 Credits for Practical)

7. Modules:

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
MITMJ401	Blockchain	4	2	4	2	6

Module	Detailed Content	Hours
1	**Blockchain:** Introduction, History, Centralised versus Decentralised systems, Layers of blockchain, Importance of blockchain, Blockchain uses and use cases. **Working of Blockchain:** Blockchain foundation, Cryptography, Game Theory, Computer Science Engineering, Properties of blockchain solutions, blockchain transactions, distributed consensus mechanisms, Blockchain mechanisms, Scalingblockchain **Working of Bitcoin:** Money, Bitcoin, Bitcoin blockchain, bitcoin network, bitcoin scripts, Full Nodes and SVPs, Bitcoin wallets.	15
2	**Ethereum:** three parts of blockchain, Ether as currency and commodity, Building trustless systems, Smart contracts, Ethereum Virtual Machine, The Mist browser, Wallets as a Computing Metaphor, The Bank Teller Metaphor, Breaking with Banking History, How	15

	Encryption Leads to Trust, System Requirements, Using Parity with Geth, Anonymity in Cryptocurrency, Central Bank Network, Virtual Machines, EVM Applications, State Machines, Guts of the EVM, Blocks, Mining's Place in the State Transition Function, Renting Time on the EVM, Gas, Working with Gas, Accounts, Transactions, and Messages, Transactions andMessages, Estimating Gas Fees for Operations, Opcodes in the EVM. **Solidity Programming:** Introduction, Global Banking Made Real, Complementary Currency, Programming the EVM, Design Rationale, Importance of Formal Proofs, Automated Proofs, Testing, Formatting Solidity Files, Reading Code, Statements and Expressions in Solidity, Value Types, Global Special Variables, Units, and Functions,	
3	**Hyperledger:** Overview, Fabric, composer, installing hyperledger fabric and composer, deploying, running the network, error troubleshooting. **Smart Contracts and Tokens:** EVM as Back End,Assets Backed by Anything, Cryptocurrency Is a Measure of Time, Function of Collectibles in Human Systems, Platforms for High-Value Digital Collectibles,Tokens as Category of Smart Contract, Creating a Token, Deploying the Contract, Playing with Contracts. **Mining Ether:** Why? Ether's Source, Defining Mining, Difficulty, Self-Regulation, and the Race for Profit, How Proof of Work Helps Regulate Block Time, DAG and Nonce, Faster Blocks, Stale Blocks, Difficulties, Ancestry of Blocks and Transactions, Ethereum and Bitcoin, Forking, Mining, Geth on Windows, ExecutingCommands in the EVM via the Geth Console, Launching Geth with Flags, Mining on the Testnet, GPU Mining Rigs, Mining on a Pool with Multiple GPUs. **Cryptoecnomics:** Introduction, Usefulness of cryptoeconomics, Speed of blocks, Ether Issuance scheme, Common Attack Scenarios.	15
4	**Blockchain Application Development:** Decentralized Applications, Blockchain Application Development, Interacting with the Bitcoin Blockchain, Interacting Programmatically with Ethereum—Sending Transactions, Creating a Smart Contract, Executing Smart Contract Functions, Public vs. Private Blockchains, Decentralized Application Architecture, **Building an Ethereum DApp:** The DApp, Setting Up a Private Ethereum Network, Creating the Smart Contract, Deploying the Smart Contract, Client Application, **DApp deployment:** Seven Ways to Think About SmartContracts, Dapp Contract Data Models, EVM back-end and front-end communication, JSON-RPC, Web 3, JavaScript API, Using Meteor with the EVM, ExecutingContracts in the Console, Recommendations for Prototyping, Third-Party Deployment Libraries,	15

	Creating Private Chains.	

List of Practicals

10 practicals covering the entire syllabus must be performed. The detailed list of practical will be circulated later in the official workshop.

8. Evaluation Pattern:

a. Total Marks: 100 Marks (10 Point Grading)

b. Passing Criteria: 40 % (4 Grade Points)

c. Marking Scheme: 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks – Practical Assessment (Passing = 20 Marks)

d. Mode of Evaluation of Answer-books: Offline

9. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of 45 Minutes.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination:

Question No.	Description	Marks
1	Answer any three Questions (Covering All Modules)	15
2	Answer any three Questions (Descriptive based on module 1)	15
3	Answer any three Questions (Descriptive based on module 2)	15
4	Answer any three Questions (Descriptive based on module 3)	15

Note: Q.1 to Q.4 will include total 4 sub questions having 5 marks each.

c. Semester End Practical Examination:

Exam Duration	Practical + Oral	Journal	Total
2 Hours 30 min per batch	40 Marks	10 Marks	50 Marks

10. Course Outcome:

On successful completion of this course, the Learner should be able to:

CO1: The students would understand the structure of a blockchain and why/when it is betterthan a simple distributed database.

CO2: Analyze the incentive structure in a blockchain based system and critically assess its functions, benefits and vulnerabilities

CO3: Evaluate the setting where a blockchain based structure may be applied, its potential andits limitations

CO4: Understand what constitutes a "smart" contract, what are its legal implications and whatit can and cannot do, now and in the near future

CO5: Develop blockchain DApps.

Books and References:					
Sr. No.	**Title**	**Author/s**	**Publisher**	**Edition**	**Year**
1.	Beginning Blockchain A Beginner's Guide to Building Blockchain Solutions	Bikramaditya Singhal, Gautam Dhameja, Priyansu Sekhar Panda	Apress		2018
2.	Introducing Ethereum and Solidity	Chris Dannen	Apress		2017
3.	The Blockchain Developer	Elad Elrom	Apress		2019

4.	Mastering Ethereum	Andreas M. Antonopoulos Dr. Gavin Wood	O'Reilly	First	2018
5.	Blockchain Enabled Applications	Vikram Dhillon David Metcalf Max Hooper	Apress		2017

COURSE STRUCTURE

1. **Title of the Course :** Cyber forensic
2. **Semester** : III
3. **Course Code: For Theory :**MITMJ402
   For Practical: MITMJP402

4. Course Objective:

a. Explain laws relevant to computer forensics.
b. Seize digital evidence from pc systems.
c. Recover data to be used as evidence .
d. Analyse data and reconstruct events.

5. **Category of Course** : Major mandatory
6. **Total Hours**: 60
7. **Total Credits**: 06 Credits (04 Credits for Theory & 02 Credits for Practical)

8. Modules:

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
MITMJ402	Machine Learning	4	2	4	2	6

Module	Detailed Content	Hours
1	Computer Forensics: The present Scenario, The Investigation Process, Computers – Searching and Seizing, Electronic Evidence, Procedures to be followed by the first responder.	12
2	Setting up a lab for Computer Forensics, Hard Disks and File Systems, Forensics on Windows Machine, Acquire and Duplicate Data	12

3	Recovery of deleted files and partitions, Using Access Data FTK and Encase for forensics Investigation, Forensic analysis of Steganography and Image files, Cracking Application passwords	12
4	Capturing logs and correlating to the events, Network Forensics – Investigating logs and Network traffic, Investigating Wireless and Web Attacks.	12
5	Email Tracking and Email Crime investigation. Mobile Forensics, Reports of Investigation, Become an expert witness	12
	Total	60

List of Practical:

10 practical covering the entire syllabus must be performed. The detailed list of practical will be circulated later in the official workshop

9. Evaluation Pattern:

a. **Total Marks** : 150 Marks (10 Point Grading)

b. **Passing Criteria** : 40 % (4 Grade Points)

c. **Marking Scheme** : 60:40:50 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)
- 50 Marks - Practical Assessment (Passing = 20 Marks)

d. **Mode of Evaluation of Answer-books** : Offline

10. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class tests of 20 marks. The class test is to be conducted when approx. 40% syllabus is completed. Test will be of one hour.
- Students have to submit assignment after completion of each module which will carry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination :

Question No.	Description	Marks
1	Objectives or Short Answers (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10

4	Answer any two Questions (Descriptive based on module 3)	10
5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.2 to Q.6 will include total 4 sub questions having 5 marks each

c. Semester End Practical Examination:

Exam Duration (in Hours)	Practical + Oral	Journal	Total
2 Hours 30 min per batch	30+10Marks	10 Marks	50 Marks

11. Course Outcome:

Upon successful completion of this course, students should be able to develop application

CO1: Investigate the cyber forensics with standard operating procedures.

CO2: Recover the data from the hard disk with legal procedure

CO3: To recover and analyse the data using forensics tool

CO4: Acquire the knowledge of network analysis and use it for analysing the internet attacks.

12. References:

1. Understanding machine learning: From theory to algorithms, by Shalev-Shwartz, Shai, and Shai Ben-David, 2014.

Practical machine learning tools and techniques, by Ian H., et al. 2016

COURSE STRUCTURE

1. **Title of the Course:** Data Science
2. **Semester**: IV
3. **Course Code: For Practical: MITELP404**

4. Course Objective:

a. Develop in depth understanding of the key technologies in data science and business analytics: data mining, machine learning, visualization techniques, predictive modeling, and statistics.
b. Practice problem analysis and decision-making.
c. Gain practical, hands-on experience with statistics programming languages and data science tools through coursework and applied research experiences.

5. **Category of Course**: ELECTIVE
6. **Total Hours**: 20HRS
7. **Total Credits**: 02Credits For Practical

8. Modules:

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
MITMJ101	Data Science	-	2	-	2	2

Sr.No	Practical No	List of the Practical
1)	---	**Prerequisites to Data Science Practical.**
2)	1	**Creating and Using Database in Cassandra.**
3)	2	**Conversion From Different Formats.**
4)	3	**Utilities and Auditing**
5)	4	**Retrieving Data**
6)	5	**Assessing Data**
7)	6	**Processing Data**
8)	7	**Transforming Data**
9)	8	**Organizing Data**
10)	9	**Generating Reports**
11)	10	**Data Visualization with Power BI**

9. Evaluation Pattern:

a. **Total Marks:** 50 Marks (10 Point Grading)
b. **Marking Scheme:** 50 Pattern
    i. 50 Marks – Practical Assessment (Passing = 20 Marks)

c. **Semester End Practical Examination**:

Exam Duration	Practical + Oral	Journal	Total
2 Hours 30 min per batch	40 Marks	10 Marks	50 Marks

10. Course Outcome:

On successful completion of this course, the Learner should be able to:

CO1: Apply quantitative modeling and data analysis techniques to the solution of real world business problems, communicate findings, and effectively present results using data visualization techniques.

CO2: Apply ethical practices in everyday business activities and make well-reasoned ethical business and data management decisions. Demonstrate knowledge of statistical data analysis techniques utilized in business decision making. Apply principles of Data Science to the analysis of business problems.

CO3: Use data science software to solve real-world problems. Apply algorithms to build machine intelligence. Demonstrate use of team work, leadership skills, decision making and organization theory

References:

Books and References:					
Sr. No.	**Title**	**Author/s**	**Publisher**	**Edition**	**Year**
1.	Practical Data Science	Andreas François Vermeulen	APress		2018
2.	Principles of Data Science	Sinan Ozdemir	PACKT		2016
3.	Data Science from Scratch	Joel Grus	O'Reilly		2015
4.	Data Science from Scratchfirst Principle in python	Joel Grus	Shroff Publishers		2017
5.	Experimental Design inData science with Least Resources	N C Das	Shroff Publishers		2018

COURSE STRUCTURE

1. **Title of the Course:** Cyber Security
2. **Semester**: IV
3. **Course Code: For Theory:** MITEL405
4. **Course Objective:**
   a. To understand various types of cyber-attacks and cyber-crimes
   b. To learn threats and risks within context of the cyber security
   c. To have an overview of the cyber laws & concepts of cyber forensics
   d. To study the defensive techniques against these attacks
5. **Category of Course**: Elective
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits (04 Credits for Theory)
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
MITEL405	Cyber Security	4	0	4	0	4

Module	Detailed Content	Hours
1	**Introduction to Cyber Security:** Basic Cyber Security Concepts, layers of security, Vulnerability, threat, Harmful acts, Internet Governance – Challenges and Constraints, Computer Criminals, CIA Triad, Assets and Threat, motive of attackers, active attacks, passive attacks, Software attacks, hardware attacks, Cyber Threats-Cyber Warfare, Cyber Crime, Cyber terrorism, Cyber Espionage, etc., Comprehensive Cyber Security Policy.	12
2	**Cyberspace and the Law & Cyber Forensics:** Introduction, Cyber Security Regulations, Roles of International Law. The INDIAN Cyberspace, National Cyber Security Policy. Introduction, Historical background of Cyber forensics, Digital Forensics Science, The Need for Computer Forensics, Cyber Forensics and Digital evidence, Forensics Analysis of Email, Digital Forensics Lifecycle, Forensics Investigation, Challenges in Computer Forensics	12
3	**Cybercrime:** Mobile and Wireless Devices: Introduction, Proliferation of Mobile and Wireless Devices, Trends in Mobility, Credit card Frauds in Mobile and Wireless Computing Era, Security Challenges Posed by Mobile Devices, Registry Settings for Mobile Devices, Authentication service Security, Attacks on Mobile/Cell Phones, Organizational security Policies and Measures in Mobile Computing Era, Laptops.	12

4	**Cyber Security:** Organizational Implications: Introduction, cost of cybercrimes and IPR issues, web threats for organizations, security and privacy implications, social media marketing: security risks and perils for organizations, social computing and the associated challenges for organizations.	12
5	**Privacy Issues:** Basic Data Privacy Concepts: Fundamental Concepts, Data Privacy Attacks, Datalinking and profiling, privacy policies and their specifications, privacy policy languages, privacy in different domains- medical, financial, etc	12
	Total	60

9. Evaluation Pattern:

a. **Total Marks:** 100 Marks (10 Point Grading)

b. **Passing Criteria**: 40 % (4 Grade Points)

c. **Marking Scheme:** 60:40 Pattern

- 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
- 40 Marks - Internal Assessment (Passing = 16 Marks)

d. **Mode of Evaluation of Answer-books:**Offline

10. Paper Pattern:

a. Internal Assessment:

- Assessment consists of a class tests of 20 marks. The class test is to be conductedwhen approx. 40% syllabus is completed. Test will be of 45 Minutes.
- Students have to submit assignment after completion of each module which willcarry 15 marks and 5 marks are for attendance.

b. Semester End Theory Examination :

Question No.	Description	Marks
1	Answer any two Questions (Covering All Modules)	10
2	Answer any two Questions (Descriptive based on module 1)	10
3	Answer any two Questions (Descriptive based on module 2)	10
4	Answer any two Questions (Descriptive based on module 3)	10

5	Answer any two Questions (Descriptive based on module 4)	10
6	Answer any two Questions (Descriptive based on module 5)	10

Note: Q.1 to Q.6 will include total 3 sub questions having 5 marks each

11. Course Outcome:

On successful completion of this course, the Learner should be able to:

CO1: Analyze cyber-attacks, types of cybercrimes, cyber laws and also how to protect them self and ultimately the entire Internet community from such attacks.

CO2: Interpret and forensically investigate security incidents

CO3: Apply policies and procedures to manage Privacy issues

CO4: Design and develop secure software modules

12. References:

1. Nina Godbole and SunitBelpure, Cyber Security Understanding Cyber Crimes,Computer Forensics and Legal Perspectives,Wiley.
2. B.B.Gupta,D.P.Agrawal,HaoxiangWang,ComputerandCyberSecurity:Principle s, Algorithm, Applications, and Perspectives, CRC Press, ISBN 9780815371335,2018.
3. Cyber Security Essentials, James Graham, Richard Howard and Ryan Otson, CRCPress.
4. Introduction to Cyber Security, Chwan-Hwa(john) Wu,J. David Irwin, CRC Press T&FGroup.

13. Course Outcome:

On successful completion of this course, the Learner should be able to:

CO1: Understand soft computing techniques and their role in problem solving.

CO2: Conceptualize and parameterize various problems to be solved through basic soft computing techniques.

CO3: Analyse and integrate various soft computing techniques in order to solve problems effectively and efficiently.

14. References:

5. Neural Networks, Fuzzy Logic & Genetic Algorithm: Synthesis and Applications by S. Rajasekaran & G. A. Vijayalakshmi Pai, Phi, 2003.
6. Soft Computing: Methodologies and Applications by Hoffmann, F., Koeppen, M., Klawonn, F. & Roy, R., Springer, 2005.
7. Principles of Soft Computing by S. N. Sivanandam & S.N. Deepa, Wiley, 2007.
8. Genetic Algorithms by David E. Goldberg, Pearson Education India, 2006.

9. Soft Computing and Its Applications by Rafik Aziz, O. Aliev, R. R. Aliev, WorldScientific, 2001.
10. Artificial Neural Networks by B. Yagnanarayana, PHI, 2009.
11. Neural Networks and Learning Machines by Simon O. Haykin, 3rd Edition, PrenticeHall, 2009.

COURSE STRUCTURE

1. **Title of the Course:** Advanced IOT
2. **Semester**: IV
3. **Course Code: For Theory:** MITELP406
4. **Course Objective:**

This course aims

1. Artificial intelligence of things (AIoT) is the combination of artificial intelligence (AI) technologies and the internet of things (IoT) infrastructure.
2. Create more efficient IoT operations, improve human-machine interactions and enhance data management and analytics.

5. **Category of Course**: Elective
6. **Total Hours**: 60
7. **Total Credits**: 04 Credits
8. **Modules:**

Course Code	Course Name	Teaching Scheme (Hours /Week)		Credits Assigned		
		Theory	Practical/ Tutorial	Theory	Practical/ Tutorial	Total
MITEL106	Advanced IOT	-	2		4	4

	Practical List	
	1. Loading Raspbian and Windows IoT Core on Raspberry Pi and executing applications on it using Python and node.js. 2. Create a home automation system and control the devices remotely. 3. Create the programs using the Microsoft Cognitive APIs for IoT. 4. Create blockchain on Raspberry Pi and implement and test it. Authenticate IoT with blockchain. 5. Implement Microservices on IoT device. 6. Build your own IoT platform. 7. Use IoT device with AWS. 8. Send telemetry from a device to an IoT hub and read it with a service application. 9. Use the Azure CLI and Azure portal to configure IoT Hub	

	message routing. 10. Face Detection using IoT device. (Pi Camera or anything else).	
	Total	

9. Evaluation Pattern:

a. **Total Marks:** 100 Marks (10 Point Grading)
b. **Passing Criteria**: 40 % (4 Grade Points)
c. **Marking Scheme:** 50:50 Pattern
    i. 60 Marks - Written/Semester End Exam (Passing = 24 Marks)
    ii. 50 Marks - Internal Assessment (Passing = 16 Marks)
d. **Mode of Evaluation of Answer-books:**Offline

10. Course Outcome:

After completion of the course, a student should be able to:

CO 1: Understanding **Integrating AI with IoT**
CO 2: Understanding **Exploring the IoT Ecosystem**
CO 3: Understanding **Unlocking IoT Data Analytics**
CO 4: Understanding **Empowering Creativity**

11. References:

1. AIoT and Smart Sensing Technologies for Smart Devices Al-Turjman Fadi publisher Engineering Science Reference, 2024
2. Artificial Intelligence for Students By Vibha Pandey