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| M.B.A.  **SYSTEM MANAGEMENT** |
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| **SYLLABUS** |
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| **from the academic year**  **2023 - 2024** |
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| **TAMILNADU STATE COUNCIL FOR HIGHER EDUCATION, CHENNAI – 600 005** |

**M.B.A. – SYSTEMS MANAGEMENT**

**(FULL TIME)**

**Choice Based Credit System**

# Program Educational Outcomes;

# PEO 1 – Employability: To develop students with industry specific knowledge & skills to meet the industry requirements and also join Public sector undertaking through competitive examinations.

# PEO 2 - Entrepreneur: To create effective business service owners, with a growth mindset by enhancing their critical thinking, problem solving and decision-making skills.

# PEO3 – Research and Development: To instill and grow a mindset that focusses efforts towards inculcating and encouraging the students in the field research and development.

# PEO 4 – Contribution to Business World: To produce ethical and innovative business professionals to enhance growth of the business world.

# PEO 5 – Contribution to the Society: To work and contribute towards holistic development of society by producing competent MBA professionals.

# Program Outcomes:

**PO1: Problem Solving Skill:** Application of tools & techniques relevant to management theories and practices in analyzing & solving business problems.

**PO2: Decision Making Skill:** Fostering analytical and critical thinking abilities for data-based decision making.

**PO3: Ethical Value:** Ability to develop value based leadership attributes.

**PO4: Communication Skill:** Ability to understand, analyze and effectively communicate global, economic, legal and ethical aspects of business.

**PO5: Individual and Team Leadership Skill:** Ability to be self-motivated in leading & driving a team towards achievement of organizational goals and contributing effectively to establish industrial harmony.

**PO6: Employability Skill:** Foster and enhance employability skills through relevant industry subject knowledge.

**PO7: Entrepreneurial Skill:** Equipped with skills and competencies to become a global entrepreneur.

**PO8: Contribution to Society:** Strive towards becoming a global influencer and motivating future generation towards building a legacy that contributes to overall growth of humankind.

# PEO – PO MAPPING

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | PO 1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 |
| PEO 1 | Y | Y | Y | Y | Y | Y | Y | Y |
| PEO 2 | Y | Y | Y | Y | Y |  | Y | Y |
| PEO3 | Y | Y | Y | Y | Y | Y |  | y |
| PEO 4 | Y | Y | Y | Y | Y | Y | Y | Y |
| PEO 5 | Y | Y | Y | Y | Y | Y | Y | Y |

# Y - Yes

# FIRST SEMESTER

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | **Inst. Hours** | **Marks** | | |
| **CIA** | **External** | **Total** |
|  | Management Principles and Business Ethics | Core | 4 | - | - | - | 4 | 60 | 25 | 75 | 100 |
|  | Quantitative Techniques and Research Methods in Business | Core | 3 | 1 | - | - | 4 | 60 | 25 | 75 | 100 |
|  | Managing Organizational Behaviour | Core | 4 | - | - | - | 4 | 60 | 25 | 75 | 100 |
|  | Accounting for Managers | Core | 3 | 1 | - | - | 4 | 60 | 25 | 75 | 100 |
|  | Managerial Economics | Core | 4 | - | - | - | 4 | 60 | 25 | 75 | 100 |
|  | Legal Systems in Business | Core | 4 | - | - | - | 4 | 60 | 25 | 75 | 100 |
|  | Entrepreneurship Development | Extra Disciplinary | 3 | - | - | - | 3 | 45 | 25 | 75 | 100 |
|  | Soft Skills I – Executive Communication | Soft Skills | - | - | 2 | - | 2 | 30 | 25 | 75 | 100 |

# SECOND SEMESTER

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | **Inst. Hours** | **Marks** | | |
| **CIA** | **External** | **Total** |
|  | Applied Operations Research | Core | 3 | 1 | - | - | 4 | 60 | 25 | 75 | 100 |
|  | Human Resource Management | Core | 4 | - | - | - | 4 | 60 | 25 | 75 | 100 |
|  | Marketing Management | Core | 4 | - | - | - | 4 | 60 | 25 | 75 | 100 |
|  | Operations Management | Core | 3 | 1 | - | - | 4 | 60 | 25 | 75 | 100 |
|  | Financial Management | Core | 3 | 1 | - | - | 4 | 60 | 25 | 75 | 100 |
|  | Strategic Management | Core | 4 | - | - | - | 4 | 60 | 25 | 75 | 100 |
|  | International Business | Extra Disciplinary | 3 | - | - | - | 3 | 45 | 25 | 75 | 100 |
|  | Soft Skills II – Business Etiquette | Soft Skills | - | - | 2 | - | 2 | 30 | 25 | 75 | 100 |
|  | Soft Skills III – Computing Skills | Soft Skills | - | - | 2 | - | 2 | 30 | 25 | 75 | 100 |

# THIRD SEMESTER

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | **Inst. Hours** | **Marks** | | |
| **CIA** | **External** | **Total** |
|  | Information Systems for Business | Core | 4 | - | - | - | 4 | 60 | 25 | 75 | 100 |
|  | \*\*Choose any one from the list | Elective | 3 | - | - | - | 3 | 45 | 25 | 75 | 100 |
|  | \*\*Choose any one from the list | Elective | 3 | - | - | - | 3 | 45 | 25 | 75 | 100 |
|  | \*\*Choose any one from the list | Elective | 3 | - | - | - | 3 | 45 | 25 | 75 | 100 |
|  | \*\*Choose any one from the list | Elective | 3 | - | - | - | 3 | 45 | 25 | 75 | 100 |
|  | \*\*Choose any one from the list | Elective | 3 | - | - | - | 3 | 45 | 25 | 75 | 100 |
|  | \*\*Choose any one from the list | Elective | 3 | - | - | - | 3 | 45 | 25 | 75 | 100 |
|  | Employability skills | Extra Disciplinary | 3 | - | - | - | 3 | 45 | 25 | 75 | 100 |
|  | Soft Skills IV – Leadership and Team Building Skills | Soft Skills | - | - | 2 | - | 2 | 30 | 25 | 75 | 100 |
|  | \*\*\*Summer Internship | Internship | - | - | - | 1 | 3 | - | 100 | - | 100 |

**\*\* Students should choose six elective Course from the specialization list in consultation with the Head of the Institution.**

**For the categorization of specialization students can either opt for either single or dual specialization.**

**In case of students opting for single specialization, they should compulsorily choose 6 elective papers from one area specialization from the list given below:**

**In case of students opting for dual specialization. They should choose 3 elective papers from respective area of specialization.**

**\*\*\* Internship will be carried out during the summer vacation after the first year. Viva Voce will be conducted by the college and marks shall be sent to the University and the same will be included in the Third Semester Marks Statement.**

# FOURTH SEMESTER

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | **Inst. Hours** | **Marks** | | |
| **CIA** | **External** | **Total** |
|  | # Project Work & Viva- Voce | Core | - | - | - | Y | 12 | - | 75 | 225 | 300 |

**L-Lecture T-Tutorial P- Practical O-Project**

**# The Project Work will be evaluated jointly by TWO Examiners (i.e. one Internal and the other External) for a Maximum of 225 Marks (9 Credits).**

**# The Viva- Voce will be conducted with Two Examiners (i.e. one Internal and the other External) for a Maximum of 75 Marks (3 Credits).**

**Specialization Courses: Systems Management**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | **Inst. Hours** | **Marks** | | |
| **CIA** | **External** | **Total** |
| 1 | Database Management System | Elective | 3 | - | - | - | 3 | 3 | 25 | 75 | 100 |
| 2 | System Analysis and Design | Elective | 3 | - | - | - | 3 | 3 | 25 | 75 | 100 |
| 3 | Decision Support System | Elective | 3 | - | - | - | 3 | 3 | 25 | 75 | 100 |
| 4 | E – Business | Elective | 3 | - | - | - | 3 | 3 | 25 | 75 | 100 |
| 5 | Internet of Things | Elective | 3 | - | - | - | 3 | 3 | 25 | 75 | 100 |
| 6 | Cloud Computing | Elective | 3 | - | - | - | 3 | 3 | 25 | 75 | 100 |
| 7 | Enterprise Resource Planning | Elective | 3 | - | - | - | 3 | 3 | 25 | 75 | 100 |
| 8 | Software project and quality management | Elective | 3 | - | - | - | 3 | 3 | 25 | 75 | 100 |
| 9 | Data Warehousing | Elective | 3 | - | - | - | 3 | 3 | 25 | 75 | 100 |
| 10 | Deep Learning and Artificial Intelligence | Elective | 3 | - | - | - | 3 | 3 | 25 | 75 | 100 |

**# Choose any 6 electives from the above list in consultation with the HOD or Head.**

**SYLLABUS**

**SEMESTER I**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | | **Inst. Hours** | **Marks** | | | |
| **CIA** | | **External** | **Total** |
|  | **Management Principles and Business Ethics** | Core | 4 | - | - | - | 4 | | 60 | 25 | | 75 | 100 |
| **Course Objectives** | | | | | | | | | | | | | |
| C1 | To familiarize the students to the basic concepts of management in order to aid in understanding how an organization functions. | | | | | | | | | | | | |
| C2 | To provide insights on Planning & Decision Making | | | | | | | | | | | | |
| C3 | To throw light on Organizing, Managing Change and Innovation | | | | | | | | | | | | |
| C4 | To elucidate on Leadership, Communication and Controlling. | | | | | | | | | | | | |
| C5 | To create awareness and importance of Business Ethics and Social Responsibility. | | | | | | | | | | | | |
| **SYLLABUS** | | | | | | | | | | | | | |
| **UNIT** | **Details** | | | | | | | **No. of Hours** | | | **Course Objectives** | | |
| I | **Introduction:** Nature of Management – Concepts and Foundations of Management- Managerial Functions- Management Skills- The Evolution of Management Thought – Tasks of a Professional Manager –Organizational Culture - Environment– Systems Approach to Management – Levels in Management – Disaster Management | | | | | | | 12 | | | C1 | | |
| II | **Planning & Decision Making:** Steps in Planning Process – Scope and Limitations – Short Term and Long Term Planning – Flexibility in Planning – Characteristics of a Sound Plan – Management By Objectives (MBO). Strategic Management ProcessDecision Making Process and Techniques. Business Models | | | | | | | 12 | | | C2 | | |
| III | **Nature of Organizing:** Organization Structure and Design - Authority Relationships – Delegation of Authority and Decentralization – Interdepartmental Coordinator – emerging Trends in corporate Structure, Strategy and Culture – Impact of Technology on Organizational design – Mechanistic vs. Adoptive Structures – Formal and Informal Organization. Span of control – Pros and Cons of Narrow and Wide Spans of Control – Optimum Span - Managing Change and Innovation. | | | | | | | 12 | | | C3 | | |
| IV | **Leadership and Control:** Leadership: Approaches to Leadership and Communication.  Control: Concept of Control – Application of the Process of Control at Different Levels of Management (top, middle and first line). Performance Standards – Measurements of Performance – Remedial Action - An Integrated Control system in an Organization – Management by Exception (MBE) – | | | | | | | 12 | | | C4 | | |
| V | **Business Ethics:** Importance of Business Ethics – Ethical Issues and Dilemmas in Business - Ethical Decision Making and Ethical Leadership – Ethics Audit - Business Ethics and - CSR Models. | | | | | | | 12 | | | C5 | | |
|  | **Total** | | | | | | | **60** | | |  | | |
| **Course Outcomes** | | | | | | | | | | | | | |
| **Course Outcomes** | On completion of this course, students will; | | | | | | | **Program Outcomes** | | | | | |
| **CO1** | Possess the knowledge on the basic concepts of management and understand how an organization functions. | | | | | | | PO4, PO6, PO8 | | | | | |
| **CO2** | Possess knowledge on planning & decision making. | | | | | | | PO1, PO2 | | | | | |
| **CO3** | Have insights on organizing, managing change and Innovation | | | | | | | PO5, PO6, PO7 | | | | | |
| **CO4** | Learn leadership, communication and controlling skills. | | | | | | | PO4, PO5 | | | | | |
| **CO5** | Have better understanding on business ethics and social responsibility. | | | | | | | PO3, PO8 | | | | | |
| **Reading List** | | | | | | | | | | | | | |
| 1. | https://deb.ugc.ac. In | | | | | | | | | | | | |
| 2. | http://wwww.managementconcepts. Com | | | | | | | | | | | | |
| 3. | International journal of Management Concepts and Philosophy | | | | | | | | | | | | |
| 4. | Journal of Management, Sage Publications | | | | | | | | | | | | |
| **References Books** | | | | | | | | | | | | | |
| 1. | Mukherjee, K., Principles of Management, 2nd Edition, Tata McGraw Hill Education Pvt. Ltd., 2009 | | | | | | | | | | | | |
| 2. | S. K. Mandal., Management Principles and practice, 3rd Edition, Jaico Publishing House, Jan.2011. | | | | | | | | | | | | |
| 3. | Griffin, R. W., Management, 11th Edition, South-Western College Publication, January 2018. | | | | | | | | | | | | |
| 4. | Koontz, H. and Weihrich, H., Essentials of Management: An International Perspective, 11th Edition, Tata McGraw Hill Education Private Ltd., July 2020 | | | | | | | | | | | | |
| 5. | Certo, S C. and Certo, T, Modern Management, 13th Edition, Prentice Hall, January 2014. | | | | | | | | | | | | |
| 6. | Robbins, S and Coulter, M, 11th Edition, Management, Prentice Hall, 11th edition, January 2012 | | | | | | | | | | | | |
| 7. | Shaikh Ubaid, Disaster Management, Technical publications, 1st edition, 2020 | | | | | | | | | | | | |

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|  | **PO 1** | **PO 2** | **PO 3** | **PO 4** | **PO 5** | **PO 6** | **PO 7** | **PO 8** |
| **CO 1** |  |  |  | 2 |  | 2 |  | 2 |
| **CO 2** | 2 | 3 |  |  |  |  |  |  |
| **CO 3** |  |  |  |  | 2 | 2 | 2 |  |
| **CO 4** |  |  |  | 3 | 3 |  |  |  |
| **CO 5** |  |  | 3 |  |  |  |  | 3 |

**3-Strong 2-Medium 1-Low**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | | **Inst. Hours** | **Marks** | | | |
| **CIA** | | **External** | **Total** |
|  | **Quantitative Techniques and Research Methods in Business** | Core | 3 | 1 | - | - | 4 | | 60 | 25 | | 75 | 100 |
| **Course Objectives** | | | | | | | | | | | | | |
| C1 | To provide the students with an introduction to probability theory and discuss how probability calculations may facilitate their decision making. | | | | | | | | | | | | |
| C2 | To construct a coherent research proposal that includes an abstract, literature review, research questions, ethical considerations and methodology. | | | | | | | | | | | | |
| C3 | To understand the basic statistical tools for analysis & interpretation of qualitative and quantitative data. | | | | | | | | | | | | |
| C4 | To recognize the principles and characteristics of the multivariate data analysis techniques. | | | | | | | | | | | | |
| C5 | To become familiar with the process of drafting a report that poses a significant problem | | | | | | | | | | | | |
| **SYLLABUS** | | | | | | | | | | | | | |
| **UNIT** | **Details** | | | | | | | **No. of Hours** | | | **Course Objectives** | | |
| I | **Introduction:** Probability - Rules of probability- Probability distribution; Binomial, Poisson and Normal Distributions, their applications in Business and Industrial Problem- Baye’s Theorem and its applications - Decision Making under risk and uncertainty; Maximax, Maximin, Regret Hurwitz and Laplace Criteria in Business and Decision Making - Decision tree. | | | | | | | 17 | | | C1 | | |
| II | **Research Methods:** Research - Definition - Research Process - Research Design – Definition- Types Of Research Design - Role of Theory in Research - Variables in Research – Objectives - Hypothesis -Types of Data; Preliminary Vs Secondary- Methods of Primary Data Collection; Survey, Observation, Experiments - Construction Of Questionnaire - Questionnaire Schedule- Validity and Reliability of Instruments - Types of Scales; Nominal, Ordinal, Interval - Types of Attitude Measurement Scales – Sampling Techniques; Probability And Non probability Techniques- Optimal Sample Size determination. | | | | | | | 10 | | | C2 | | |
| III | **Data Preparation and Analysis:** Data Preparation - Editing –Coding- Data Entry- Data Analysis- Testing Of Hypothesis Univariate and Bivariate Analysis -Parametric And Nonparametric Tests and Interpretation of Test Results- Chi-Square Test- Correlation; Karl Pearson’s Vs Correlation Coefficient and Spearman's Rank Correlation- Regression Analysis - One Way and Two Way Analysis of Variance. | | | | | | | 15 | | | C3 | | |
| IV | **Multivariate Statistical Analysis:** Exploratory and Confirmatory Factor Analysis -Discriminant Analysis- Cluster Analysis -Conjoint Analysis -Multiple Regression- Multidimensional Scaling- Their Application In Marketing Problems -Application of Statistical Software For Data Analysis- SEM Analysis | | | | | | | 09 | | | C4 | | |
| V | **Report Writing and Ethics in Business Research:** Research Reports- Different Types -Report Writing Format- Content of Report- Need For Executive Summary- Chapterization -Framing the Title of the Report- Different Styles Of Referencing -Academic Vs Business Research Reports - Ethics In Research. | | | | | | | 09 | | | C5 | | |
|  | **Total** | | | | | | | 60 | | |  | | |
| **Course Outcomes** | | | | | | | | | | | | | |
| **Course Outcomes** | On completion of this course, students will; | | | | | | | **Program Outcomes** | | | | | |
| **CO1** | Be able to develop problem-solving techniques needed to accurately calculate probabilities. | | | | | | | PO1, PO2, PO6, PO7 | | | | | |
| **CO2** | Be able to devise research methods, techniques and strategies in the appropriate manner for managerial decision making and conduct research for the industry. | | | | | | | PO4, PO6 | | | | | |
| **CO3** | Be able to apply and interpret the different types of quantitative and qualitative methods of data analysis. | | | | | | | PO4, PO6 | | | | | |
| **CO4** | Be able to use multivariate techniques appropriately, undertake multivariate hypothesis tests, and draw appropriate conclusions. | | | | | | | PO4, PO6 | | | | | |
| **CO5** | Be able to present orally their research or a summary of another’s research in an organized, coherent, and compelling fashion. | | | | | | | PO4, PO6 | | | | | |
| **Reading List** | | | | | | | | | | | | | |
| 1. | <https://www.dartmouth.edu/~chance/teaching_aids/books_articles/probability_book/amsbook.mac.pdf> | | | | | | | | | | | | |
| 2. | <https://study.com/academy/topic/probability.html> | | | | | | | | | | | | |
| 3. | <https://onlinecourses.nptel.ac.in/noc18_ma07/preview> | | | | | | | | | | | | |
| 4. | <https://hbr.org/1964/07/decision-trees-for-decision-making> | | | | | | | | | | | | |
| **References Books** | | | | | | | | | | | | | |
| 1. | Kumar, R., Research Methodology: A Step-by-Step guide for Beginners, Sage, South Asia, 4th Edition, 2014. | | | | | | | | | | | | |
| 2. | Srivastava, T.N. and Rego, S., Statistics for Management, 2nd Edition, Tata McGraw Hill, 3rd Edition, 2016. | | | | | | | | | | | | |
| 3. | Cooper, D.R., Schindler, P. And Business Research Methods, Tata- McGrew Hill,12th Edition, 2012. | | | | | | | | | | | | |
| 4. | Cooper, D.R., Schindler, P. and Sharma, J.K., Business Research Methods,11th Edition, Tata-McGraw Hill, 12 th Edition, 2018. | | | | | | | | | | | | |
| 5. | Johnson, R.A., and Wichern, D.W., Applied Multivariate Statistical Analysis, PHI Learning Pvt. Ltd., 6 th Edition, 2012. | | | | | | | | | | | | |
| 6. | Anderson, Sweeny, Williams, Camm and Cochran, Statistics for business and Economics, Cengage Learning, New Delhi, 13th Edition, 2017 | | | | | | | | | | | | |

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|  | **PO 1** | **PO 2** | **PO 3** | **PO 4** | **PO 5** | **PO 6** | **PO 7** | **PO 8** |
| **CO 1** | 3 | 3 |  |  |  | 3 | 3 |  |
| **CO 2** |  |  |  | 3 |  | 3 |  |  |
| **CO 3** |  |  |  | 2 |  | 2 |  |  |
| **CO 4** |  |  |  | 2 |  | 2 |  |  |
| **CO 5** |  |  |  | 2 |  | 3 |  |  |

**3-Strong 2-Medium 1-Low**

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| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | | **Inst. Hours** | **Marks** | | | |
| **CIA** | | **External** | **Total** |
|  | **Managing Organizational Behaviour** | Core | 4 | - | - | - | 4 | | 60 | 25 | | 75 | 100 |
| **Course Objectives** | | | | | | | | | | | | | |
| C1 | To familiarize the students to the basic concepts of managing Organizational Behaviour in order to aid in understanding how an men behave in an organization. | | | | | | | | | | | | |
| C2 | To provide insights on Individual Differences, perception, learning, Attitudes values and motivation | | | | | | | | | | | | |
| C3 | To throw light on Group Dynamics and Interpersonal Communication | | | | | | | | | | | | |
| C4 | To elucidate on Leadership, Politics, Conflicts and Negotiation. | | | | | | | | | | | | |
| C5 | To create awareness and importance of work stress and Emotional Intelligence and its influence on employees in an organization. | | | | | | | | | | | | |
| **SYLLABUS** | | | | | | | | | | | | | |
| **UNIT** | **Details** | | | | | | | **No. of Hours** | | | **Course Objectives** | | |
| I | **Introduction to Organizational Behaviour:** Historical background of OB - Concept Relevance of OB – Contributing disciplines - to the field of OB, challenges and opportunities for OB, foundations of Individual Behaviour. Theory – social theory- Organizational Citizenship Behaviour | | | | | | | 12 | | | C1 | | |
| II | **Individual Difference -** Personality – concept and determinants of personality – theories of personality – type of theories – trait theory – psycho analytic theory - social learning theory – Erikson’s stages of Personality Development Chris Argyris Immaturity to Maturity Continuum. Personality – Job fit.  **Perception:** Meaning Process – Factors influencing perception – Attribution theory  **Learning:** Classical, Operant and Social Cognitive Approaches – Managerial implications**.**  **Attitudes and Values**:– Components, Attitude – Behaviour relationship, formation, values.  **Motivation**: Early Theories of Motivation – Hierarchy of needs theory, Theory X and Theory Y, Two factor theory, McClelland’s theory of needs and Contemporary theories of motivation – Self – Determination theory, Job Engagement, Goal Setting theory, Self– efficacy theory, Re – inforcement theory, Equity theory, Expectancy theory. | | | | | | | 12 | | | C2 | | |
| III | **Group Dynamics –** Foundations of Group Behaviour – Group and Team - Stages of Group Development–Factors affecting Group and Team Performance - Group Decision making  **Interpersonal Communication –** Communication Process – Barriers to Communication– Guidelines for Effective Communication | | | | | | | 12 | | | C3 | | |
| IV | **Leadership –** Trait, Behavioural and Contingency theories, Leaders vs Managers Power and  **Politics:** Sources of Power – Political Behaviour in Organizations – Managing Politics.  **Conflict and Negotiation:** Sources and Types of Conflict –Negotiation Strategies– Negotiation Process. | | | | | | | 12 | | | C4 | | |
| V | **Work Stress:** Stressors in the Workplace – Individual Differences on Experiencing Stress - Managing Workplace Stress. Organizational Culture and Climate: Concept and Importance – Creating and Sustaining Culture.  **Emotional Intelligence,** Work Life Integration Practices.  Knowledge based enterprise- systems and Processes; Networked and virtual organizations. | | | | | | | 12 | | | C5 | | |
|  | **Total** | | | | | | | **60** | | |  | | |
| **Course Outcomes** | | | | | | | | | | | | | |
| **Course Outcomes** | On completion of this course, students will; | | | | | | | **Program Outcomes** | | | | | |
| **CO1** | Possess the knowledge on the basic concepts of managing Organizational Behaviour in order to aid in understanding how an men behave in an organization | | | | | | | PO4 | | | | | |
| **CO2** | Possess knowledge on Individual Differences, perception, learning, Attitudes values and motivation | | | | | | | PO3, PO6 | | | | | |
| **CO3** | Have insights on Group Dynamics and Interpersonal Communication | | | | | | | PO2, PO4, PO5 | | | | | |
| **CO4** | Learn Leadership, Politics, Conflicts and Negotiation. | | | | | | | PO5 | | | | | |
| **CO5** | Have better understanding on work stress and Emotional Intelligence and its influence on employees in an organization. | | | | | | | PO6, PO8 | | | | | |
| **Reading List** | | | | | | | | | | | | | |
| 1. | [www.himpub.com](http://www.himpub.com) | | | | | | | | | | | | |
| 2. | <https://iedunote.com.organisational-behaviour> | | | | | | | | | | | | |
| 3. | [www.yourarticlelibrary.com/organisation/](http://www.yourarticlelibrary.com/organisation/) | | | | | | | | | | | | |
| 4. | Journal of Organizational Behaviour – wiley Online Library | | | | | | | | | | | | |
| **References Books** | | | | | | | | | | | | | |
| 1. | Prasad .L.M., Organisational Behaviour ,Sultan Chand and Sons, 2019 | | | | | | | | | | | | |
| 2. | C.B.Guptha, A Textbook Of Organisational Behaviours ,S.Chand & Company,2019 | | | | | | | | | | | | |
| 3. | K. Aswattappa, Organisational Behaviour, Himalaya Publishing House, 12th Edition, 2016. | | | | | | | | | | | | |
| 4. | Luthans, F. Organizational Behaviour, 12th Edition, Tata McGraw Hill Education, 2017. | | | | | | | | | | | | |
| 5. | McShane, S.L., Von Glinow, M.A., and Sharma, R.R., Organizational Behaviour, 5th Edition, Tata McGraw-Hill Education Pvt. Ltd., 2011. | | | | | | | | | | | | |
| 6. | Stephen P. Robins, Timothy A. Judge and Neharika Vohra, Essentials of Organisational Behaviour, 18th Edition, Pearson Education, 2019. | | | | | | | | | | | | |

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|  | **PO 1** | **PO 2** | **PO 3** | **PO 4** | **PO 5** | **PO 6** | **PO 7** | **PO 8** |
| **CO 1** |  |  |  | 2 |  |  |  |  |
| **CO 2** |  |  | 3 |  |  | 3 |  |  |
| **CO 3** |  | 3 |  | 3 | 3 |  |  |  |
| **CO 4** |  |  |  |  | 3 |  |  |  |
| **CO 5** |  |  |  |  |  | 3 |  | 2 |

**3-Strong 2-Medium 1-Low**

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| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | | **Inst. Hours** | **Marks** | | | |
| **CIA** | | **External** | **Total** |
|  | **Accounting For Managers** | Core | 3 | 1 | - | - | 4 | | 60 | 25 | | 75 | 100 |
| **Course Objectives** | | | | | | | | | | | | | |
| C1 | To acquaint the students with the fundamentals of principles of financial, cost and management accounting | | | | | | | | | | | | |
| C2 | To enable the students to prepare, analyses and interpret financial statements | | | | | | | | | | | | |
| C3 | To acquaint the students with the tools and techniques of financial analysis | | | | | | | | | | | | |
| C4 | To enable the students to take decisions using management accounting tools. | | | | | | | | | | | | |
| C5 | To enable the students to prepare the reports with the accounting tools and facilitate managerial decision making. | | | | | | | | | | | | |
|  | **SYLLABUS** | | | | | | | | | | | | |
| **UNIT** | **Details** | | | | | | | **No. of Hours** | | | **Course Objectives** | | |
| I | Financial Accounting – Meaning - Objectives - functions. Branches of Accounting: Financial, Cost and Management Accounting - Accounting Concepts and conventions. Journal – Ledger – Trial Balance – Preparation of Final Accounts: Trading, Profit and Loss Account and Balance Sheet (problems); International Accounting Standards - IFRS | | | | | | | 12 | | | C1 | | |
| II | Financial Statement Analysis - Objectives - Techniques of Financial Statement Analysis: Common Size and Comparative Financial Statements, Trend analysis, Ratio Analysis.  Fund Flow Statement - Statement of Changes in Working Capital - Preparation of Fund Flow Statement - Cash Flow Statement Analysis- Distinction between Fund Flow and Cash Flow Statement – problem. | | | | | | | 12 | | | C2 | | |
| III | Marginal Costing - Definition - distinction between marginal costing and absorption costing - Break even point Analysis - Contribution, p/v Ratio, margin of safety - Decision making under marginal costing system-key factor analysis, make or buy decisions, export decision, sales mix decision- Problems. | | | | | | | 12 | | | C3 | | |
| IV | Budget, Budgeting, and Budgeting Control - Types of Budgets - Preparation of Flexible and fixed Budgets, master budget and Cash Budget - Problems - Zero Base Budgeting. | | | | | | | 12 | | | C4 | | |
| V | Cost Accounting : meaning – Objectives - Elements of Cost – Cost Sheet(Problems) – classification of cost – Cost Unit and Cost Centre – Methods of Costing – Techniques of Costing. Standard costing and variance analysis Reporting to Management – Uses of Accounting information in Managerial decision-making. Reporting-Accounting Standards and Accounting Disclosure practices in India; Exposure to Practical Knowledge of using Accounting software- Open Source. | | | | | | | 12 | | | C5 | | |
|  | **Total** | | | | | | | **60** | | |  | | |
| **Course Outcomes** | | | | | | | | | | | | | |
| **Course Outcomes** | On completion of this course, students will; | | | | | | | **Program Outcomes** | | | | | |
| **CO1** | Be able to understand the fundamentals of principles of financial, cost and management accounting | | | | | | | PO6 | | | | | |
| **CO2** | Be able to prepare, analyze and interpret financial statements | | | | | | | PO1, PO2, PO4, PO6, PO7 | | | | | |
| **CO3** | Be able to use the tools and techniques of financial analysis. | | | | | | | PO1, PO2, PO3, PO6, PO7 | | | | | |
| **CO4** | Be able to take decisions using management accounting tools. | | | | | | | PO1, PO2, PO6, PO7 | | | | | |
| **CO5** | Be able to prepare the reports with the accounting tools and facilitate and take managerial decisions. | | | | | | | PO2, PO3, PO4, PO6, PO7, PO8 | | | | | |
| **Reading List** | | | | | | | | | | | | | |
| 1. | [http://files.rajeshindukuristudyplace.webnode.com/200000014-9621c971b8/ accounting%20 for%20 managers.pdf](http://files.rajeshindukuristudyplace.webnode.com/200000014-9621c971b8/%20accounting%20%20for%20%20managers.pdf) | | | | | | | | | | | | |
| 2. | <http://shodhganga.inflibnet.ac.in/bitstream/10603/70588/9/09_chapter%201.pdf> | | | | | | | | | | | | |
| 3. | <http://educ.jmu.edu/~drakepp/principles/module6/capbudtech.pdf> | | | | | | | | | | | | |
| 4. | [https://www.researchgate.net/publication/313477460\_concept\_of\_working\_capital\_management](https://www.researchgate.net/publication/313477460_CONCEPT_OF_WORKING_CAPITAL_MANAGEMENT) | | | | | | | | | | | | |
| **References Books** | | | | | | | | | | | | | |
| 1. | Gupta, A., Financial Accounting for Management: An Analytical Perspective, 5th Edition, Pearson, 2016. | | | | | | | | | | | | |
| 2. | Khan, M.Y. and Jain, P.K., Management Accounting: Text, Problems and Cases, 8thEdition, Tata McGraw Hill Education Pvt. Ltd., 2021. | | | | | | | | | | | | |
| 3. | Nalayiram Subramanian, Contemporary Financial Accounting and reporting for Management – a holistic perspective- Edn. 1, 2014 published by S. N. Corporate Management Consultants Private Limited | | | | | | | | | | | | |
| 4. | Horngren, C.T.,Sundem, G.L., Stratton, W.O., Burgstahler, D. and Schatzberg, J., 16th Edition, Pearson, 2013 | | | | | | | | | | | | |
| 5. | Noreen, E., Brewer, P. and Garrison, R., Managerial Accounting for Managers, 13th Edition, Tata McGraw-Hill Education Pvt. Ltd., 2009. | | | | | | | | | | | | |
| 6. | Rustagi,R. P., Management Accounting, 2nd Edition, Taxmann Allied Services Pvt. Ltd, 2011 | | | | | | | | | | | | |

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|  | **PO 1** | **PO 2** | **PO 3** | **PO 4** | **PO 5** | **PO 6** | **PO 7** | **PO 8** |
| **CO 1** |  |  |  |  |  | 2 |  | 2 |
| **CO 2** | 3 | 3 |  | 3 |  | 3 | 2 |  |
| **CO 3** | 3 | 3 | 3 |  |  | 3 | 2 |  |
| **CO 4** | 3 | 3 |  |  |  | 3 | 3 |  |
| **CO 5** |  | 3 | 3 | 3 |  | 3 | 2 | 2 |

**3-Strong 2-Medium 1-Low**

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| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | | **Inst. Hours** | **Marks** | | | |
| **CIA** | | **External** | **Total** |
|  | **Managerial Economics** | Core | 4 | - | - | - | 4 | | 60 | 25 | | 75 | 100 |
| **Course Objectives** | | | | | | | | | | | | | |
| C1 | To familiarize the students about managerial economics and to know the fundamental concepts affecting business decisions. | | | | | | | | | | | | |
| C2 | To understand the concept of utility and demand analysis and demand forecasting | | | | | | | | | | | | |
| C3 | To know about production function and market structure | | | | | | | | | | | | |
| C4 | To have an idea and understanding about Macroeconomics like National Income, savings and investment, Indian economic policy and Planning. | | | | | | | | | | | | |
| C5 | To Provide insights on Money Market, Inflation and Deflation, Monetary and Fiscal policies, FDI and cashless economy. | | | | | | | | | | | | |
| **SYLLABUS** | | | | | | | | | | | | | |
| **UNIT** | **Details** | | | | | | | **No. of Hours** | | | **Course Objectives** | | |
| I | Introduction: Definition of Managerial Economics. Decision Making and the Fundamental Concepts Affecting Business Decisions – the Incremental Concept, Marginalism, Equi-marginal Concept, the Time Perspective, Discounting Principle, Opportunity Cost Principle- Micro and Macro Economics. | | | | | | | 12 | | | C1 | | |
| II | Utility Analysis and the Demand Curve: Elasticity of Demand - Demand Analysis: Basic Concepts, and tools of analysis for demand forecasting. Use of Business Indicators: Demand forecasting for consumer, Consumer Durable and Capital Goods. Input-Output Analysis – Consumer Behavior-Consumer Equilibrium | | | | | | | 12 | | | C2 | | |
| III | The Production Function: Production with One Variable Input – Law of Variable Proportions – Production with Two Variable Inputs – Production Isoquants – Isocost Lines Estimating Production Functions- Returns to Scale– Economies Vs Diseconomies of Scale – Cost Concepts – Analysis of cost – Short and long run costs.  Market Structure: Perfect and Imperfect Competition – Monopoly, Duopoly, Monopolistic Competition – Pricing Methods. | | | | | | | 12 | | | C3 | | |
| IV | Macro Economic Variables – National Income- Concepts – Gross Domestic Product, Gross National Product, Net National Product – Measurement of National Income, Savings, Investment - Business Cycles and Contracyclical Policies – Role of Economic Policy – Indian Economic Planning | | | | | | | 12 | | | C4 | | |
| V | Commodity and Money Market: Demand and Supply of Money – Money Market Equilibrium – Monetary Policy – Inflation – Deflation – Stagflation-Role of Fiscal Policies- Indian Fiscal Policies - Government Policy towards Foreign Capital and Foreign Collaborations – Globalization and its Impact. Cashless economy and digitalized cash transfers; Economic models and its steps; FEMA-GST-Industrial Policy in India and its effects on growth. | | | | | | | 12 | | | C5 | | |
|  | **Total** | | | | | | | **60** | | |  | | |
| **Course Outcomes** | | | | | | | | | | | | | |
| **Course Outcomes** | On completion of this course, students will; | | | | | | | **Program Outcomes** | | | | | |
| **CO1** | Be able to understand the basic concepts of managerial economics that helps the firm in decision making process. | | | | | | | PO2, PO4 | | | | | |
| **CO2** | Be familiar about the Basic concepts of Demand, Supply and Equilibrium and their determinants | | | | | | | PO4, PO6, PO7 | | | | | |
| **CO3** | Have better idea and understanding about production function and market structure | | | | | | | PO6, PO7 | | | | | |
| **CO4** | Have better insights about macroeconomics concepts like National income, Savings and Investment, Indian Economic Policy and planning | | | | | | | PO8 | | | | | |
| **CO5** | Possess better knowledge about Money market, Monetary and Fiscal policy, inflation and deflation, FDI and globalization and Cashless economy and digitalized cash transfers. | | | | | | | PO7 | | | | | |
| **Reading List** | | | | | | | | | | | | | |
| 1. | <http://pearsoned.co.in/prc/book/paul-g-keat-managerial-economics-economic-tools-todays-decision-makers6e-6/9788131733530> | | | | | | | | | | | | |
| 2. | [http://www.onlinevideolecture.com/mba-programs/kmpetrov/managerial economics/?courseid=4207](http://www.onlinevideolecture.com/mba-programs/kmpetrov/managerial%20economics/?course_id=4207) | | | | | | | | | | | | |
| 3. | <https://www.slideshare.net/dvy92010/nature-and-scope-of-managerial-economics-76225857> | | | | | | | | | | | | |
| 4. | The Indian Economic Journal - SAGE Journals | | | | | | | | | | | | |
| **References Books** | | | | | | | | | | | | | |
| 1. | 1. Damodaran, S., Managerial Economics, 2nd Edition, Oxford University Press, 2011. | | | | | | | | | | | | |
| 2. | Dwivedi, D.N., Managerial Economics, Vikas Publishing House, 2011. | | | | | | | | | | | | |
| 3. | R. L. Varshney , K.L. Maheshwari., Managerial Economics, Sultan Chand & Sons, 2014. | | | | | | | | | | | | |
| 4. | William F. Samuelson, Stephen G. Marks, Jay L., Zagorsky., Managerial Economics, Wiley Publishers, 9th Edition (2021) | | | | | | | | | | | | |
| 5. | H. L. Ahuja., Managerial Economics., Atlantic Publishers and distributors(P) Ltd., 2017. | | | | | | | | | | | | |
| 6. | Dominick Salvatore, Managerial Economics: Principles and worldwide applications, 9E Adaptation, Oxford university press, 9th Edition, 2020. | | | | | | | | | | | | |

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|  | **PO 1** | **PO 2** | **PO 3** | **PO 4** | **PO 5** | **PO 6** | **PO 7** | **PO 8** |
| **CO 1** |  | 2 |  | 3 |  |  |  |  |
| **CO 2** |  |  |  | 3 |  | 2 | 2 |  |
| **CO 3** |  |  |  |  |  | 3 | 3 |  |
| **CO 4** |  |  |  |  |  |  |  | 2 |
| **CO 5** |  |  |  |  |  |  | 2 |  |

**3-Strong 2-Medium 1-Low**

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| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | | **Inst. Hours** | **Marks** | | | |
| **CIA** | | **External** | **Total** |
|  | **Legal Systems in Business** | Core | 4 | - | - | - | 4 | | 60 | 25 | | 75 | 100 |
| **Course Objectives** | | | | | | | | | | | | | |
| C1 | To create knowledge and understanding on law of contracts | | | | | | | | | | | | |
| C2 | To describe about sale of goods and Negotiable instrument act | | | | | | | | | | | | |
| C3 | To have an overall understanding about partnership act and company law. | | | | | | | | | | | | |
| C4 | To familiarize various labor laws for effective administration of Human Resource of an organization. | | | | | | | | | | | | |
| C5 | To provide insights and awareness about consumer protection act, Cyber-crimes, Intellectual property Rights. | | | | | | | | | | | | |
| **SYLLABUS** | | | | | | | | | | | | | |
| **UNIT** | **Details** | | | | | | | **No. of Hours** | | | **Course Objectives** | | |
| I | **The Law of Contracts:** Definition of Contact Offer and Acceptance – Essential Elements of a Valid Contract: Free Consent – Competency of Parties – Lawful Consideration – Legality of Object. Void, Voidable, Unenforceable and Illegal Contracts – Performance of Contracts – Privity of Contracts – Assignment of Contracts – By Whom Contract must be Performed – Time and Place of Performance – Performance of Reciprocal Promises – Contracts which need not be performed, Discharge of Contracts : By Performance, By Agreement, By Impossibility, By Lapse of Time, By Operation of Law and By Breach of Contracts – Remedies for Breach of Contracts. | | | | | | | 12 | | | C1 | | |
| II | **Sale of Goods Act:** Definition of a Sale and a Contract of Sale – Difference between (1) Sale and an Agreement to Sell (2) Sale and a Contract Form (3) Sale and Bailment (4) Sale and Mortgage of Goods (5) Sale and Time Purchase Conditions and Warranties – Passing of Property of Goods – Rights of an Unpaid Seller.  **Negotiable Instruments Act:** Negotiable Instruments in General: Cheques, Bills of Exchange and Promissory Notes – Definition and Characteristics | | | | | | | 12 | | | C2 | | |
| III | **Partnership Act:** Evolution – Definition of Partnership – Difference between Partnership and Joint Family Business – Kinds of Partnerships – Registration – Rights and Liabilities of Partners – Dissolution.  **Company Law:** Evolution of Company Form of Organisation – Companies Separate Legal Entity – Comparison of Company with Partnership and Joint Hindu Family Business – Kinds of Companies – Comparison of Private and Public Companies – Formation of Companies – General Idea About Memorandum and Articles of Association, Prospectus, Statement in lieu of Prospectus – Management of Companies – General Idea of Management of Companies – Officers, Meetings – Resolutions – Account and Audit – Winding up of Companies – General Idea of the Different Modes of Winding Up. | | | | | | | 12 | | | C3 | | |
| IV | **Labour Law:** Factories Act, Minimum Wages Act, Industrial Disputes Act, Employees Compensation Act, Payment of Bonus Act 1965. Payment of Gratuity Act 1972. ESI Act, Employees Provident Fund and Miscellaneous Provisions Act 1952, Maternity Benefits Act, Child labour Abolition & Regulation Act,1986- Inter-state Migrant Workmen (Regulation of Employment & Conditions of services) Act 1979- Bonded Labour system (Abolition)Act 1976- Sexual Harassment of women at Workplace (Prevention, Prohibition & Redressal) Act 2013- Contract Labour (Regulation and Abolition) Act- Four Labour Codes and Rules-RTI Act 2005. | | | | | | | 12 | | | C4 | | |
| V | Consumer Protection Act, Competition Act 2002, Cyber Crimes, IT Act 2008 – Intellectual Property Rights: Types of Intellectual Property – Trademarks Act 1999 – The Copyright Act 1957 – International Copyright Order, 1999 – Design Act, 2000; UNICITRAL – United Nations Commission on International Trade Law. | | | | | | | 12 | | | C5 | | |
|  | **Total** | | | | | | | **60** | | |  | | |
| **Course Outcomes** | | | | | | | | | | | | | |
| **Course Outcomes** | On completion of this course, students will; | | | | | | | **Program Outcomes** | | | | | |
| **CO1** | Have knowledge on understandings on law of contract. | | | | | | | PO4, PO6, PO7 | | | | | |
| **CO2** | Know the sale of Goods & Negotiable instrument act. | | | | | | | PO6 | | | | | |
| **CO3** | Have understandings on partnership and company law | | | | | | | PO6, PO7 | | | | | |
| **CO4** | Have familiarize with various labour laws. | | | | | | | PO5, PO6, PO7 | | | | | |
| **CO5** | Possess insights & awareness about consumer protection Act Cyber Crimes, Intellectual Property Rights. | | | | | | | PO8 | | | | | |
| **Reading List** | | | | | | | | | | | | | |
| 1. | <http://www.legalserviceindia.com/article/> | | | | | | | | | | | | |
| 2. | [http://www.freebookcentre.net/Law/Law-Books.html 2](http://www.freebookcentre.net/Law/Law-Books.html%202) | | | | | | | | | | | | |
| 3. | <https://www.mooc-list.com/course/business-law-wma> | | | | | | | | | | | | |
| 4. | <https://ilj.law.indiana.edu/> | | | | | | | | | | | | |
| **References Books** | | | | | | | | | | | | | |
| 1. | Kapoor ND., Legal Systems in Business, Edition 2 (2021), Sultan Chand & Sons. | | | | | | | | | | | | |
| 2. | Rao, P.M., Mercantile Law, PHI Learning, 2011. | | | | | | | | | | | | |
| 3. | Majumdar, A. K. and Kapoor, G.K., Company Law, 15th Edition, Taxmann Publications Pvt. Ltd., 2012. | | | | | | | | | | | | |
| 4. | Majumdar, A. K. and Kapoor, G.K., Company Law and Practice, 17th Edition, Taxmann Publications Pvt. Ltd., 2012. | | | | | | | | | | | | |
| 5. | Intellectual Property Laws, Universal Law Publishing, 2012. | | | | | | | | | | | | |
| 6. | Daniel Albuquerque , Legal systems in Business, Oxford University Press India, 2nd Edition, 2015. | | | | | | | | | | | | |

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|  | **PO 1** | **PO 2** | **PO 3** | **PO 4** | **PO 5** | **PO 6** | **PO 7** | **PO 8** |
| **CO 1** |  |  |  | 2 |  | 2 | 2 |  |
| **CO 2** |  |  |  |  |  | 2 |  |  |
| **CO 3** |  |  |  |  |  | 2 | 2 |  |
| **CO 4** |  |  |  |  | 2 | 2 | 2 |  |
| **CO 5** |  |  |  |  |  |  |  | 2 |

**3-Strong 2-Medium 1-Low**

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| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | | **Inst. Hours** | **Marks** | | | |
| **CIA** | | **External** | **Total** |
|  | **Entrepreneurship Development** | Extra Disciplinary | 3 | - | - | - | 3 | | 45 | 25 | | 75 | 100 |
| **Course Objectives** | | | | | | | | | | | | | |
| C1 | To introduce students to entrepreneurship and its growth in India. | | | | | | | | | | | | |
| C2 | To impart knowledge on innovation, its types, role of technology in innovation, patents and licensing. | | | | | | | | | | | | |
| C3 | To orient the students on new venture creation | | | | | | | | | | | | |
| C4 | To enable students to prepare a feasible business plan | | | | | | | | | | | | |
| C5 | To give inputs on various types of financing available for new ventures. | | | | | | | | | | | | |
| **SYLLABUS** | | | | | | | | | | | | | |
| **UNIT** | **Details** | | | | | | | **No. of Hours** | | | **Course Objectives** | | |
| I | Introduction: The Entrepreneur – Definition – Characteristics of Successful entrepreneur. Entrepreneurial scene in India; MSME; Analysis of entrepreneurial growth in different communities – Case histories of successful entrepreneurs. Similarities and Distinguish between Entrepreneur and Intrapreneur. | | | | | | | 9 | | | C1 | | |
| II | Innovation in Business: Types of Innovation – Creating and Identifying Opportunities for Innovation – Design Thinking- The Technological Innovation Process – Creating New Technological Innovation and Intrapreneurship – Licensing – Patent Rights – Innovation in Indian Firms | | | | | | | 9 | | | C2 | | |
| III | New Venture Creation: Identifying Opportunities for New Venture Creation: Environment Scanning – Generation of New Ideas for Products and Services. Creating, Shaping, Recognition, Seizing and Screening of Opportunities. Feasibility Analysis: Technical Feasibility of Products and Services – Marketing Feasibility: Marketing Methods – Pricing Policy and Distribution Channels | | | | | | | 9 | | | C3 | | |
| IV | Business Plan Preparation: Benefits of a Business Plan – Elements of the Business Plan – Developing a Business Plan – Guidelines for preparing a Business Plan – Format and Presentation; Start-ups and e-commerce Start-ups. Business Model Canvas | | | | | | | 9 | | | C4 | | |
| V | Financing the New Venture: Capital structure and working capital Management: Financial appraisal of new project, Role of Banks – Credit appraisal by banks. Institutional Finance to Small Industries – Incentives – Institutional Arrangement and Encouragement of Entrepreneurship. | | | | | | | 9 | | | C5 | | |
|  | **Total** | | | | | | | **45** | | |  | | |
| **Course Outcomes** | | | | | | | | | | | | | |
| **Course Outcomes** | On completion of this course, students will; | | | | | | | **Program Outcomes** | | | | | |
| **CO1** | Be able to know about growth of entrepreneurship in India | | | | | | | PO4, PO7 | | | | | |
| **CO2** | Gain knowledge on innovation, its types, role of technology in innovation, patents and licensing | | | | | | | PO7, PO8 | | | | | |
| **CO3** | Obtain knowledge on new venture creation | | | | | | | PO6, PO7 | | | | | |
| **CO4** | Be able to prepare a business plan | | | | | | | PO7, PO8 | | | | | |
| **CO5** | Gian knowledge on various types of financing available for new ventures. | | | | | | | PO7, PO8 | | | | | |
| **Reading List** | | | | | | | | | | | | | |
| 1. | <http://www.jimssouthdelhi.com/sm/BBA6/ED.pdf> | | | | | | | | | | | | |
| 2. | https://[www.cengage.com/highered](http://www.cengage.com/highered) | | | | | | | | | | | | |
| 3. | <https://roadmapresearch.com/entrepreneurship-beyond-curriculum> | | | | | | | | | | | | |
| 4. | The International Journal of Entrepreneurship and Innovation | | | | | | | | | | | | |
| **References Books** | | | | | | | | | | | | | |
| 1. | Reddy, N., Entrepreneurship: Text and Cases, Cengage Learning, 2010. | | | | | | | | | | | | |
| 2. | Roy, R., Entrepreneurship, 2nd Edition, Oxford University Press, 2011. | | | | | | | | | | | | |
| 3. | Barringer, B., Entrepreneurship: Successfully Launching New Ventures,  3rd Edition, Pearson, 2011. | | | | | | | | | | | | |
| 4. | Bessant, J., and Tidd, J., Innovation and Entrepreneurship, 2nd Edition, John  Wiley &amp; Sons, 2011. | | | | | | | | | | | | |
| 5. | Desai, V., Small Scale Industries and Entrepreneurship, Himalaya Publishing  House, 2011. | | | | | | | | | | | | |
| 6. | Entrepreneurship: Successfully Launching New Ventures, Global Edition, 6th  Edition Bruce R. Barringer, Texas A & amp; M University, R. Duane Ireland,  ©2018 |Pearson | | | | | | | | | | | | |

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|  | **PO 1** | **PO 2** | **PO 3** | **PO 4** | **PO 5** | **PO 6** | **PO 7** | **PO 8** |
| **CO 1** |  |  |  | 3 |  |  | 3 |  |
| **CO 2** |  |  |  |  |  |  | 3 | 2 |
| **CO 3** |  |  |  |  |  | 2 | 3 |  |
| **CO 4** |  |  |  |  |  |  | 3 | 2 |
| **CO 5** |  |  |  |  |  |  | 3 | 3 |

**3-Strong 2-Medium 1-Low**

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| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | | **Inst. Hours** | **Marks** | | | |
| **CIA** | | **External** | **Total** |
|  | **Soft Skills I – Executive Communication** | Soft Skills | - | - | 2 | - | 2 | | 30 | 25 | | 75 | 100 |
| **Course Objectives** | | | | | | | | | | | | | |
| C1 | To acquire communication awareness they are going to get for the industry. | | | | | | | | | | | | |
| C2 | To make the customer realize that you can provide them with information and other essential things | | | | | | | | | | | | |
| C3 | To explore the skill of writing business proposals | | | | | | | | | | | | |
| C4 | To **develop a** plan for the meetings and interviews | | | | | | | | | | | | |
| C5 | To analyze the skills required for non-verbal communication | | | | | | | | | | | | |
| **SYLLABUS** | | | | | | | | | | | | | |
| **UNIT** | **Details** | | | | | | | **No. of Hours** | | | **Course Objectives** | | |
| I | **UNIT 1- Communication:** Meaning and Significance of Communication for Management- Types of Communication Factors Affecting Effectiveness of Communication- Barriers to Communication- Principles of Effective Communication Dyadic Communication- Face-to-face Communication. Other Modes of Communication. | | | | | | | 6 | | | C1 | | |
| II | **UNIT 11- Business Correspondence:** Planning Business Messages: Analyzing the Task, Anticipating the Audience. Adapting the Message Organizing and Writing Business Messages: Patterns of organization, Use of Tools such as Mind Maps, Composing the Message- Norms for Business Letters Letters for Different Kinds of Situation: Personalized Standard Letters, Enquiries, Inviting Quotations, Sending Quotations, Placing Orders, Inviting tenders, Claim letters, Customers Complaints, Collection Letters, Sales Promotion Letters- Revising Business Messages: Revising for Clarity. Conciseness and Readability, Proof reading and Evaluating- Letters of application and resume. | | | | | | | 6 | | | C2 | | |
| III | **UNIT III- Business Reports and Proposals:** Structure of Reports- Long and Short Reports: Formal and Informal Reports- Writing Research Reports- Technical Reports- Norms for Including Exhibits and Appendices- Writing Business Proposals. | | | | | | | 6 | | | C3 | | |
| IV | **UNIT IV- Conducting Meetings and Interviews:** Procedure for Conducting Meetings- Preparing Agenda, Minutes and Resolutions- Conducting Seminars and Conferences- Procedure of Regulating Speech- Evaluating Oral Presentations Drafting Speech- Participating in Debates and Group Discussions- Presentation Skills- Fluency Development Strategies- Attending and Conducting Interviews- Listening. | | | | | | | 6 | | | C4 | | |
| V | **UNIT V- Non-verbal Communication:** Personal Appearance- Posture- Body Language- Reading Nonverbal Messages- Use of Charts. Diagrams and Tables- Visual and Audio-visual Aids for Communication. | | | | | | | 6 | | | C5 | | |
|  | **Total** | | | | | | | **30** | | |  | | |
| **Course Outcomes** | | | | | | | | | | | | | |
| **Course Outcomes** | On completion of this course, students will; | | | | | | | **Program Outcomes** | | | | | |
| **CO1** | Understanding of theories and concepts, types and various modes of communication in organizations | | | | | | | PO4, PO6 | | | | | |
| **CO2** | Development of skills on developing Business Correspondence | | | | | | | PO4, PO6 | | | | | |
| **CO3** | Development of skills onpreparing Business Reports and Proposals | | | | | | | PO4, PO6 | | | | | |
| **CO4** | To draft effective business correspondence with brevity, and clarity in designing and developing clean and lucid organizing skills. | | | | | | | PO4, PO6 | | | | | |
| **CO5** | To demonstrate his/her verbal and non-verbal communication ability through presentations. | | | | | | | PO4, PO6 | | | | | |
| **Reading List** | | | | | | | | | | | | | |
| 1. | <https://www.skillsyouneed.com/ips/communication-skills.html> | | | | | | | | | | | | |
| 2. | <https://mtbt.fpg.unc.edu/more-baby-talk/10-ways-promote-language-and-communication-skills-infants-and-toddlers> | | | | | | | | | | | | |
| 3. | <http://skillopedia.com> | | | | | | | | | | | | |
| 4. | <https://www.habitsforwellbeing.com/9-effective-communication-skills> | | | | | | | | | | | | |
| **References Books** | | | | | | | | | | | | | |
| 1. | Chaney, L. and Martin, J., Intercultural Business Communication. Person, 4 ed., 2008. | | | | | | | | | | | | |
| 2. | Chaturvedi, Business Communication, Person, 2 edition, 2011 | | | | | | | | | | | | |
| 3. | Bovec L. Courtland and John V. Thill, Business Communication Today, 10 ed., Pearson Education, New Delhi, 2011. | | | | | | | | | | | | |
| 4. | American Management Association, The AMA Handbook of Business Writing: The Ultimate Guide to Style, Usage, Punctuation, Construction and Formatting, 2010. | | | | | | | | | | | | |
| 5. | Gerson, Sharan J., and Steven M Gerson, Technical Writing: Process and Product, Person Education, New Delhi, 2008 | | | | | | | | | | | | |

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|  | **PO 1** | **PO 2** | **PO 3** | **PO 4** | **PO 5** | **PO 6** | **PO 7** | **PO 8** |
| **CO 1** |  |  |  | 3 |  | 3 |  |  |
| **CO 2** |  |  |  | 3 |  | 3 |  |  |
| **CO 3** |  |  |  | 3 |  | 3 |  |  |
| **CO 4** |  |  |  | 3 |  | 3 |  |  |
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**3-Strong 2-Medium 1-Low**

**SEMESTER II**

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| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | | **Inst. Hours** | **Marks** | | | |
| **CIA** | | **External** | **Total** |
|  | **Applied Operations Research** | Core | 3 | 1 | - | - | 4 | | 60 | 25 | | 75 | 100 |
| **Course Objectives** | | | | | | | | | | | | | |
| C1 | To provide the students with introduction on OR and its models to aid in understanding its applicability in the various functional areas of management. | | | | | | | | | | | | |
| C2 | To understand the concept of linear programming models in determining profit maximization and cost minimization | | | | | | | | | | | | |
| C3 | To learn about various methods adopted in transportation and Assignments models. | | | | | | | | | | | | |
| C4 | To determine about inventory models, replacement models, job sequencing, networking model and Queuing model | | | | | | | | | | | | |
| C5 | To throw light on dynamic model and game models and the application of pure and mixed strategies in competitive environment. | | | | | | | | | | | | |
| **SYLLABUS** | | | | | | | | | | | | | |
| **UNIT** | **Details** | | | | | | | **No. of Hours** | | | **Course Objectives** | | |
| I | Introduction: Overview of operations research – Origin – Nature, scope & characteristics of OR – Models in OR – Application of operations research in functional areas of management | | | | | | | 08 | | | C1 | | |
| II | Linear Programming Problem: Linear programming problem model – Formulation – Maximization & Minimization problem – Graphical method – Simplex method – Artificial variable –- Primal & Dual. | | | | | | | 12 | | | C2 | | |
| III | Transportation problem: Basic Solution – North / West corner Solution, LCM, VAM, Matrices method – Optimal Solution – Stepping stone method – Vogel’s approximation method – Modi method – Degeneracy – Imbalance matrix. Assignment model: Hungarian method – Traveling salesmen problem. | | | | | | | 12 | | | C3 | | |
| IV | Project Scheduling and Resource Management: Deterministic Inventory models – Purchasing & Manufacturing models – Probabilistic inventory models – Replacement model – Sequencing – Brief Introduction to Queuing models. Networking – Programme Evaluation and Review Technique (PERT) and Critical Path Method (CPM) for Project Scheduling- Crashing – Resource allocation and Resource Scheduling. | | | | | | | 18 | | | C4 | | |
| V | Game Theory and Strategies: Games theory – two player zero sum game theory – Saddle Point –Mixed Strategies for games without saddle points – Dominance method – Graphical and L.P Solutions- Goal Programming; Simulation; Integer programming and Dynamic programming. | | | | | | | 10 | | | C5 | | |
|  | **Total** | | | | | | | **60** | | |  | | |
| **Course Outcomes** | | | | | | | | | | | | | |
| **Course Outcomes** | On completion of this course, students will; | | | | | | | **Program Outcomes** | | | | | |
| **CO1** | Obtain insight on the origin and nature of OR and also the application of various models of OR. | | | | | | | PO4, PO6 | | | | | |
| **CO2** | Learn about the graphical, Simplex, Big M and dual methods of Linear programming problem. | | | | | | | PO1, PO2, PO6, PO7 | | | | | |
| **CO3** | Be well versed with the concept of transportation and Assignments models | | | | | | | PO1, PO2, PO6, PO7 | | | | | |
| **CO4** | Have better understanding on inventory models, replacement models, job sequencing, networking model and Queuing model | | | | | | | PO1, PO2, PO6, PO7 | | | | | |
| **CO5** | Be imparted knowledge on the various methods of game model | | | | | | | PO2, PO7 | | | | | |
| **Reading List** | | | | | | | | | | | | | |
| 1. | [www.cbom.atozmath.com](http://www.cbom.atozmath.com) | | | | | | | | | | | | |
| 2. | <http://www.pondiuni.edu.in/storage/dde/downloads/mbaii_qt.pdf> | | | | | | | | | | | | |
| 3. | [http://164.100.133.129;81/econtent/Uploads/Operations\_Research.pdf](http://164.100.133.129:81/econtent/Uploads/Operations_Research.pdf) | | | | | | | | | | | | |
| 4. | <https://www.journals.elsevier.com/operations-research-perspectives> | | | | | | | | | | | | |
| **References Books** | | | | | | | | | | | | | |
| 1. | Anderson, D.R., Sweeney, D.J., Williams, T.A. and Martin, K., An Introduction to Management Science: Quantitative Approach to Decision Making, 14th Edition Paperback – 1, Cengage Learning India Pvt. Ltd., 2019 | | | | | | | | | | | | |
| 2. | Gupta, P.K., and Comboj, Introduction to Operations Research, S. Chand, 2014 | | | | | | | | | | | | |
| 3. | Hiller, F., Liebermann, Nag and Basu, Introduction to Operations Research, 11th Edition Paperback, Tata McGraw-Hill Publishing Co. Ltd., 2021 | | | | | | | | | | | | |
| 4. | Khanna, R.B., Quantitative Techniques for Managerial Decision Making, 3rd Edition – Paperback, New Age International Publishers, 2018 | | | | | | | | | | | | |
| 5. | Taha, H.A., Operations Research: An Introduction, 10th Edition, Pearson, 2019 | | | | | | | | | | | | |
| 6. | Vohra,N.D., Quantitative Techniques in Management, 5th Edition, Tata McGraw Hill Education Pvt. Ltd., 2017. | | | | | | | | | | | | |

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|  | **PO 1** | **PO 2** | **PO 3** | **PO 4** | **PO 5** | **PO 6** | **PO 7** | **PO 8** |
| **CO 1** |  |  |  | 2 |  | 2 |  |  |
| **CO 2** | 3 | 2 |  |  |  | 2 | 2 |  |
| **CO 3** | 3 | 3 |  |  |  | 3 | 2 |  |
| **CO 4** | 3 | 3 |  |  |  | 2 | 2 |  |
| **CO 5** |  | 3 |  |  |  |  | 2 |  |

**3-Strong 2-Medium 1-Low**

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| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | | **Inst. Hours** | **Marks** | | | |
| **CIA** | | **External** | **Total** |
|  | **Human Resource Management** | Core | 4 | - | - | - | 4 | | 60 | 25 | | 75 | 100 |
| **Course Objectives** | | | | | | | | | | | | | |
| C1 | To embark importance of HRM role, functions and need | | | | | | | | | | | | |
| C2 | To assimilate theoretical and practical implications of HRP | | | | | | | | | | | | |
| C3 | To critically use appropriate training tools | | | | | | | | | | | | |
| C4 | To analyze and implement an effective performance management | | | | | | | | | | | | |
| C5 | To extrapolate and design compensation management techniques | | | | | | | | | | | | |
| **SYLLABUS** | | | | | | | | | | | | | |
| **UNIT** | **Details** | | | | | | | **No. of Hours** | | | **Course Objectives** | | |
| I | **Introduction:** Introduction of Human Resource Management: Importance of Human Resources, Definition and Objectives of Human Resources Management, Qualities of a good HR manager – Evolution and growth of Human Resource Management in India. Functions of Human Resource Management. Strategic Human Resource Management (SHRM).Human Resource Policies: Need, type and scope, Human Resource Accounting and Audit- Gig Economy. | | | | | | | 12 | | | C1 | | |
| II | **Human Resource Planning (HRP):** Human Resources Planning: Long and Short term planning, Job Analysis, Skills inventory, Job Description, Job Specification and Succession Planning, Strategic Human Resource Planning.  Recruitment and selection: Purposes, types and methods of recruitment and selection, Relative merits and demerits of the different methods, Recruitment and Social Media.  Placement, Induction, Transfers, Promotions, Dismissal, Resignation, Exit Interviews, Reduction of attrition rate- Attrition and retention management | | | | | | | 12 | | | C2 | | |
| III | **Training, Development & Career Management:**  Importance and benefits of Training and Development, Types of Training Methods, Executive Development Programs, Concept and process of Career Management; Competency mapping, Knowledge Management & Talent Management. | | | | | | | 12 | | | C3 | | |
| IV | **Performance Management:**  Importance, process and Methods: Ranking, rating scales, critical incident method, Removing subjectivity from evaluation, MBO as a method of appraisal, Performance Feedback, Online PMS. Human Resource Information System; International Human Resource Management; Cross cultural diversity management; Hybrid work culture; work-life balance; Quality of work-life; HR Analytics. | | | | | | | 12 | | | C4 | | |
| V | **Compensation Management:** Wage and Salary Administration: Job Evaluation, Calculation of Wage, Salary, Prerequisites, Compensation Packages, Cost of Living Index and Calculation of Dearness Allowance, Rewards and Incentives; ESOP-Financial and non-financial incentives, Productivity – linked Bonus, Compensation Criteria, Rewards and Recognition. | | | | | | | 12 | | | C5 | | |
|  | **Total** | | | | | | | **60** | | |  | | |
| **Course Outcomes** | | | | | | | | | | | | | |
| **Course Outcomes** | On completion of this course, students will; | | | | | | | **Program Outcomes** | | | | | |
| **CO1** | Gain an understanding of HRM policies and importance. | | | | | | | PO4, PO6 | | | | | |
| **CO2** | Implement appropriate HRP in workplace. | | | | | | | PO6 | | | | | |
| **CO3** | Apply feasible Training method and manage career progressions. | | | | | | | PO5, PO6, PO7 | | | | | |
| **CO4** | Demonstrate managing performance of human resources. | | | | | | | PO6, PO7 | | | | | |
| **CO5** | Design and justify compensation framework. | | | | | | | PO4, PO6, PO7 | | | | | |
| **Reading List** | | | | | | | | | | | | | |
| 1. | <https://businessjargons.com/performance-management.html> | | | | | | | | | | | | |
| 2. | <https://www.hr-guide.com/data/G400.htm> | | | | | | | | | | | | |
| 3. | <https://www.managementstudyguide.com/training-development-hr-function.htm> | | | | | | | | | | | | |
| 4. | <https://www.tandfonline.com/toc/rijh20/current> | | | | | | | | | | | | |
| **References Books** | | | | | | | | | | | | | |
| 1. | Ashwathappa, K., Human Resource Management, 9th Edition, Tata McGraw-Hill Education Pvt. Ltd., 2021. | | | | | | | | | | | | |
| 2. | Ivanecevich, J.M., Human Resource Management, 12th Edition, Tata McGraw-Hill Education Pvt. Ltd., 2020. | | | | | | | | | | | | |
| 3. | Gary Dessler & Biju Varrkey, Human Resource Management, 16th Edition, Pearson India Pvt. Ltd., 2020. | | | | | | | | | | | | |
| 4 | DeCenzo, D.A., Robbins S.P., Susan L Verhulst, Human Resource Management, 11th Edition, Wiley India Pvt. Ltd., 2015. | | | | | | | | | | | | |
| 5. | Leigh Thompson, Making the team, A guide for Managers, Pearson, 6th Edition 2019. | | | | | | | | | | | | |
| 6. | Gary Dessler, Fundamentals of Human Resource Management, Pearson, 4th Edition 2017. | | | | | | | | | | | | |

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|  | **PO 1** | **PO 2** | **PO 3** | **PO 4** | **PO 5** | **PO 6** | **PO 7** | **PO 8** |
| **CO 1** |  |  |  | M |  | M |  |  |
| **CO 2** |  |  |  |  |  | M |  |  |
| **CO 3** |  |  |  |  | S | S | M |  |
| **CO 4** |  |  |  |  |  | M | M |  |
| **CO 5** |  |  |  | M |  | M | M |  |

**3-Strong 2-Medium 1-Low**

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| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | | **Inst. Hours** | **Marks** | | | |
| **CIA** | | **External** | **Total** |
|  | **Marketing Management** | Core | 4 | - | - | - | 4 | | 60 | 25 | | 75 | 100 |
| **Course Objectives** | | | | | | | | | | | | | |
| C1 | To develop an understanding and enhance the knowledge about marketing theories, principles, strategies and concepts and how they are applied. | | | | | | | | | | | | |
| C2 | To provide with opportunities to analyze marketing activities within the firm. | | | | | | | | | | | | |
| C3 | To analyze and explore the buyer behavior pattern in marketing situations. | | | | | | | | | | | | |
| C4 | To understand the branding, pricing and strategies in marketing a product. | | | | | | | | | | | | |
| C5 | To upgrade the knowledge and awareness of Consumer Rights in the Market. | | | | | | | | | | | | |
| **SYLLABUS** | | | | | | | | | | | | | |
| **UNIT** | **Details** | | | | | | | **No. of Hours** | | | **Course Objectives** | | |
| I | Introduction: Marketing Management Philosophies – What is marketing- The concepts of marketing- Marketing and Services – Digital Marketing – Social Media Marketing – Current marketing challenges; Rural Marketing – E-Rural Marketing – International Marketing – Industrial Marketing. | | | | | | | 12 | | | C1 | | |
| II | Strategic Marketing– Marketing Management Process – Analysis of Marketing opportunities, Selecting Target Consumers, developing Marketing Mix Analysis of Macro and Micro environment Marketing Research as an Aid to Marketing, Marketing Research Process – Sales Forecasting –Techniques. Marketing Tactics, The Mix Service and Retail Marketing. | | | | | | | 12 | | | C2 | | |
| III | MIS: Marketing Information Systems- Customer Relationship Management (CRM) Customer Engagement Marketing – Sales force Automation- Marketing Analytics | | | | | | | 12 | | | C3 | | |
| IV | Buyer Behaviour: Factors Influencing Consumer Behaviour – Buying situation– Buying Decision Process – Industrial Buyer Behaviour. Market Segmentation : Targeting and Positioning – Competitive Marketing Strategies. Customer Life Cycle – Customer Life time Value, Product Portfolio Management. | | | | | | | 12 | | | C4 | | |
| V | Product Policies: Consumer and Industrial Product Decisions, Branding, Packaging and Labelling – New Product Development and Product Life Cycle Strategies, Pricing – Pricing Strategies and approaches, Promotion Decisions: Promotion Mix – Integrated Marketing Communication – Advertising and Sales Promotion - Sales Force Decisions, Selection, Training, Compensation and Control – Publicity and Personal Selling – Distribution Management – Channel Management: Selection, Co-operation and Conflict Management – Vertical, Horizontal and Multi-channel Systems Consumer Protection – Awareness of Consumer Rights in the Market Place. | | | | | | | 12 | | | C5 | | |
|  | **Total** | | | | | | | **60** | | |  | | |
| **Course Outcomes** | | | | | | | | | | | | | |
| **Course Outcomes** | On completion of this course, students will; | | | | | | | **Program Outcomes** | | | | | |
| **CO1** | Understand the fundamental principles of marketing, marketing concepts and ideas. | | | | | | | PO4, PO6, PO7 | | | | | |
| **CO2** | Understand the organization’s marketing strategy and marketing environment. Familiar with marketing research with forecasting techniques. | | | | | | | PO4, PO6 | | | | | |
| **CO3** | Understand the buyer behavior and market segmentation and competitive marketing strategies. | | | | | | | PO4, PO6, PO7 | | | | | |
| **CO4** | Think strategically about branding, pricing and marketing issues. | | | | | | | PO3, PO4, PO6, PO7 | | | | | |
| **CO5** | Familiar with Promotion decisions along with awareness on Consumer Rights in the Market Place. | | | | | | | PO6, PO8 | | | | | |
| **Reading List** | | | | | | | | | | | | | |
| 1. | <https://ocw.mit.edu/courses/sloan-school-of-management/15-810-marketing-management-fall-2010/lecture-notes/> | | | | | | | | | | | | |
| 2. | <https://cpbucket.fiu.edu/mar3023vd1131/syllabus.html> | | | | | | | | | | | | |
| 3. | <https://www.ama.org/ama-academic-journals/> | | | | | | | | | | | | |
| 4. | <https://www.emerald.com/insight/publication/issn/0736-3761> | | | | | | | | | | | | |
| **References Books** | | | | | | | | | | | | | |
| 1. | Pillai & Baghawathy, Marketing Management, S.Chand , 2010. | | | | | | | | | | | | |
| 2. | Gupta Prachi, Aggarwal Ashita , et al., Marketing Management: Indian Cases, 1st Edition, 2017 | | | | | | | | | | | | |
| 3. | G.Shainesh Philip Kotler, et..al., Marketing Management; Indian Case Studies included, 16th Edition, Pearson, 2022 | | | | | | | | | | | | |
| 4. | [Warren J. Keegan](https://www.amazon.in/Warren-J-Keegan/e/B001ILHKJY?ref=sr_ntt_srch_lnk_2&qid=1656309878&sr=1-2), Global Marketing Management, 8thEdition, Pearson, 2017. | | | | | | | | | | | | |
| 5. | Mullins, Marketing Management: A Strategic Decision Making Approach, 7th Edition, McGraw-Hill, 2010. | | | | | | | | | | | | |
| 6. | Philip Kotler and  [Keven Lane Keller](https://www.amazon.in/s/ref=dp_byline_sr_book_2?ie=UTF8&field-author=Keven+Lane+Keller&search-alias=stripbooks), Marketing Management, 15th Edition, Pearson, 2015 | | | | | | | | | | | | |

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|  | **PO 1** | **PO 2** | **PO 3** | **PO 4** | **PO 5** | **PO 6** | **PO 7** | **PO 8** |
| **CO 1** |  |  |  | 2 |  | 2 | 2 |  |
| **CO 2** |  |  |  | 3 |  | 3 |  |  |
| **CO 3** |  |  |  | 2 |  | 2 | 2 |  |
| **CO 4** |  |  | 2 | 2 |  | 2 | 2 |  |
| **CO 5** |  |  |  |  |  | 2 |  | 2 |

**3-Strong 2-Medium 1-Low**

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| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | | **Inst. Hours** | **Marks** | | | |
| **CIA** | | **External** | **Total** |
|  | **Operations Management** | Core | 3 | 1 | - | - | 4 | | 60 | 25 | | 75 | 100 |
| **Course Objectives** | | | | | | | | | | | | | |
| C1 | To understand the production function, production design & capacity planning, | | | | | | | | | | | | |
| C2 | Exploring the Make or Buy decision, and thus understanding the role of inventory management | | | | | | | | | | | | |
| C3 | To determine multiple plant location decisions and effective utilization of plant layout. To explain the models, concepts, and techniques adopted in the areas of inventory control and maintenance. | | | | | | | | | | | | |
| C4 | To elucidate the importance and usefulness of work-study and quality control tools | | | | | | | | | | | | |
| C5 | To provide insights on service operations management and waiting line analysis. | | | | | | | | | | | | |
| **SYLLABUS** | | | | | | | | | | | | | |
| **UNIT** | **Details** | | | | | | | **No. of Hours** | | | **Course Objectives** | | |
| I | INTRODUCTION: Operations Management- Nature, Scope, Historical Development, Functions- Long term Vs Short term issues- A Systems Perspective- Challenges- Manufacturing Trends in India-Production Design and Process Planning- Types of Production Processes- Plant Capacity-Capacity Planning- Make or Buy Decisions- Use of Crossover Chart for Selection Processes-Types of Charts used in Operations Management. | | | | | | | 12 | | | C1 | | |
| II | FACILITY DESIGN: Plant Location: Factors to be considered in Plant Location- Location Analysis Techniques- Choice of General Region, Particular community and Site- Multiple Plant Location Decision- Plant Location Trends. Layout of Manufacturing Facilities: Principles of a Good Layout- Layout Factors- Basic Types of Layout- Principles of Materials Handling- Materials Handling Equipment - Role of Ergonomics in Job Design. | | | | | | | 12 | | | C2 | | |
| III | INVENTORY CONTROL AND MAINTENANCE: Basic Inventory Models- Economic Order Quantity- Economic Batch Quantity- Reorder Point-Safety Stock- Inventory Costs-Classification and Codification of Stock- ABC Classification-Materials Requirement Planning (MRP)- JIT- Implications of Supply Chain Management. Maintenance: Preventive Vs Breakdown Maintenance- Group Replacement Vs Individual Replacement- Breakdown Time Distribution- Maintenance of Cost Balance- Procedure for Maintenance. | | | | | | | 12 | | | C3 | | |
| IV | DESIGN OF WORK SYSTEMS AND QUALITY CONTROL: Work Study- Objectives- Procedure- Method Study and Motion Study- Work Measurement-Time Study-Performance Rating- Allowance Factors- Standard Time- Work Sampling Techniques- Job Sequencing and Scheduling. Quality Control: Purpose of Inspection and Quality Control- Different Types of Inspection- Acceptance Sampling- The Operating Characteristic Curve- Control Charts for Variables and Attributes; Quality Circles; TQM – Six Sigma, Kaizen | | | | | | | 14 | | | C4 | | |
| V | SERVICE OPERATIONS MANAGEMENT: Introduction to Services Management- Nature of Services- Types of Services- Service Encounter-Designing Service Organizations- Service Facility Location and Layout- Service Blueprinting-Waiting Line Analysis for Service Improvement- Service Processes and Service Delivery. | | | | | | | 10 | | | C5 | | |
|  | **Total** | | | | | | | **60** | | |  | | |
| **Course Outcomes** | | | | | | | | | | | | | |
| **Course Outcomes** | On completion of this course, students will; | | | | | | | **Program Outcomes** | | | | | |
| **CO1** | Understand the concepts of production and its design, capacity planning and make or buy decisions. | | | | | | | PO2, PO4 | | | | | |
| **CO2** | Be cognizant of the complexity involved in plant location decisions and utilization of plant layout. | | | | | | | PO2, PO7 | | | | | |
| **CO3** | Understand the Inventory models and the importance of maintenance techniques. | | | | | | | PO6, PO7 | | | | | |
| **CO4** | Be aware of work-study procedures and the importance on quality control tools | | | | | | | PO1, PO2, PO6, PO7 | | | | | |
| **CO5** | Have insight on service operations, service delivery and waiting line analysis. | | | | | | | PO2, PO6, PO7 | | | | | |
| **Reading List** | | | | | | | | | | | | | |
| 1. | [www.shsu.edu/~mgt\_ves/mgt560/ServiceManagement.ppt](http://www.shsu.edu/~mgt_ves/mgt560/ServiceManagement.ppt) | | | | | | | | | | | | |
| 2. | zums.ac.ir/files/research/site/ebooks/strategy/operations-strategy.pdf | | | | | | | | | | | | |
| 3. | <https://www.emerald.com/insight/publication/issn/0144-3577> | | | | | | | | | | | | |
| 4. | <https://www.inderscience.com/jhome.php?jcode=ijaom> | | | | | | | | | | | | |
| **References Books** | | | | | | | | | | | | | |
| 1. | Aswathappa K and Shridhara Bhat K, Production and Operations Management, 2nd Edition, Himalaya Publishing House, 2021. | | | | | | | | | | | | |
| 2. | Mahadevan B, Operations Management Theory and Practice, 3rd Edition, Pearson Education, 2015. | | | | | | | | | | | | |
| 3. | Russel and Taylor, Operations and Supply Chain Management, 8th Edition, Wiley, 2021. | | | | | | | | | | | | |
| 4. | William J Stevenson, Operations Management, 14th Edition, McGraw Hill, 2021. | | | | | | | | | | | | |
| 5. | Gerard Cachon and Christian Terwiesch, Operations Management, 3rd Edition, McGraw Hill, 2022. | | | | | | | | | | | | |
| 6. | Prof. K C Jain, Production and Operations Management, 1st Edition, Wiley, 2022. | | | | | | | | | | | | |

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|  | **PO 1** | **PO 2** | **PO 3** | **PO 4** | **PO 5** | **PO 6** | **PO 7** | **PO 8** |
| **CO 1** |  | 2 |  | 2 |  |  |  |  |
| **CO 2** |  | 2 |  |  |  |  | 2 |  |
| **CO 3** |  |  |  |  |  | 2 | 2 |  |
| **CO 4** | 2 | 2 |  |  |  | 2 | 2 |  |
| **CO 5** |  | 2 |  |  |  | 2 | 2 |  |

**3-Strong 2-Medium 1-Low**

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| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | | **Inst. Hours** | **Marks** | | | |
| **CIA** | | **External** | **Total** |
|  | **Financial Management** | Core | 3 | 1 | - | - | 4 | | 60 | 25 | | 75 | 100 |
| **Course Objectives** | | | | | | | | | | | | | |
| C1 | To create an understanding and familiarize the students to the fundamentals of financial management and create awareness on the various sources of finance. | | | | | | | | | | | | |
| C2 | To create awareness on the various investment techniques on the investment decision making. | | | | | | | | | | | | |
| C3 | To throw light on the concept of cost of capital and familiarize on the technique of identifying the right source of capital. | | | | | | | | | | | | |
| C4 | To educate on the concept of capital structure and the create understanding on the concept of dividend. | | | | | | | | | | | | |
| C5 | To create an understanding on the concept of working capital, its need, importance, factors and forecasting technique | | | | | | | | | | | | |
| **SYLLABUS** | | | | | | | | | | | | | |
| **UNIT** | **Details** | | | | | | | **No. of Hours** | | | **Course Objectives** | | |
| I | Introduction: Financial management: Definition and scope – objectives of Financial Management – Profit Maximization - wealth maximization - functions and role of finance manager. Sources of finance – short term – Bank Sources – Long term – Shares – Debentures – Preferred stock – Debt: Hire purchase, Leasing, Venture Capital – Private equity- International Financial Management- Financial Planning- Behavioural Finance- Capital Market- Money Market- Micro Finance- Financial Information System. | | | | | | | 12 | | | C1 | | |
| II | Investing Decision - Capital Budgeting Process – Techniques of Investment Appraisal: Pay Back Period; Accounting Rate of Return, Time Value of Money- DCF Techniques –Net Present Value, Profitability Index and Internal Rate of Return- Problems - Risk analysis in Capital Budgeting- Introduction to Fintech – Digital Currency - Cryptocurrency – Financial Modeling; Hurdle Rate. | | | | | | | 12 | | | C2 | | |
| III | Cost of Capital - Cost of specific sources of capital – Cost of equity capital – Cost of debt – Cost of preference – Cost of retained earnings - weighted average cost of capital. EBIT -EPS Analysis - Operating Leverage - Financial Leverage-problems. | | | | | | | 12 | | | C3 | | |
| IV | Capital structure - Factors influencing capital structure – optimal capital structure - capital structure theories – Net Income Approach – Net Operating Income (NOI) Approach – Modigliani - Miller(MM) Approach – Traditional Approach – Practical Problems. Dividend and Dividend policy: Meaning, classification - sources available for dividends -Dividend policy general, determinants of dividend policy. | | | | | | | 12 | | | C4 | | |
| V | Working Capital Management - Definition and Objectives - Working Capital Policies - Factors affecting Working Capital requirements - Forecasting Working Capital requirements (problems) - Cash Management - Receivables Management and - Inventory Management - Working Capital Financing - Sources of Working Capital and Implications of various Committee Reports- Financial Analytics. | | | | | | | 12 | | | C5 | | |
|  | **Total** | | | | | | | **60** | | |  | | |
| **Course Outcomes** | | | | | | | | | | | | | |
| **Course Outcomes** | On completion of this course, students will; | | | | | | | **Program Outcomes** | | | | | |
| **CO1** | Be aware of the basic concepts of financial management and understand the various sources of finance. | | | | | | | PO4, PO6, PO7 | | | | | |
| **CO2** | Possess knowledge on investment decision making. | | | | | | | PO1, PO2, PO6, PO7 | | | | | |
| **CO3** | Have insights on the cost of capital and would have familiarized themselves with the technique of calculating the cost of capital. | | | | | | | PO2, PO7 | | | | | |
| **CO4** | Have learnt the concept of capital structure and dividend | | | | | | | PO6, PO7 | | | | | |
| **CO5** | Have good understanding on the concept of working capital, its need, importance, factors and the methods of forecasting it. | | | | | | | PO1,PO2, PO4, PO7 | | | | | |
| **Reading List** | | | | | | | | | | | | | |
| 1. | https://accountingexplained.com/managerial/capital-budgeting/ | | | | | | | | | | | | |
| 2. | http://www.studyfinance.com/lessons/workcap/ | | | | | | | | | | | | |
| 3. | Journal of International Financial Management & Accounting | | | | | | | | | | | | |
| 4. | The Management Accountant Journal - icmai-rnj.in | | | | | | | | | | | | |
| **References Books** | | | | | | | | | | | | | |
| 1. | S.N.Maheswari, Finanacial Management, Sulthan Chand & Sons, 15th Edition, 2019 | | | | | | | | | | | | |
| 2. | I.M. Pandey Financial Management, Vikas Publishing House Pvt. Ltd., 11th edition, 2018. | | | | | | | | | | | | |
| 3. | Van Horne, J.C., Financial Managememt and Policy, 13th Edition, Pearson, 2015. | | | | | | | | | | | | |
| 4. | Prasanna Chandra, Financial Management, 10th edition, Tata McGraw Hill, 2019 | | | | | | | | | | | | |
| 5. | Periasamy, P., Financial Management, 4th Edition, Tata McGraw-Hill Education Pvt. Ltd., 2017. | | | | | | | | | | | | |
| 6. | Brigham, E.F. and Ehrhardt, M.C., Financial Management: Theory and Practice, 14th Edition, 2015. | | | | | | | | | | | | |

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|  | **PO 1** | **PO 2** | **PO 3** | **PO 4** | **PO 5** | **PO 6** | **PO 7** | **PO 8** |
| **CO 1** |  |  |  | 2 |  | 2 | 2 |  |
| **CO 2** | 2 | 3 |  |  |  | 2 | 2 |  |
| **CO 3** |  | 2 |  |  |  |  | 3 |  |
| **CO 4** |  |  |  |  |  | 2 | 3 |  |
| **CO 5** | 2 | 2 |  | 3 |  |  | 2 |  |

**3-Strong 2-Medium 1-Low**

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| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | **Inst. Hours** | | **Marks** | | | |
| **CIA** | **External** | **Total** | |
|  | **Strategic Management** | Core | 4 | - | - | - | 4 | 60 | | 25 | 75 | 100 | |
| **Course Objectives** | | | | | | | | | | | | |
| C1 | To enable the students understand the importance of vision and mission in framing corporate strategy. | | | | | | | | | | | |
| C2 | To provide insights on how business is responsible socially and ethically. | | | | | | | | | | | |
| C3 | To highlight on the environmental analysis framework. | | | | | | | | | | | |
| C4 | To throw light on strategic formulation and strategic choice. | | | | | | | | | | | |
| C5 | To understand strategic implementation and strategic control. | | | | | | | | | | | |
| **SYLLABUS** | | | | | | | | | | | | |
| **UNIT** | **Details** | | | | | **No. of Hours** | | | **Course Objectives** | | | |
| I | Introduction: Strategy – Strategic Management Process – Developing a Strategic Vision –Mission- Setting Objectives– Strategies and Tactics – Importance of Corporate Strategy – the 7-S Framework- Corporate Governance– Board of Directors: Role and Functions – Board Functioning – Top Management: Role and Skills. | | | | | 12 | | | C1 | | | |
| II | Corporate Policy and Planning in India: Importance – Characteristics – Objectives - Policy Formulation and Development – Types of Business Policies-Implementation of Policies. Society and Business: Social Responsibility of Business –Corporate Governance and Ethical Responsibility. | | | | | 12 | | | C2 | | | |
| III | Environmental Analysis: Environmental Scanning – Industry Analysis - The Synthesis of External Factors - Internal Scanning – Value Chain Analysis – SWOT Audit –Scenario planning- Creating an Industry Matrix. | | | | | 12 | | | C3 | | | |
| IV | Strategy Formulation and Analysis: Strategy Formulation – Strategic Factors Analysis Summary Matrix (SFAS) Portfolio Analysis – Business Strategy- TOWS Matrix– Corporate Strategy – Functional Strategy – Strategic Choice – Generic, Competitive Strategies; ETOP, TOWS | | | | | 12 | | | C4 | | | |
| V | Strategy Implementation: Strategy Implementation - Corporate Culture – Matching Organisation Structure to Strategy – Mergers and Acquisitions and Diversifications – Strategic Leadership Strategic Control: Measurement in Performance- Problems in Measurement of Performance- Strategy Audit-Strategic Control Process – Du Pont’s Control Model – Balanced Score Card – Michael Porter’s Framework for Strategic Management – Future of Strategic Management – Strategic Information System. | | | | | 12 | | | C5 | | | |
|  | **Total** | | | | | **60** | | |  | | | |
| **Course Outcomes** | | | | | | | | | | | | |
| **Course Outcomes** | On completion of this course, students will; | | | | | **Program Outcomes** | | | | | | |
| **CO1** | Be able to frame vision and mission statements. | | | | | PO3, PO4, PO7 | | | | | | |
| **CO2** | Be social and ethically responsible. | | | | | PO3, PO8 | | | | | | |
| **CO3** | Possess insights on making environmental analysis. | | | | | PO3, PO8 | | | | | | |
| **CO4** | Possess knowledge on learning strategic formulation & strategy choice. | | | | | PO2, PO5, PO7 | | | | | | |
| **CO5** | Understanding strategic implementation and control. | | | | | PO4, PO5, PO7 | | | | | | |
| **Reading List** | | | | | | | | | | | | |
| 1. | Strategic Management Journal – Wiley online Library | | | | | | | | | | | |
| 2. | Journal of strategy and Management – Emerald Insight | | | | | | | | | | | |
| 3. | Mastering Strategic Management – [www.opentextbooks.org.hk](http://www.opentextbooks.org.hk) | | | | | | | | | | | |
| 4. | Mastering Strategic Management – [www.saylor.org](http://www.saylor.org). | | | | | | | | | | | |
| **References Books** | | | | | | | | | | | | |
| 1. | V S P Rao, Strategic Management Text and Cases, 2nd edition 2013. | | | | | | | | | | | |
| 2. | Kazmi, A., Strategic Management and Business Policy, 15th Edition, Tata McGraw-Hill Education, 2018. | | | | | | | | | | | |
| 3. | Dess, G., Lumpkin, G.T. and Eisner, A., Strategic Management, 8th Edition, Tata McGraw-Hill, 2018. | | | | | | | | | | | |
| 4. | Hill, C.W.L. and Jones, G.R., Strategic Management: An Integrated Approach, 9th Edition, Cengage Learning, 2012. | | | | | | | | | | | |
| 5. | Pearce II, J., Robinson, R.B. and Mittal, A., Strategic Management: Formulation, Implementation and Control, 12th Edition, McGraw-Hill, 2017. | | | | | | | | | | | |
| 6. | Wheelen, T.L. and Hunger, D., Strategic Management and Business Policy, 13th Edition, Pearson, 2012. | | | | | | | | | | | |

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|  | **PO 1** | **PO 2** | **PO 3** | **PO 4** | **PO 5** | **PO 6** | **PO 7** | **PO 8** |
| **CO 1** |  |  | 3 | 2 |  |  | 3 |  |
| **CO 2** |  |  | 3 |  |  |  |  | 3 |
| **CO 3** |  |  | 2 |  |  |  |  | 3 |
| **CO 4** |  | 2 |  |  | 3 |  |  | 2 |
| **CO 5** |  |  |  | 3 | 3 |  |  | 3 |

**3-Strong 2-Medium 1-Low**

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| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | | **Inst. Hours** | **Marks** | | | |
| **CIA** | | **External** | **Total** |
|  | **International Business** | Extra Disciplinary | 3 | - | - | - | 3 | | 45 | 25 | | 75 | 100 |
| **Course Objectives** | | | | | | | | | | | | | |
| C1 | To understand and analyze international situations and evaluate international collaborative arrangements and strategic alliances. | | | | | | | | | | | | |
| C2 | To apply knowledge of political, legal, economic and cultural country differences to develop competitive strategies in foreign, regional and global markets. | | | | | | | | | | | | |
| C3 | To throw light on international trade theories and the management of business functional operations in an international context. | | | | | | | | | | | | |
| C4 | To analyze and evaluate barriers, opportunities, market entry modes and the process of internationalization. | | | | | | | | | | | | |
| C5 | To know about regional economic integration and contemporary issues in international business. | | | | | | | | | | | | |
| **SYLLABUS** | | | | | | | | | | | | | |
| **UNIT** | **Details** | | | | | | | **No. of Hours** | | | **Course Objectives** | | |
| I | Introduction: Introduction to International Business: Importance, nature and scope of International business-International Business Vs. Domestic Business; Tariff and non-tariff barriers- transition from Domestic to International Business; Advantages and disadvantages of International business; Balance of Payments; Balance of Trade; Balance of Current Account . Modes of entry into International Business- Internationalization process and managerial implications- Multinational Corporations and their involvement in International Business- Issues in foreign investments, technology transfer, pricing and regulations- International collaborative arrangements and strategic alliances- Counter Trade; Import-Export Process and Documentation. | | | | | | | 9 | | | C1 | | |
| II | International Business Environment and Cultural Differences: International Business Environment: Economic, Political, Cultural and Legal environments in International Business. Framework for analyzing International Business environment. Differences in Culture: Introduction — Social Structure — Religion — Language — Education —Culture and the Workplace — Cultural Change — Cross-cultural Literacy — Culture and Competitive Advantage. | | | | | | | 9 | | | C2 | | |
| III | International Trade Theory: Introduction — Mercantilism, Neo-Mercantilism — Theory of Absolute Advantage — Theory of Comparative Advantage — Heckscher-Ohlin Theory — The New Trade Theory — National Competitive Advantage — Porter's Diamond —General Agreement on Tariff and Trade (GATT)- World Trade Organization (WTO)-GATS-UNCTAD- Trade Blocks; Customs Union-EU- PTA- European Free Trade Area (EFTA)-Central American Common Market(CACM)-Latin American Free Trade Association(LAFTA)- North American Free Trade Agreement(NAFTA)- Association of South East Asian Nations(ASEAN)- CARICOM- GSTP-GSP-SAPTA-Indian Ocean RIM Initiative- BIMSTEC- Bretton Woods Twins- World Bank & IMF, International Finance Corporation- Multilateral Investment Guarantee Agency (MIGA). | | | | | | | 9 | | | C3 | | |
| IV | Global Trading and Investment Environment: Recent Trends in India’s Foreign Trade- India’s Commercial Relations and Trade Agreements with other countries- Institutional Infrastructure for export promotion in India- Export Assistance- Export Finance- Export Processing Zones (EPZs) - Special Economic Zones (SEZs)- Exports by Air, Post and Sea- Small Scale Industries (SSI) and Exports- Role of ECGC- Role of EXIM Bank of India- Role of Commodity Boards- Role of State Trading Agencies in Foreign Trade- STC, MMTC, etc. Foreign Exchange Market- Functions of Foreign Exchange Market- Foreign Direct Investments (FDI); forms of FDI — Horizontal and Vertical Foreign Direct Investment — Advantages of FDI to Host and Home Countries. | | | | | | | 9 | | | C4 | | |
| V | Contemporary Issues: Contemporary Issues in International Business- International Sales Contract- Major Laws- INCO terms- Standard Clauses of International Sales Contract- Role of Indian Council of Arbitration / International Chamber of Commerce in solving Trade disputes. Export Regulations: Procedure for export of goods- Quality Control and Pre- shipment Inspection- Customs Clearance- Port formalities- Exchange regulations for Export- Role of Clearing and Forwarding Agents. | | | | | | | 9 | | | C5 | | |
|  | **Total** | | | | | | | **45** | | |  | | |
| **Course Outcomes** | | | | | | | | | | | | | |
| **Course Outcomes** | On completion of this course, students will; | | | | | | | **Program Outcomes** | | | | | |
| **CO1** | Be aware of the international situations and evaluate international collaborative arrangements and strategic alliances. | | | | | | | PO2, PO4, PO7 | | | | | |
| **CO2** | Possessed knowledge of political, legal, economic and cultural country differences to develop competitive strategies in foreign, regional and global markets. | | | | | | | PO4, PO7 | | | | | |
| **CO3** | Know the various international trade theories and the management of business functional operations in an international context. | | | | | | | PO4, PO6, PO7 | | | | | |
| **CO4** | Be able to evaluate barriers, opportunities, market entry modes and the process of internationalization. | | | | | | | PO2, PO4, PO7 | | | | | |
| **CO5** | Have better understanding on regional economic integration and contemporary issues in international business. | | | | | | | PO6, PO7, PO8 | | | | | |
| **Reading List** | | | | | | | | | | | | | |
| 1. | [www.internationalbusinesscorporation.com](http://www.internationalbusinesscorporation.com) | | | | | | | | | | | | |
| 2. | [www.business-ethics.org](http://www.business-ethics.org) | | | | | | | | | | | | |
| 3. | <https://www.jstor.org/journal/jintebusistud> | | | | | | | | | | | | |
| 4. | Journal of International Business and Management (JIBM) | | | | | | | | | | | | |
| **References Books** | | | | | | | | | | | | | |
| 1. | International Business: Competing in the Global Marketplace (SIE) | 11th Edition – 14 August 2018 by [Charles W. L. Hill](https://www.amazon.in/Charles-W-L-Hill/e/B001IGNO5S/ref=dp_byline_cont_book_1)  (Author), [G. Tomas M. Hult](https://www.amazon.in/s/ref=dp_byline_sr_book_2?ie=UTF8&field-author=G.+Tomas+M.+Hult&search-alias=stripbooks) (Author), [Rohit Mehtani](https://www.amazon.in/s/ref=dp_byline_sr_book_3?ie=UTF8&field-author=Rohit+Mehtani&search-alias=stripbooks) (Author) | | | | | | | | | | | | |
| 2. | International Business | Fourth Edition | By Pearson – 30 November 2017 by [S. Tamer Cavusgil](https://www.amazon.in/s/ref=dp_byline_sr_book_1?ie=UTF8&field-author=S.+Tamer+Cavusgil&search-alias=stripbooks) (Author), [Gary Knight](https://www.amazon.in/s/ref=dp_byline_sr_book_2?ie=UTF8&field-author=Gary+Knight&search-alias=stripbooks) (Author), [John Riesenberger](https://www.amazon.in/s/ref=dp_byline_sr_book_3?ie=UTF8&field-author=John+Riesenberger&search-alias=stripbooks) (Author) | | | | | | | | | | | | |
| 3. | Cherunilam, F., International Business: Text and Cases, 5th Edition, PHI Learning, 2010. | | | | | | | | | | | | |
| 4. | Paul, J., International Business, 5th Edition, PHI Learning, 2010. | | | | | | | | | | | | |
| 5. | Deresky, H., International Management: Managing Across Borders and Cultures, 6th Edition, Pearson, 2011. | | | | | | | | | | | | |
| 6. | Griffin, R., International Business, 7th Edition, Pearson Education, 2012. | | | | | | | | | | | | |

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|  | **PO 1** | **PO 2** | **PO 3** | **PO 4** | **PO 5** | **PO 6** | **PO 7** | **PO 8** |
| **CO 1** |  | 2 |  | 3 |  |  | 2 |  |
| **CO 2** |  |  |  | M |  |  | 2 |  |
| **CO 3** |  |  |  | 3 |  | 3 | 3 |  |
| **CO 4** |  | 3 |  | 3 |  |  | 3 |  |
| **CO 5** |  |  |  |  |  | 3 | 3 | 3 |

**3-Strong 2-Medium 1-Low**

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| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | | **Inst. Hours** | **Marks** | | | |
| **CIA** | | **External** | **Total** |
|  | **Soft Skills II - Business Etiquette** | Soft Skills | - | - | 2 | - | 2 | | 30 | 25 | | 75 | 100 |
| **Course Objectives** | | | | | | | | | | | | | |
| C1 | To analyze the Business etiquette at workplace | | | | | | | | | | | | |
| C2 | To determine the Principles of exceptional work behavior | | | | | | | | | | | | |
| C3 | To explore Tech etiquette in using various telecommunication devices and channels | | | | | | | | | | | | |
| C4 | To successfully handle Multi-cultural challenges | | | | | | | | | | | | |
| C5 | To ascertain sensitivity to new and emerging issues in etiquette | | | | | | | | | | | | |
| **SYLLABUS** | | | | | | | | | | | | | |
| **UNIT** | **Details** | | | | | | | **No. of Hours** | | | **Course Objectives** | | |
| I | Introduction to business etiquette: The ABCs of etiquette Meeting and greeting scenarios-Developing a culture of excellence The principles of exceptional work behaviour - What is the role of Good Manners in Business?-Enduring Words  Greetings and Introductions: Guideline for receptionists - Making introductions and greeting people- Greeting Components- The protocol of shaking hands- Introductions - Introductory scenarios - Addressing individuals. | | | | | | | 6 | | | C1 | | |
| II | Meeting and Boardroom Protocol: Guidelines for planning a meeting - Before the meeting - On the day of the Meeting - Guidelines for Attending the meeting - For the Chairperson- For attendees - For Presenters - Planning a power point presentation-Dealing with customer complaints.  Entertaining Etiquette: Planning a meal- Issuing invitations -Business meals basics - Basics of table etiquette - Holding and resting utensils - Business dining etiquette - Multi-cultural Highlight: Japanese Dinning-Specific food Etiquette guidelines. | | | | | | | 6 | | | C2 | | |
| III | Telephone Etiquette: Cell phone etiquette-Social Media Usage etiquette- Telephone etiquette guidelines - Mastering the telephone courtesy - Active listening - Putting callers on hold -Transferring a call - Screening calls - Taking at message - Voice Mail-Closing the call - When Making calls - Closing the call-Handling rude or impatient clients  Internet & email etiquette: Internet usage in the workplace Email- Netiquette - Online chat - Online chat etiquette - Online chat etiquette guidelines | | | | | | | 6 | | | C3 | | |
| IV | Business Attire & Professionalism: Business style and professional image - Dress code - Guidelines for appropriate business attire - Grooming for  success - Guidelines for appropriate business attire - Grooming for success - Multicultural dressing  Diversity Management- Gender Sensitivity- Social Media and Communication with colleagues-Preventing sexual harassment-Disability Etiquette: Basic disability Etiquette practices - Courtesies for wheelchair users Courtesies for blind or visually impaired - Courtesies for the deaf- People with speech impairments. | | | | | | | 6 | | | C4 | | |
| V | Business Ethics: Ethics in the workplace - The challenge of business ethics - Creating an ethical compass - Business ethics and advantages - Ethical Issues - Conflict Management- Conflict resolution strategies - Choosing the appropriate gift in the business environment  Multi-cultural challenges: Multi-cultural etiquette - Example of cultural sensitivity - Cultural differences and their effect on business etiquette- onsite projects-Cultural Highlight: China-Cultural Highlight: India. | | | | | | | 6 | | | C5 | | |
|  | **Total** | | | | | | | **30** | | |  | | |
| **Course Outcomes** | | | | | | | | | | | | | |
| **Course Outcomes** | On completion of this course, students will; | | | | | | | **Program Outcomes** | | | | | |
| **CO1** | Learn using business etiquette at work place | | | | | | | PO4, PO6, PO7 | | | | | |
| **CO2** | Be able to acquire knowledge about the Principles of exceptional work behaviour | | | | | | | PO4, PO6, PO7 | | | | | |
| **CO3** | Be able to enhance their knowledge of latest Tech etiquette in using various telecommunication devices and channels. | | | | | | | PO4, PO6, PO7 | | | | | |
| **CO4** | Get familiarized with the Successful handling of Multi-cultural challenge | | | | | | | PO4, PO6, PO7 | | | | | |
| **CO5** | Become sensitive to new and emerging issues in etiquette | | | | | | | PO4, PO6, PO7 | | | | | |
| **Reading List** | | | | | | | | | | | | | |
| 1. | https://accountingexplained.com/managerial/capital-budgeting/ | | | | | | | | | | | | |
| 2. | http://www.studyfinance.com/lessons/workcap/ | | | | | | | | | | | | |
| 3. | Journal of International Financial Management & Accounting | | | | | | | | | | | | |
| 4. | The Management Accountant Journal - icmai-rnj.in | | | | | | | | | | | | |
| **References Books** | | | | | | | | | | | | | |
| 1. | Gonda, C. M. (2016) Master of Business Etiquette: The Ultimate Guide to Corporate Etiquette and Soft Skills Embassy Books, First Edition. | | | | | | | | | | | | |
| 2. | Mehra, S. K. (2012) Business Etiquette A Guide For The Indian Professional. Noula: HarperCollins | | | | | | | | | | | | |
| 3. | Pachter, B. (2013). The Essentials of Business Etiquette: How to Greet, Eat, and Tweet Your Way to Success (1) edition New York: McGraw-Hill Education. | | | | | | | | | | | | |
| 4. | Past, K. (2008). Indian Business Etiquette: 1 (First edition). Ahmedabad Jaico Publishing House. | | | | | | | | | | | | |
| 5. | Travis, R. (2013). Tech Eliquette: OMG, 2 Edition, RLT Publishing. | | | | | | | | | | | | |
| 6. | Gonda, C. M. (2016) Master of Business Etiquette: The Ultimate Guide to Corporate Etiquette and Soft Skills Embassy Books, First Edition. | | | | | | | | | | | | |

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|  | **PO 1** | **PO 2** | **PO 3** | **PO 4** | **PO 5** | **PO 6** | **PO 7** | **PO 8** |
| **CO 1** |  |  |  | 2 |  | 2 | 2 |  |
| **CO 2** |  |  |  | 2 |  | 2 | 2 |  |
| **CO 3** |  |  |  | 2 |  | 2 | 2 |  |
| **CO 4** |  |  |  | 2 |  | 2 | 2 |  |
| **CO 5** |  |  |  | 2 |  | 2 | 2 |  |

**3-Strong 2-Medium 1-Low**

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| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | | **Inst. Hours** | **Marks** | | | |
| **CIA** | | **External** | **Total** |
|  | **Soft Skills III – Computing Skills** | Soft Skills | - | - | 2 | - | 2 | | 30 | 25 | | 75 | 100 |
| **Course Objectives** | | | | | | | | | | | | | |
| C1 | To create awareness and understanding on the basic functions of MS Excel | | | | | | | | | | | | |
| C2 | To elucidate the students on the various advanced functions of MS Excel | | | | | | | | | | | | |
| C3 | To educate the students on MS Access and its application in database management | | | | | | | | | | | | |
| C4 | To enable the students to understand the functions and usage of various cloud based apps like Google Drive, Google Sheets and Google Docs | | | | | | | | | | | | |
| C5 | To enable the students learn the functions and usage of Cloud based apps like Google Forms, Google Slides and Google Cloud Printing. | | | | | | | | | | | | |
| **SYLLABUS** | | | | | | | | | | | | | |
| **UNIT** | **Details** | | | | | | | **No. of Hours** | | | **Course Objectives** | | |
| I | MS Excel – Basic Functions - Workbook – Building – modifying - navigating; Worksheet – Auto fill copying and moving cells, inserting and deleting rows, printing; Formulas and functions-Troubleshooting formulas, Functions and its forms like database, reference, Databases – creating, sorting filtering and linking. | | | | | | | 6 | | | C1 | | |
| II | MS Excel Advanced Functions – Vlookup – Hlookup – Charts – Count - Countif – Sum - Sumif – Product – Sumproduct.  Functions: Mathematical - Financial - logic – Text - Statistical | | | | | | | 6 | | | C2 | | |
| III | MS Access – Components, creating a database and project, import and exporting, customizing; Tables – creating and setting fields; Queries – types, creating, wizards – Reports – creating and layout. | | | | | | | 6 | | | C3 | | |
| IV | Cloud based apps – Google Drive, Google Sheets, Google Docs, | | | | | | | 6 | | | C4 | | |
| V | Cloud based apps - Google Forms, Google Slides – Google Cloud Print | | | | | | | 6 | | | C5 | | |
|  | **Total** | | | | | | | **30** | | |  | | |
| **Course Outcomes** | | | | | | | | | | | | | |
| **Course Outcomes** | On completion of this course, students will; | | | | | | | **Program Outcomes** | | | | | |
| **CO1** | Have awareness and understanding on the basic functions of MS Excel | | | | | | | PO4, PO6, PO7 | | | | | |
| **CO2** | Know the advanced functions of MS Excel | | | | | | | PO4, PO6, PO7 | | | | | |
| **CO3** | Possess knowledge on MS Access and its application in database management | | | | | | | PO2, PO4, PO6, PO7 | | | | | |
| **CO4** | Understand and possess knowledge on the functions and usage of various cloud based apps like Google Drive, Google Sheets and Google Docs | | | | | | | PO4, PO5, PO6, PO7 | | | | | |
| **CO5** | Understand and be aware of the functions and usage of Cloud based apps like Google Forms, Google Slides and Google Cloud Printing. | | | | | | | PO4, PO6, PO7 | | | | | |
| **Reading List** | | | | | | | | | | | | | |
| 1. | Humphrey M.L., Excel For Beginners, Kindle Edition, 2017 | | | | | | | | | | | | |
| 2. | Richard Rost, Learning MS Access Kindle Edition, 2013 | | | | | | | | | | | | |
| 3. | Sachin Srivastava, Google Cloud Platform, Kindle Edition, 2021 | | | | | | | | | | | | |
| 4. | Valarie Lestourgeon, A Beginner’s Guide to GCP, Kindle Edition, 2021 | | | | | | | | | | | | |
| **References Books** | | | | | | | | | | | | | |
| 1. | Gonda, C. M. (2016) Master of Business Etiquette: The Ultimate Guide to Corporate Etiquette and Soft Skills Embassy Books, First Edition. | | | | | | | | | | | | |
| 2. | Mehra, S. K. (2012) Business Etiquette A Guide For The Indian Professional. Noula: HarperCollins | | | | | | | | | | | | |
| 3. | Pachter, B. (2013). The Essentials of Business Etiquette: How to Greet, Eat, and Tweet Your Way to Success (1) edition New York: McGraw-Hill Education. | | | | | | | | | | | | |
| 4. | Past, K. (2008). Indian Business Etiquette: 1 (First edition). Ahmedabad Jaico Publishing House. | | | | | | | | | | | | |
| 5. | Travis, R. (2013). Tech Eliquette: OMG, 2 Edition, RLT Publishing. | | | | | | | | | | | | |

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|  | **PO 1** | **PO 2** | **PO 3** | **PO 4** | **PO 5** | **PO 6** | **PO 7** | **PO 8** |
| **CO 1** |  |  |  | 3 |  | 3 | 3 |  |
| **CO 2** |  |  |  | 3 |  | 3 | 3 |  |
| **CO 3** |  | 3 |  | 3 | 3 | 3 | 3 |  |
| **CO 4** |  |  |  | 3 | 3 | 3 | 3 |  |
| **CO 5** |  |  |  | 3 |  | 3 | 3 |  |

**3-Strong 2-Medium 1-Low**

**SEMESTER III**

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| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | | **Inst. Hours** | **Marks** | | | |
| **CIA** | | **External** | **Total** |
|  | **Information Systems for Business** | Core | 4 | - | - | - | 4 | | 45 | 25 | | 75 | 100 |
| **Course Objectives** | | | | | | | | | | | | | |
| C1 | To enable students to understand the fundamentals of information system and its role of information in managerial decision making | | | | | | | | | | | | |
| C2 | To throw light on fundamentals of information systems like TPS, DSS, and EIS. | | | | | | | | | | | | |
| C3 | To manage system applications and data to best support functional areas of business | | | | | | | | | | | | |
| C4 | To provide insights in securely managing database and information using the process of | | | | | | | | | | | | |
| C5 | To elucidate the need and importance of ERP, its selection and implementation in workplace | | | | | | | | | | | | |
| **SYLLABUS** | | | | | | | | | | | | | |
| **UNIT** | **Details** | | | | | | | **No. of Hours** | | | **Course Objectives** | | |
| I | Introduction to information system**-**The management, structure and activities- Information needs and sources-Types of management decisions and information need. System classification Elements of system, input, output, process and feedback. | | | | | | | 12 | | | C1 | | |
| II | Transaction Processing information system, Office Automation System (OAS) - Knowledge workers System(KWS); MIS; Information system for managers, Intelligence information system –Decision support system-Executive information systems. | | | | | | | 12 | | | C2 | | |
| III | Functional Management Information System: Production / Operations Information system, Marketing Information Systems, Accounting Information system, Financial Information system, Human resource Information system. | | | | | | | 12 | | | C3 | | |
| IV | System Analysis and Design: The work of a system analyst- SDLC-System design – AGILE Model – Waterfall Model – Spiral Model – Iterative and Incremental Model - RAD Model - Requirement analysis-Data flow diagram, relationship diagram, design- Implementation-Evaluation and maintenance of MIS, Database System: Overview of Database- Components-advantages and disadvantages of database; Data Warehousing and Data Mining; Business Intelligence; Artificial Intelligence; Expert System; Big Data; Cyber Safety and Security- Cryptography; RSA Model of Encryption; Data Science - Block Chain Technology; E-commerce and E-Business models; IOT - RFID. | | | | | | | 12 | | | C4 | | |
| V | Enterprise Resource Planning (ERP) System, Benefits of the ERP, ERP how different from conventional packages , Need for ERP , ERP components , Selection of ERP Package, ERP implementation, Customer Relationship management. Organisation & Types, Decision Making, Data & information, Characteristics & Classification of information, Cost & value of information, various channels of information and MIS; Information system audit and control – E-Governance. | | | | | | | 12 | | | C5 | | |
|  | **Total** | | | | | | | **60** | | |  | | |
| **Course Outcomes** | | | | | | | | | | | | | |
| **Course Outcomes** | On completion of this course, students will; | | | | | | | **Program Outcomes** | | | | | |
| **CO1** | Learn the importance of data and information in managerial decision making. | | | | | | | PO1, PO2, PO6 | | | | | |
| **CO2** | Possess on the various IS and the its relevance to Organizational environment | | | | | | | PO3, PO5, PO8, | | | | | |
| **CO3** | Understand the application of IS on the various functions like Accounting, Finance, Marketing, Operations and HR | | | | | | | PO1, PO3, PO5, PO8 | | | | | |
| **CO4** | To study the various models and new technologies | | | | | | | PO1, PO2, PO6, PO7 | | | | | |
| **CO5** | Be exposed on the importance of selecting the appropriate ERP and its implementation | | | | | | | PO1, PO2, PO5, PO8 | | | | | |
| **Reading List** | | | | | | | | | | | | | |
| 1. | Information Systems for Business and Beyond – opentextbooks.site. | | | | | | | | | | | | |
| 2. | Management Information Systems: Managing the Digital firm – www.textbooks.com | | | | | | | | | | | | |
| 3. | Information systems Journal – Wiley Online Library. | | | | | | | | | | | | |
| 4. | Information Systems management in Business and development organisations – Harekrishna Misra – PHI Learning. | | | | | | | | | | | | |
| **References Books** | | | | | | | | | | | | | |
| 1. | Azam, M., Management Information System, McGrawHill Education, 2012 | | | | | | | | | | | | |
| 2. | Laudon, K., Laudon, J. and Dass, R., Management Information Systems – Managing the Digital Firm, 11th Edition, Pearson, 2010. | | | | | | | | | | | | |
| 3. | Murdick, R.G., Ross, J.E. and Claggett, J.R., Information Systems for Modern Management, 3rd Edition, PHI, 2011. | | | | | | | | | | | | |
| 4. | O’Brien, J.A., Morakas, G.M. and Behl, R., Management Information Systems, 9th Edition, Tata McGraw-Hill Education, 2009. | | | | | | | | | | | | |
| 5. | Saunders, C.S. and Pearson, K.E., Managing and Using Information Systems, 3rd Edition, Wiley India Pvt. Ltd., 2009. | | | | | | | | | | | | |
| 6. | Stair, R. and Reynolds, G., Information Systems, 10th Edition, Cengage Learning,2012. | | | | | | | | | | | | |

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|  | **PO 1** | **PO 2** | **PO 3** | **PO 4** | **PO 5** | **PO 6** | **PO 7** | **PO 8** |
| **CO 1** | 3 | 2 |  |  |  | 3 |  |  |
| **CO 2** |  |  | 3 |  | 3 |  |  | 3 |
| **CO 3** | 2 |  | 3 |  | 2 |  |  | 3 |
| **CO 4** | 3 | 3 |  |  |  | 2 | 3 |  |
| **CO 5** | 3 | 2 |  |  | 2 |  |  | 3 |

**3-Strong 2-Medium 1-Low**

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| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | | **Inst. Hours** | **Marks** | | | |
| **CIA** | | **External** | **Total** |
|  | **EMPLOYABILITY SKILLS** | Extra Disciplinary | 3 | - | - | - | 3 | | 45 | 25 | | 75 | 100 |
| **Course Objectives** | | | | | | | | | | | | | |
| C1 | To learn about the employability skills | | | | | | | | | | | | |
| C2 | To understand dimensions of task oriented skills | | | | | | | | | | | | |
| C3 | To study on critical problem-solving techniques | | | | | | | | | | | | |
| C4 | To develop employability skills | | | | | | | | | | | | |
| C5 | To understand the logical and reasoning skills | | | | | | | | | | | | |
| **SYLLABUS** | | | | | | | | | | | | | |
| **UNIT** | **Details** | | | | | | | **No. of Hours** | | | **Course Objectives** | | |
| I | **INTRODUCTION TO EMPLOYABILITY SKILLS**  Meaning – Definition – Hard skills and soft  skills –Employability skills and vocational skills – Employability and employment –  Employability attributes. | | | | | | | 9 | | | C1 | | |
| II | **UNPACKING EMPLOYABILITY SKILLS**  Embedded employability skills – Dimensions of  competency – Task skills –Task Management skills – Contingency Management skills –  Job/Role Environment skills. | | | | | | | 9 | | | C2 | | |
| III | **INTER – RELATIONSHIPS OF EMPLOYABILITY SKILLS**  Communication – Team work –  Problem solving – Initiative and Enterprise – Planning and Organizing – Self management –  Learning – Technology. | | | | | | | 9 | | | C3 | | |
| IV | **RESUME WRITING**  Meaning – Features of good resume – Model (Exercise). Etiquettes – Dress, Cleanliness, Etiquettes to be followed inside the employment seeking process. | | | | | | | 9 | | | C4 | | |
| V | **Arithmetic and Logical Reasoning Skills – Exercise.** | | | | | | | 9 | | | C5 | | |
|  | **Total** | | | | | | | **45** | | |  | | |
| **Course Outcomes** | | | | | | | | | | | | | |
| **Course Outcomes** | On completion of this course, students will; | | | | | | | | | | | | |
| **CO1** | Acquire employability skills | | | | | | | PO4, PO6, PO7 | | | | | |
| **CO2** | understand dimensions of task oriented skills | | | | | | | PO4, PO6, PO7 | | | | | |
| **CO3** | study on critical problem-solving techniques | | | | | | | PO4, PO6, PO7 | | | | | |
| **CO4** | develop employability skills | | | | | | | PO4, PO6, PO7 | | | | | |
| **CO5** | understand the logical and reasoning skills | | | | | | | PO4, PO6, PO7 | | | | | |
| **Reading List** | | | | | | | | | | | | | |
| 1. | <https://www.jobjumpstart.gov.au/article/what-are-employability-skills> | | | | | | | | | | | | |
| 2. | <https://www.simplilearn.com/why-are-employability-skills-important-article> | | | | | | | | | | | | |
| 3. | <https://blog.hubspot.com/marketing/employability-skills> | | | | | | | | | | | | |
| 4. | <https://www.indeed.com/career-advice/finding-a-job/employability-skills> | | | | | | | | | | | | |
| **References Books** | | | | | | | | | | | | | |
| 1. | Soft Skills, Dr. K. Alex | | | | | | | | | | | | |
| 2. | Winning Interview Skills, Complied & Edited by J.K. Chopra. | | | | | | | | | | | | |
| 3. | A Modern Approach to Verbal and Non- Verbal Reasoning, R. S. Aggarwal. | | | | | | | | | | | | |
| 4. | Fafinski, S., Finch, E. (2014). Employability Skills for Law Students. United Kingdom: OUP Oxford. | | | | | | | | | | | | |
| 5. | Trought, F. (2017). Brilliant Employability Skills: How to Stand Out from the Crowd in the Graduate Job Market. United Kingdom: Pearson Education Limited. | | | | | | | | | | | | |
| 6. | Chaita, M. V. (2016). Developing Graduate Employability Skills: Your Pathway to Employment. United States: Universal Publishers. | | | | | | | | | | | | |

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|  | **PO 1** | **PO 2** | **PO 3** | **PO 4** | **PO 5** | **PO 6** | **PO 7** | **PO 8** |
| **CO 1** |  |  |  | 3 |  | 3 |  |  |
| **CO 2** |  |  |  | 3 |  | 3 |  |  |
| **CO 3** |  | 2 |  | 3 |  | 3 |  |  |
| **CO 4** |  |  |  | 3 | 2 | 3 | 1 |  |
| **CO 5** |  |  |  | 3 |  | 3 |  |  |

**3-Strong 2-Medium 1-Low**

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| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | | **Inst. Hours** | **Marks** | | | |
| **CIA** | | **External** | **Total** |
|  | **Soft Skills IV – Leadership & Team Building Skills** | Soft Skills | - | - | 2 | - | 2 | | 30 | 25 | | 75 | 100 |
| **Course Objectives** | | | | | | | | | | | | | |
| C1 | To understand the characteristics, style, traits of leaders, and theories of leadership. | | | | | | | | | | | | |
| C2 | To learn more about self-leadership and developing team-building skills through case studies and examples. | | | | | | | | | | | | |
| C3 | To understand how to form, manage and lead the team. | | | | | | | | | | | | |
| C4 | To understand the measures of conflict in a team | | | | | | | | | | | | |
| C5 | To explore team roles & processes in developing and managing a team | | | | | | | | | | | | |
| **SYLLABUS** | | | | | | | | | | | | | |
| **UNIT** | **Details** | | | | | | | **No. of Hours** | | | **Course Objectives** | | |
| I | **Leadership Theories:** Nature of leadership theories & models of leadership - attributes of effective leaders - traits of leadership - interpersonal competence & leadership | | | | | | | 6 | | | C1 | | |
| II | **Leadership Styles:** Leadership qualities -styles of leadership -attitudes-role models & new leadership - cultural differences and diversity in leadership - leader behaviour leadership in different countries- leadership ethics & social responsibility. | | | | | | | 6 | | | C2 | | |
| III | **Leadership Skills:** Leadership skills - Leadership & management - transactional & transformational in leadership -Strength based leadership in practice - Tasks & Relationship approach in leadership - influence tactics of leaders- motivation and coaching skills. Establishing constructive climate- listening to out group members- communication and conflict resolution skills. | | | | | | | 6 | | | C3 | | |
| IV | **Team Work:** Working in group & teams - characteristics of effective team- types- team development: Tuckman's team development stages- Belbin team roles - Ginnett - team effectiveness leadership model. | | | | | | | 6 | | | C4 | | |
| V | **Exploring team roles & processes:** mapping the stages of group development -Building: and developing teams-overcoming resistance coping and conflict and Ego-leading a team managing meetings. | | | | | | | 6 | | | C5 | | |
|  | **Total** | | | | | | | **30** | | |  | | |
| **Course Outcomes** | | | | | | | | | | | | | |
| **Course Outcomes** | On completion of this course, students will; | | | | | | | **Program Outcomes** | | | | | |
| **CO1** | Critical understanding of theories and concepts of leadership and teamwork in organizations | | | | | | | PO4, PO5, PO6, PO7 | | | | | |
| **CO2** | Critical awareness of the importance of teamwork and development of the skills for building effective teams | | | | | | | PO4, PO5, PO6, PO7 | | | | | |
| **CO3** | Understanding of the techniques and practical understanding of how to apply theories and concepts to improve leadership skills. | | | | | | | PO2, PO4, PO5, PO6, PO7 | | | | | |
| **CO4** | Development of skills in effective leadership and professional communication | | | | | | | PO4, PO5, PO6, PO7 | | | | | |
| **CO5** | Demonstrate effective written communication skills for plans, strategies and outcomes. | | | | | | | PO4, PO6, PO7 | | | | | |
| **Reading List** | | | | | | | | | | | | | |
| 1. | Uday Kumar Haldar, Leadership and Team Building, | | | | | | | | | | | | |
| 2. | D.K. Tripathy, Team Building and Leadership with Texts and Cases, Himalaya Publishing House, 2014 | | | | | | | | | | | | |
| 3. | International Journal on Leadership, Publishing India Group | | | | | | | | | | | | |
| 4. | International Journal of Organizational Leadership, CIKD | | | | | | | | | | | | |
| **References Books** | | | | | | | | | | | | | |
| 1. | Gonda, C. M. (2016) Master of Business Etiquette: The Ultimate Guide to Corporate Etiquette and Soft Skills Embassy Books, First Edition. | | | | | | | | | | | | |
| 2. | Mehra, S. K. (2012) Business Etiquette A Guide For The Indian Professional. Noula: HarperCollins | | | | | | | | | | | | |
| 3. | Pachter, B. (2013). The Essentials of Business Etiquette: How to Greet, Eat, and Tweet Your Way to Success (1) edition New York: McGraw-Hill Education. | | | | | | | | | | | | |
| 4. | Past, K. (2008). Indian Business Etiquette: 1 (First edition). Ahmedabad Jaico Publishing House. | | | | | | | | | | | | |
| 5. | Travis, R. (2013). Tech Eliquette: OMG, 2 Edition, RLT Publishing. | | | | | | | | | | | | |
| 6. | Gonda, C. M. (2016) Master of Business Etiquette: The Ultimate Guide to Corporate Etiquette and Soft Skills Embassy Books, First Edition. | | | | | | | | | | | | |

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|  | **PO 1** | **PO 2** | **PO 3** | **PO 4** | **PO 5** | **PO 6** | **PO 7** | **PO 8** |
| **CO 1** |  |  |  | 3 | 3 | 3 | 3 |  |
| **CO 2** |  |  |  | 3 | 3 | 3 | 3 |  |
| **CO 3** |  | 3 |  | 3 | 3 | 3 | 3 |  |
| **CO 4** |  |  |  | 3 | 3 | 3 | 3 |  |
| **CO 5** |  |  |  | 3 |  | 3 | 3 |  |

**3-Strong 2-Medium 1-Low**

**Specialization Courses: Systems Management**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | **Inst. Hours** | **Marks** | | |
| **CIA** | **External** | **Total** |
| 1 | Database Management System | Elective | 3 | - | - | - | 3 | 3 | 25 | 75 | 100 |
| 2 | System Analysis and Design | Elective | 3 | - | - | - | 3 | 3 | 25 | 75 | 100 |
| 3 | Decision Support System | Elective | 3 | - | - | - | 3 | 3 | 25 | 75 | 100 |
| 4 | E – Business | Elective | 3 | - | - | - | 3 | 3 | 25 | 75 | 100 |
| 5 | Internet of Things | Elective | 3 | - | - | - | 3 | 3 | 25 | 75 | 100 |
| 6 | Cloud Computing | Elective | 3 | - | - | - | 3 | 3 | 25 | 75 | 100 |
| 7 | Enterprise Resource Planning | Elective | 3 | - | - | - | 3 | 3 | 25 | 75 | 100 |
| 8 | Software project and quality management | Elective | 3 | - | - | - | 3 | 3 | 25 | 75 | 100 |
| 9 | Data Warehousing | Elective | 3 | - | - | - | 3 | 3 | 25 | 75 | 100 |
| 10 | Deep Learning and Artificial Intelligence | Elective | 3 | - | - | - | 3 | 3 | 25 | 75 | 100 |

**# Choose any 6 electives from the above list in consultation with the HOD or Head.**

**SPECIALIZATION COURSES: SYSTEMS MANAGEMENT**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | | **Inst. Hours** | **Marks** | | | |
| **CIA** | | **External** | **Total** |
|  | **Data Base Management System** | Elective | 3 | - | - | - | 3 | | 45 | 25 | | 75 | 100 |
| **Course Objectives** | | | | | | | | | | | | | |
| C1 | To provide insights to the database concepts and modeling. | | | | | | | | | | | | |
| C2 | To throw light on RDBMS and basic structure of SQL. | | | | | | | | | | | | |
| C3 | To familiarize on integrity & domain constraints and normalization using functional, multivalued, join dependencies. | | | | | | | | | | | | |
| C4 | To create awareness and importance of object oriented data model. | | | | | | | | | | | | |
| C5 | To elucidate on database system architectures. | | | | | | | | | | | | |
| **SYLLABUS** | | | | | | | | | | | | | |
| **UNIT** | **Details** | | | | | | | **No. of Hours** | | | **Course Objectives** | | |
| I | Introduction – Data Models – Database languages – Transaction – Storage management – Database administrator – Users – overall system structure – Entity – Relationship  Model – Basic concepts –Mapping constraints – keys – E - R Diagram – Weak Entity Sets –reduction of E- R Diagram to tables. | | | | | | | 9 | | | C1 | | |
| II | Relational Model – structure – relational algebra – extended operations – Modifications on a database – views – SQL – basic structure – set operations – aggregate functions – Nested Sub queries – derived relations, views. | | | | | | | 9 | | | C2 | | |
| III | Integrity constraints – Domain constraints – referential integrity – assertions – triggers – functional dependencies – relational database design – decomposition – normalization using functional, multivalued, Join dependencies– Domain – Key Normal form – alternative approaches. | | | | | | | 9 | | | C3 | | |
| IV | Object Oriented data Model – Languages – Object Relational databases: Nested Relations – Complex types and object Orientation – Querying with complex types – creation of complex values and objects – comparison. | | | | | | | 9 | | | C4 | | |
| V | Database System Architectures : Centralized Systems, Client server systems, Distributed systems, Parallel databases – introduction –inter query –intra query, intra-operation –interoperation parallelism –distributed databases –distributed data storage–network transparency –Query processing –Transaction model–Commit protocols –coordinator selection –concurrency control –deadlock handling –multi database systems. | | | | | | | 9 | | | C5 | | |
|  | **Total** | | | | | | | **45** | | |  | | |
| **Course Outcomes** | | | | | | | | | | | | | |
| **Course Outcomes** | On completion of this course, students will; | | | | | | | **Program Outcomes** | | | | | |
| **CO1** | Summarise the database concepts and modeling. | | | | | | | P02, P06 | | | | | |
| **CO2** | Recall the concept of RDBMS and basic structure of SQL. | | | | | | | P01, P06 | | | | | |
| **CO3** | Generalise on integrity & domain constraints and normalization using functional, multivalued, join dependencies. | | | | | | | P01, P05, P06 | | | | | |
| **CO4** | Formulate one’s understanding on object oriented data model. | | | | | | | P01, P06 | | | | | |
| **CO5** | Criticise and compare the database system architectures. | | | | | | | P02, P05, P06 | | | | | |
| **Reading List** | | | | | | | | | | | | | |
| 1. | T. William Olle, Database management system, [[Encyclopedia of Computer Science](javascript:void(0);" \o "T. William Olle)](https://dl.acm.org/doi/book/10.5555/1074100) | | | | | | | | | | | | |
| 2. | [Journal of Intelligent Information Systems](https://www.springer.com/journal/10844/) - Integrating Artificial Intelligence and Database Technologies, Springer | | | | | | | | | | | | |
| 3. | [Knowledge and Information Systems](https://www.springer.com/journal/10115/), Springer  An International Journal | | | | | | | | | | | | |
| 4. | [Journal of Network and Systems Management](https://www.springer.com/journal/10922/), Springer | | | | | | | | | | | | |
|  | **TEXT BOOKS** | | | | | | | | | | | | |
| 1. | C.J. Date, A.Kannan, S.SwamiNadhan, An Introduction to Database systems, , Pearson, 8th Edition, 2003 | | | | | | | | | | | | |
| 2 | Paneerselvam, R; Database Management Systems; PHI; 2018 | | | | | | | | | | | | |
| 3 | SatinderBal Gupta; Aditya Mittal; Introduction to Database Management; Laxmi Publication; 2009 | | | | | | | | | | | | |
| 4 | Raghu Ramakrishnan;JohannesGehrke; Database management systems; third edition; McGraw Hill; 2000 | | | | | | | | | | | | |
| 5 | Rajiv Chopra; Database management sytems: A Practical approach; 5th edition; S Chand and company; 2008 | | | | | | | | | | | | |
| **References Books** | | | | | | | | | | | | | |
| 1. | A Silberschatz, H Korth, S Sudarshan, “Database System and Concepts ”, McGraw-Hill, 6th Edition, 2013 | | | | | | | | | | | | |
| 2. | Raghurama Krishnan, Johannes Gehrke, Data base Management Systems, McGraw-Hill 3rd Edition, 2014. | | | | | | | | | | | | |
| 3. | ElmasriNavathe, Fundamentals of Database Systems, Pearson Education, 7th Edition, 2015 | | | | | | | | | | | | |
| 4. | Rob, Coronel, “Database Systems”, Seventh Edition, Cengage Learning, 2006. | | | | | | | | | | | | |
|  | Total | | | | | | | 100 Marks | | | | | |

**CO – PO MAPPING**

|  |  |  |  |  |  |  |  |  |
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|  | **PO 1** | **PO 2** | **PO 3** | **PO 4** | **PO 5** | **PO 6** | **PO 7** | **PO 8** |
| **CO 1** |  | S |  |  |  | S |  |  |
| **CO 2** | M |  |  |  |  | S |  |  |
| **CO 3** | M |  |  |  | S | M |  |  |
| **CO 4** | S |  |  |  |  | M |  |  |
| **CO 5** |  | S |  |  | S | M |  |  |

**S-Strong M-Medium L-Low**

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| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | | **Inst. Hours** | **Marks** | | | |
| **CIA** | | **External** | **Total** |
|  | **System Analysis and Design** | Elective | 3 | - | - | - | 3 | | 45 | 25 | | 75 | 100 |
| **Course Objectives** | | | | | | | | | | | | | |
| C1 | To familiarize the students on the fundamentals of system analysis and design. | | | | | | | | | | | | |
| C2 | To provide insights on computer-assisted tools and types of automated tools. | | | | | | | | | | | | |
| C3 | To throw light on review and selection fact-finding techniques. | | | | | | | | | | | | |
| C4 | To elucidate on the essentials of design designing effective output. | | | | | | | | | | | | |
| C5 | To create awareness and importance on software design & documentation and case studies on various domains. | | | | | | | | | | | | |
| **SYLLABUS** | | | | | | | | | | | | | |
| **UNIT** | **Details** | | | | | | | **No. of Hours** | | | **Course Objectives** | | |
| I | System Analysis Fundamentals**:** Introduction to System, System Analysis and Design, Need for System Analysis and Design, Role of the System Analyst System Development Strategies: SDLC, Structured Analysis Development Method, System Prototype Method. | | | | | | | 9 | | | C1 | | |
| II | Case Tools:Benefits of Computer-Assisted Tools, Categories of Automated Tools, Case Components Organizations as System: Interrelatedness and Interdependence of System, System Process, Boundaries, System Feedback, Managing Project. | | | | | | | 9 | | | C2 | | |
| III | Review and Selection Fact-Finding Techniques:Interview, Questionnaire, Record Review, Observation Data Flow Diagram: Advantages, Notations, Rules, Leveling, Logical and Physical DFD. Data Dictionary: Importance, Data Elements, Describing Process Specification Structured Decisions: Decision Tree, Decision Tables, Structured English. | | | | | | | 9 | | | C3 | | |
| IV | The Essentials of Design Designing Effective Output:Objectives, Types of Output, Method, Factors to consider - Designing Effective Input: Objectives, Guideline for Form design, Screen and Web Forms, Designing User Interface: Objectives, Types of user interface, Designing Accurate Data – Entry Procedures: Objectives, Effective coding, Data-Entry Method, Ensuring data quality through input validation | | | | | | | 9 | | | C4 | | |
| V | Quality Assurance through Software Engineering - Design of Software, Software design and documentation: Structured Flowcharts, HIPO, Warnier /Orr Diagrams Managing Quality Assurance: Level of Assurance, Level of Test Implementation of Information System: Training Strategies, Conversion, Post Implementation Review -Case Studies - Financial Accounting System - Payroll System – Library System - Inventory System - Online Banking System - Railway Reservation system(Input, Output, DFD) | | | | | | | 9 | | | C5 | | |
|  | **Total** | | | | | | | **45** | | |  | | |
| **Course Outcomes** | | | | | | | | | | | | | |
| **Course Outcomes** | On completion of this course, students will; | | | | | | | **Program Outcomes** | | | | | |
| **CO1** | Recall the fundamentals of system analysis and design. | | | | | | | P01, P02 | | | | | |
| **CO2** | Describe the computer-assisted tools and types of automated tools. | | | | | | | P02, P06 | | | | | |
| **CO3** | Analyse the review and selection of fact-finding techniques. | | | | | | | P01, P04 | | | | | |
| **CO4** | Formulate the essentials of designing effective output. | | | | | | | P02, P06 | | | | | |
| **CO5** | Organise your understanding on software design & documentation and case studies on various domains. | | | | | | | P01, P06 | | | | | |
| **Reading List** | | | | | | | | | | | | | |
| 1. | [Finite Elements in Analysis and Design, Elsvier](https://www.sciencedirect.com/journal/finite-elements-in-analysis-and-design) | | | | | | | | | | | | |
| 2. | [Formal Methods in System Design](https://www.springer.com/journal/10703/), Springer | | | | | | | | | | | | |
| 3. | Journal of Systems and Software, Elsevier | | | | | | | | | | | | |
| 4. | [Telecommunication Systems](https://www.springer.com/journal/11235/) - Modelling, Analysis, Design and Management, Springer | | | | | | | | | | | | |
|  | **Text book** | | | | | | | | | | | | |
| 1 | V Rajaraman; Analysis and Design of Information Systems; PHI; 2018 | | | | | | | | | | | | |
| 2 | J B Dixit; Structured system Analysis and Design ; Laxmi Publications; 2007 | | | | | | | | | | | | |
| 3 | AruneshGoyal; System Analysis and Design ; PBI Learning; 2011 | | | | | | | | | | | | |
| 4 | Dr V k Jain; System Analysis and Design handbook; Dreamtech Press; 2000 | | | | | | | | | | | | |
| 5 | Preeti Gupta; Structured System Analysis and Design; Firewall Media; 2005 | | | | | | | | | | | | |
| **References Books** | | | | | | | | | | | | | |
| 1. | Hoffer J. A, George J.F, Valacich J.S, Modern Systems Analysis and Design, Pearson Education, 6th Edition, 2011 | | | | | | | | | | | | |
| 2. | Alan Dennis and Barbara Wixom, [Roberta M. Roth](https://www.wiley.com/en-us/search?pq=%7Crelevance%7Cauthor%3ARoberta+M.+Roth), Systems Analysis and Design, Wiley, 2018. | | | | | | | | | | | | |
| 3. | Whitten J. L, Bentley L. D, Systems Analysis and Design Methods, McGraw Hill, 2005. | | | | | | | | | | | | |
| 4. | Kenneth E. Kendall, Julie E. Kendall, Systems Analysis and Design, Pearson Education, 10th Edition, 2019. | | | | | | | | | | | | |
| 5. | Elias M. Awad, System Analysis and Design, Galgotia Publications Pvt. Ltd, 2010 | | | | | | | | | | | | |

**CO-PO MAPPING**

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|  | **PO 1** | **PO 2** | **PO 3** | **PO 4** | **PO 5** | **PO 6** | **PO 7** | **PO 8** |
| **CO 1** | S |  |  |  |  | S |  |  |
| **CO 2** |  | S |  |  |  | S |  |  |
| **CO 3** | M |  |  | S |  |  |  |  |
| **CO 4** |  | M |  |  |  | M |  |  |
| **CO 5** | S |  |  |  |  | S |  |  |

**S-Strong M-Medium L-Low**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | | **Inst. Hours** | **Marks** | | | |
| **CIA** | | **External** | **Total** |
|  | **Decision Support System** | Elective | 3 | - | - | - | 3 | | 45 | 25 | | 75 | 100 |
| **Course Objectives** | | | | | | | | | | | | | |
| C1 | To provide insights on components and characteristics of DSS. | | | | | | | | | | | | |
| C2 | To throw light on modeling process, model directory and model base management system. | | | | | | | | | | | | |
| C3 | To familiarize on data structure and data base languages. | | | | | | | | | | | | |
| C4 | To create awareness and importance of dialog management, user interface and visual interactive modeling. | | | | | | | | | | | | |
| C5 | To elucidate on development of decision support system. | | | | | | | | | | | | |
| **SYLLABUS** | | | | | | | | | | | | | |
| **UNIT** | **Details** | | | | | | | **No. of Hours** | | | **Course Objectives** | | |
| I | Introduction: Decision concept – Steps – Decision Support System – Components – Characteristics – Classifications and Applications. | | | | | | | 9 | | | C1 | | |
| II | Model Management: Model – Modeling Process – Types of Models – Optimization – Simulation – Heuristic: Descriptive – Predictive Model Base – Modeling Languages – Model Directory, Model Base Management System – Model Execution, Integration and Command Processing – Model Packages. | | | | | | | 9 | | | C2 | | |
| III | Data Management System: Data Base – Sources of Data – Data Directory – Data Structure and Data Base Languages – Query Facility – Data Management System – DBMS as DSS Development Tool. | | | | | | | 9 | | | C3 | | |
| IV | Dialog Management: User Interface – Graphics – Multimedia – Visual Interactive Modeling – Natural language processing – Speech Recognition and Understanding – Issues in User interface. | | | | | | | 9 | | | C4 | | |
| V | Development of Decision Support System: Development Process – Software and Hardware; Data Acquisition – Model Acquisition – Dialog development – Integration – Testing and Validation – Training and Implementation. | | | | | | | 9 | | | C5 | | |
|  | **Total** | | | | | | | **45** | | |  | | |
| **Course Outcomes** | | | | | | | | | | | | | |
| **Course Outcomes** | On completion of this course, students will; | | | | | | | **Program Outcomes** | | | | | |
| **CO1** | Have insights on components and characteristics of DSS. | | | | | | | P01, P02 | | | | | |
| **CO2** | Possess knowledge on DSS architecture; approaches to development; and models in DSS. | | | | | | | P02, P04 | | | | | |
| **CO3** | Possess knowledge on Group DSS and Executive Information Systems (EIS). | | | | | | | P01, P05 | | | | | |
| **CO4** | Have better understanding on AI and expert systems. | | | | | | | P02, P06 | | | | | |
| **CO5** | Learn and understand on development of decision support system. | | | | | | | P01, P06 | | | | | |
| **Reading List** | | | | | | | | | | | | | |
| 1. | [Decision Support Systems and Electronic Commerce, Elsevier](https://www.sciencedirect.com/journal/finite-elements-in-analysis-and-design) | | | | | | | | | | | | |
| 2. | [Decision](https://www.springer.com/journal/10703/) Support Systems, Science Direct | | | | | | | | | | | | |
| 3. | Decision Sciences – Wiley Online Library | | | | | | | | | | | | |
| 4. | [Soft Computing](https://www.springer.com/journal/500/) - A Fusion of Foundations, Methodologies and Applications  Springer | | | | | | | | | | | | |
|  | **Text Books** | | | | | | | | | | | | |
| 1 | Sitansu S Mittra; Decision Support Systems: Tools and Techniques; Wiley; 1986 | | | | | | | | | | | | |
| 2 | RamanathanSugumaran; John Degroote; Spatial Decision Support System: Principles and Practices; Taylor and Francis; 2011 | | | | | | | | | | | | |
| 3 | V S Janakiraman; Sarukesi, K; Decision Support Systems; PHI; 2008 | | | | | | | | | | | | |
| 4 | B Ravindranath; Decision Support Systems and Data Warehouses; NewAge International; 2003 | | | | | | | | | | | | |
| **References Books** | | | | | | | | | | | | | |
| 1. | Efraim Turban, Jay E. Aronson, Ting-Peng Liang, Ramesh Sharda, Decision Support & Business Intelligent Systems, Pearson Education, 8th Edition, 2007 | | | | | | | | | | | | |
| 2. | Mallach, Efrem G, Decision Support & data Warehouse Systems –McGraw-Hill, 2002 | | | | | | | | | | | | |
| 3. | Marakas, George. M, Decision Support Systems in the 21st century – Pearson Education, 1999 | | | | | | | | | | | | |
| 4. | Daniel J Power, Decision Support Systems – Concepts and Resources for Managers: Quorum Books, 2002 | | | | | | | | | | | | |
| 5. | Efraim Turban, Ramesh Sharda, DursunDelen, Business Intelligence and Analytics – Systems for decision support, Pearson, 2018 | | | | | | | | | | | | |

**CO-PO MAPPING**

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|  | **PO 1** | **PO 2** | **PO 3** | **PO 4** | **PO 5** | **PO 6** | **PO 7** | **PO 8** |
| **CO 1** | S | M |  |  |  |  |  |  |
| **CO 2** |  | S |  | S |  |  |  |  |
| **CO 3** | M |  |  |  | S |  |  |  |
| **CO 4** |  | M |  |  |  | S |  |  |
| **CO 5** | S |  |  |  |  | M |  |  |

**S-Strong M-Medium L-Low**

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| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | | **Inst. Hours** | **Marks** | | | |
| **CIA** | | **External** | **Total** |
|  | **E-Business** | Elective | 3 | - | - | - | 3 | | 45 | 25 | | 75 | 100 |
| **Course Objectives** | | | | | | | | | | | | | |
| C1 | To familiarize the students on the web designing software tools. | | | | | | | | | | | | |
| C2 | To provide insights on data warehousing and application of e-commerce in various sectors. | | | | | | | | | | | | |
| C3 | To throw light on E-Marketing and ERP tools & modules | | | | | | | | | | | | |
| C4 | To elucidate on E-security, Internet governance and cyber law issues. | | | | | | | | | | | | |
| C5 | To create awareness and importance of E-commerce in service sector; and privacy & information rights | | | | | | | | | | | | |
| **SYLLABUS** | | | | | | | | | | | | | |
| **UNIT** | **Details** | | | | | | | **No. of Hours** | | | **Course Objectives** | | |
| I | Introduction : Introduction to World Wide Web – Intelligent Web Designing – Software Tools – IP, TCP, HTTP, HTML, Cryptography – Consumer Interface Technologies – OLAP and Data Mining | | | | | | | 9 | | | C1 | | |
| II | Principles – Potential – Knowledge Management – Data Warehousing – Application of E-Commerce in Different Sector – Service, Industry, Domestic – Multidisciplinary Approach to E-Commerce, Customer Relation Management. | | | | | | | 9 | | | C2 | | |
| III | Business Model – E-Marketing – Intelligent Agents – Economics in E-Commerce – Equilibrium Price – Supply Chain Management – ERP Tools and Modules – Opportunities and Challenges – Mobile Commerce | | | | | | | 9 | | | C3 | | |
| IV | Online Payment – E-Security – Security Protocols – How sites are hacked – Internet Governance – Firewall  Legal Issues: Software Intellectual Property Law – Contract Law for E-Business – Cyber Law Issues - Interpol | | | | | | | 9 | | | C4 | | |
| V | E-Commerce Industries: Online Retail Sector – Online Financial Services – Online Travel Services – Online Career Services – Online Publishing – Online Entertainment Consumer Protection: Privacy and Information Rights – Warranties and New Products. | | | | | | | 9 | | | C5 | | |
|  | **Total** | | | | | | | **45** | | |  | | |
| **Course Outcomes** | | | | | | | | | | | | | |
| **Course Outcomes** | On completion of this course, students will; | | | | | | | **Program Outcomes** | | | | | |
| **CO1** | Summarise the knowledge on the web designing software tools. | | | | | | | P05, P06, P07 | | | | | |
| **CO2** | Describe the application of data warehousing and of e-commerce in various sectors. | | | | | | | P02, P04 | | | | | |
| **CO3** | Explain the tools of E-Marketing and ERP & its modules. | | | | | | | P02, P06 | | | | | |
| **CO4** | Interpret the issues associated with E-security, Internet governance and cyber law. | | | | | | | P02, P03, P06, P07 | | | | | |
| **CO5** | Explain the role of E-commerce in service sector; and privacy & information rights | | | | | | | P04, P06 | | | | | |
| **Reading List** | | | | | | | | | | | | | |
| 1. | [Information Systems and e-Business Management](https://www.springer.com/journal/10257/), Springer | | | | | | | | | | | | |
| 2. | [Electronic Commerce Research](https://www.springer.com/journal/10660/), Springer | | | | | | | | | | | | |
| 3. | [Dien D. Phan](https://www.tandfonline.com/author/Phan%2C+Dien+D) , E-Business Management Strategies: A Business-To-Business Case Study, Information Systems Management, Taylor & Francis | | | | | | | | | | | | |
| 4. | E-business model design, classification, and measurements, Thunderbird International Business Review, Wiley Online Review | | | | | | | | | | | | |
|  | Text Books | | | | | | | | | | | | |
| 1. | Joseph P T, “E-Commerce: An Indian Perspective”, PHI Publications, 5th Edition, 2015. | | | | | | | | | | | | |
| 2. | UrmiDatta&NehaSomani, “E-commerce and Business Communication”, Oxford University Press, 1st Edition, 2017 | | | | | | | | | | | | |
| 3 | E commerce: An Introduction;AmirManzoor; Lambert Academic Publishing; 2019 | | | | | | | | | | | | |
| 4 | MamtaBhusry; E Commerce; Firewall Media; 2005 | | | | | | | | | | | | |
| 5 | V Rajaraman; Essentials of E Commerce Technology; PHI Learning; 2009 | | | | | | | | | | | | |
| **References Books** | | | | | | | | | | | | | |
| 1. | David Whiteley, “E-Commerce: Strategy, Technologies and Applications”, Indian Edition, McGraw Hill Publications, 2017. | | | | | | | | | | | | |
| 2. | Jelassi, Tawfik, Martínez-López, Francisco J, “Strategies for e-Business - Concepts and Cases on Value Creation and Digital Business Transformation”, Springer Publications, 2020. | | | | | | | | | | | | |
| 3. | Kenneth C Laudon and Carol GuercioTraver, “E-Commerce – Business, Technology, Society”, Pearson Publication, 15th Edition, 2019. | | | | | | | | | | | | |

**CO-PO MAPPING**

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|  | **PO 1** | **PO 2** | **PO 3** | **PO 4** | **PO 5** | **PO 6** | **PO 7** | **PO 8** |
| **CO 1** |  |  |  |  | M | M | M |  |
| **CO 2** |  | S |  | M |  |  |  |  |
| **CO 3** |  | M |  |  |  | S |  |  |
| **CO 4** |  | S | S |  |  | S | S |  |
| **CO 5** |  |  |  | M |  | M |  |  |

**S-Strong M-Medium L-Low**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Subject Code** | | **Subject Name** | | **Category** | **L** | **T** | **P** | **O** | **Credits** | | **Inst. Hours** | **Marks** | | | |
| **CIA** | | **External** | **Total** |
|  | | **Internet of Things (IoT)** | | Elective | 3 | - | - | - | 3 | | 45 | 25 | | 75 | 100 |
|  | **Course Objectives** | | | | | | | | | | | | | | |
| C1 | | To provide insights to the students on the basic concepts of IoT | | | | | | | | | | | | | |
| C2 | | To throw light on the various models related to IoT architecture. | | | | | | | | | | | | | |
| C3 | | To familiarize on the design and building blocks of IoT. | | | | | | | | | | | | | |
| C4 | | To create awareness and importance of data analytics tools for IoT. | | | | | | | | | | | | | |
| C5 | | To elucidate on IoT related case-studies and real world applications. | | | | | | | | | | | | | |
| **SYLLABUS** | | | | | | | | | | | | | | | |
| **UNIT** | | **Details** | | | | | | | | **No. of Hours** | | | **Course Objectives** | | |
| I | | **Introduction:** Evolution of Internet of Things - Physical Design of IoT - Logical Design of IoT - IoT Enabling Technologies - IoT Levels and Deployment Templates - Domain Specific to IoTs. | | | | | | | | 9 | | | C1 | | |
| II | | **IoT Architecture:** ETSI, IETF, OGC architectures - IoT reference model - Domain model - information model - functional model - communication model - IoT reference architecture. | | | | | | | | 9 | | | C2 | | |
| III | | **Building IoT:** IoT Systems - Logical Design using Python - IoT Physical Devices and Endpoints: What is an IoT Device - Basic building blocks of an IoT device - Exemplary Device: Raspberry Pi - Programming Rashberry Pi with Python - Other IoTDevices. | | | | | | | | 9 | | | C3 | | |
| IV | | **IoT Data Platform:** Data Analytics for IoT: Introduction - Apache Hadoop - Using Hadoop Map Reduce for Batch Data Analysis - Apache Oozie - Apache Spark - Tools for IoT - Introduction - Chef: Setting up Chef. | | | | | | | | 9 | | | C4 | | |
| V | | **Case Studies and Real-World Applications:** Real world design constraints - IoT Physical Servers & Cloud Offerings - Case Studies Illustrating IoT Design: Introduction - Asset management – Smart Cities - Environment - Productivity Applications. | | | | | | | | 9 | | | C5 | | |
|  | |  | **Total** | | | | | | | **45** | | |  | | |
|  | **Course Outcomes** | | | | | | | | | | | | | | |
| **Course Outcomes** | | On completion of this course, students will; | | | | | | | | **Program Outcomes** | | | | | |
| **CO1** | | Infer the basic concepts of IoT. | | | | | | | | P04, P06 | | | | | |
| **CO2** | | Comparison on the various models related to IoT architecture. | | | | | | | | P02, P04, P05 | | | | | |
| **CO3** | | Recall the design and building blocks of IoT. | | | | | | | | P01, P02, P06, P07 | | | | | |
| **CO4** | | Assess the importance of data analytics tools for IoT. | | | | | | | | P02, P06, P07 | | | | | |
| **CO5** | | Analyse the IoT related case-studies and real world applications. | | | | | | | | P01,P02,P03,P06, P07 | | | | | |
| **Reading List** | | | | | | | | | | | | | | | |
| 1. | | Internet of Things – Science Direct | | | | | | | | | | | | | |
| 2. | | [International Journal of Internet of Things and Cyber-Assurance](https://www.inderscience.com/jhome.php?jcode=ijitca), [Inderscience](https://www.inderscience.com/jhome.php?jcode=ijitca) | | | | | | | | | | | | | |
| 3. | | [S Li](https://scholar.google.com/citations?user=9YFCw0kAAAAJ&hl=en&oi=sra), [LD Xu](https://scholar.google.com/citations?user=Y4NfrdAAAAAJ&hl=en&oi=sra), [S Zhao](https://scholar.google.com/citations?user=F6E0b2QAAAAJ&hl=en&oi=sra), The internet of things: a survey, , Information systems frontiers, Springer | | | | | | | | | | | | | |
| 4. | | [F Wortmann](https://scholar.google.com/citations?user=fYruVTcAAAAJ&hl=en&oi=sra), K Flüchter ,[Internet of things](https://link.springer.com/article/10.1007/s12599-015-0383-3) - Business & Information Systems Engineering, Springer | | | | | | | | | | | | | |
|  | | **Text Books** | | | | | | | | | | | | | |
| 1. | | ArshdeepBahga, Vijay Madisetti, - Internet of Things – A hands-on approach, University Press, 2015 | | | | | | | | | | | | | |
| 2 | | DrKamleshLakhwani; DrHemant Kumar Gianey; Joseph KoftWireko; Internet of Things; BPB Publications; 2020 | | | | | | | | | | | | | |
| 3 | | Sunil Cheruvu; Anil Kumar; Ned Smith; Demystufying Internet of Things Security: Successful IoT; Apress; 2019 | | | | | | | | | | | | | |
| 4 | | RajkumarBuyya; Amir VahidDastjerdi; IoT: Principles and Paradigms; Elsevier; 2016 | | | | | | | | | | | | | |
| 5 | | AbhikChaudhry; Internet of things, for things and by things; Taylor and Francis; 2019 | | | | | | | | | | | | | |
| **References Books** | | | | | | | | | | | | | | | |
| 2. | | Dieter Uckelmann, Mark Harrison, Michahelles, Florian (Eds), ―Architecting the Internet of Things‖, Springer, 2011. | | | | | | | | | | | | | |
| 3. | | Honbo Zhou, ―The Internet of Things in the Cloud: A Middleware Perspective‖, CRC Press, 2012. | | | | | | | | | | | | | |
| 4. | | Jan Holler, VlasiosTsiatsis , Catherine Mulligan, Stamatis , Karnouskos, StefaAvesand. David Boyle, "From Machine-to-Machine to the Internet of Things – Introduction to a New Age of Intelligence", Elsevier, 2014. | | | | | | | | | | | | | |
| 5. | | Olivier Hersent, David Boswarthick, Omar Elloumi , ―The Internet of Things – Key applications and Protocols‖, Wiley, 2012 | | | | | | | | | | | | | |
| 6. | | Adrian McEwen and Hakim Cassimally, “Designing the Internet of Things”, John Wiley & Sons, 2013. | | | | | | | | | | | | | |

**CO-PO MAPPING**

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|  | **PO 1** | **PO 2** | **PO 3** | **PO 4** | **PO 5** | **PO 6** | **PO 7** | **PO 8** |
| **CO 1** |  |  |  | S |  | S |  |  |
| **CO 2** |  | M |  | S | S |  |  |  |
| **CO 3** | S | S |  |  |  | M | M |  |
| **CO 4** |  | M |  |  |  | S | S |  |
| **CO 5** | S | S | S |  |  | M | S |  |

**S-Strong M-Medium L-Low**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | | **Inst. Hours** | **Marks** | | | |
| **CIA** | | **External** | **Total** |
|  | **Cloud Computing** | Elective | 3 | - | - | - | 3 | | 45 | 25 | | 75 | 100 |
| **Course Objectives** | | | | | | | | | | | | | |
| C1 | To familiarize the students on the history and models of cloud computing. | | | | | | | | | | | | |
| C2 | To provide insights on characteristics, challenges and virtualization concepts of cloud computing. | | | | | | | | | | | | |
| C3 | To throw light on cloud computing applications such as Amazon AWS, Microsoft Azure and Google App Engine. | | | | | | | | | | | | |
| C4 | To elucidate on cloud access, cloud provenance and cloud security. | | | | | | | | | | | | |
| C5 | To create awareness and importance of governance and the future of cloud based system in organization. | | | | | | | | | | | | |
| **SYLLABUS** | | | | | | | | | | | | | |
| **UNIT** | **Details** | | | | | | | **No. of Hours** | | | **Course Objectives** | | |
| I | **History of Cloud Computing:** History of Centralized and Distributed Computing - Overview of Distributed Computing, Cluster computing, Grid computing. Technologies for Network based systems- System models for Distributed and cloud computing- Software environments for distributed systems and clouds. | | | | | | | 9 | | | C1 | | |
| II | **Introduction to Cloud Computing:** Introduction to Cloud Computing- Cloud issues and challenges - Properties - Characteristics - Service models, Deployment models. Cloud resources: Network and API - Virtual and Physical computational resources - Data-storage. Virtualization concepts - Types of Virtualization- Introduction to Various Hypervisors - High Availability (HA)/Disaster Recovery (DR) using Virtualization, Moving VMs . | | | | | | | 9 | | | C2 | | |
| III | **Cloud Computing Applications:** Cloud Programming and Software Environments – Parallel and Distributed Programming paradigms – Overview on Amazon AWS and Microsoft Azure – Overview on Google App Engine – Emerging Cloud software Environment. | | | | | | | 9 | | | C3 | | |
| IV | **Cloud Security:** Cloud Access: authentication, authorization and accounting - Cloud Provenance and metadata - Cloud Reliability and fault-tolerance - Cloud Security, privacy, policy and compliance Cloud federation, interoperability and standards. | | | | | | | 9 | | | C4 | | |
| V | **Governance and the future of Cloud:** Organizational Readiness and Change Management in the Cloud Age, Legal Issues in Cloud Computing, Achieving Production Readiness for Cloud Services, How Cloud Will Change Operating Systems, Future of Cloud TV & Cloud-Based Smart Devices, Cloud and Mobile, Home-Based Cloud Computing. | | | | | | | 9 | | | C5 | | |
|  | **Total** | | | | | | | **45** | | |  | | |
| **Course Outcomes** | | | | | | | | | | | | | |
| **Course Outcomes** | On completion of this course, students will; | | | | | | | **Program Outcomes** | | | | | |
| **CO1** | Quote on the history and models of cloud computing. | | | | | | | P04, P06, P07, P08 | | | | | |
| **CO2** | Analyse the characteristics, challenges and virtualization concepts of cloud computing. | | | | | | | P01, P04, P05 | | | | | |
| **CO3** | Comprehend on cloud computing applications such as Amazon AWS, Microsoft Azure and Google App Engine. | | | | | | | P01, P02, P03, P06, P07 | | | | | |
| **CO4** | Compare and contrast on cloud access, cloud provenance and cloud security. | | | | | | | P05, P06, P07. P08 | | | | | |
| **CO5** | Organise your thoughts on governance and the future of cloud based system in organization. | | | | | | | P01,P02,P03,P04, P07 | | | | | |
| **Reading List** | | | | | | | | | | | | | |
| 1. | [Journal of Cloud Computing](https://journalofcloudcomputing.springeropen.com/), Advances, Systems and Applications, Springer Open | | | | | | | | | | | | |
| 2. | Special Issue on Cloud-based Media Computing and Communications, Computer Communications, Elseiver | | | | | | | | | | | | |
| 3. | L Qian, Z Luo, Y Du, L Guo , [Cloud computing: An overview](https://link.springer.com/chapter/10.1007/978-3-642-10665-1_63), international conference on cloud computing, 2009 - Springer | | | | | | | | | | | | |
| 4. | [Lizhe Wang](https://link.springer.com/article/10.1007/s00354-008-0081-5#auth-Lizhe-Wang),  [Gregor von Laszewski](https://link.springer.com/article/10.1007/s00354-008-0081-5#auth-Gregor-Laszewski), [Andrew Younge](https://link.springer.com/article/10.1007/s00354-008-0081-5#auth-Andrew-Younge), [Xi He](https://link.springer.com/article/10.1007/s00354-008-0081-5#auth-Xi-He), [Marcel Kunze](https://link.springer.com/article/10.1007/s00354-008-0081-5#auth-Marcel-Kunze), [Jie Tao](https://link.springer.com/article/10.1007/s00354-008-0081-5" \l "auth-Jie-Tao) &  [Cheng Fu](https://link.springer.com/article/10.1007/s00354-008-0081-5#auth-Cheng-Fu), Cloud Computing: a Perspective Study, [New Generation Computing](https://link.springer.com/journal/354), Springer | | | | | | | | | | | | |
|  | **Text Books** | | | | | | | | | | | | |
| 1. | Kris Jamsa, Cloud Computing, Jones & Bartlett Learning, 2013 | | | | | | | | | | | | |
| 2. | Kumar Saurahb, Cloud Computing – Insights into new era infrastructure, Wiley India, 2nd Edition, 2012 | | | | | | | | | | | | |
| 3. | Rao, M N ; Cloud Computing; Prentice Hall India; 2015 | | | | | | | | | | | | |
| 4. | Pandey, U S; Chaudhary, Kavita; Cloud Computing; S chand and company; 2014 | | | | | | | | | | | | |
| 5. | Nayan B Ruparelia; Cloud computing; MIT Press; 2016 | | | | | | | | | | | | |
| **References Books** | | | | | | | | | | | | | |
| 1. | RajkumarBuyya, James Broberg and AndrzejGoscinski, Cloud Computing – Principles and Paradigms, John Wiley & Sons, 2011 | | | | | | | | | | | | |
| 2. | Barrie Sosinsky, “ Cloud Computing Bible” John Wiley & Sons, 2011 | | | | | | | | | | | | |
| 3. | Tim Mather, SubraKumaraswamy, and ShahedLatif, Cloud Security and Privacy An Enterprise Perspective on Risks and Compliance, O'Reilly, 2009 | | | | | | | | | | | | |
| 4. | Kai Hwang, Geoffrey C. Fox and Jack J. Dongarra, Distributed and cloud computing from Parallel Processing to the Internet of Things, Morgan Kaufmann, Elsevier, 2012 | | | | | | | | | | | | |

**CO-PO MAPPING**

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|  | **PO 1** | **PO 2** | **PO 3** | **PO 4** | **PO 5** | **PO 6** | **PO 7** | **PO 8** |
| **CO 1** |  |  |  | S |  | M | S | S |
| **CO 2** | S |  |  | M | S |  |  |  |
| **CO 3** | M | S | S |  |  | S | M |  |
| **CO 4** |  |  |  |  | S | M | S | S |
| **CO 5** | S | M | M | S |  |  | S |  |

**S-Strong M-Medium L-Low**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | | **Inst. Hours** | **Marks** | | | |
| **CIA** | | **External** | **Total** |
|  | **Enterprise Resource Planning (ERP)** | Elective | 3 | - | - | - | 3 | | 45 | 25 | | 75 | 100 |
| **Course Objectives** | | | | | | | | | | | | | |
| C1 | To familiarize the students to the basics of ERP models, structures and advantages | | | | | | | | | | | | |
| C2 | To brief the advancement of IT and data management | | | | | | | | | | | | |
| C3 | To throw light on ERP marketplace dynamics | | | | | | | | | | | | |
| C4 | To elucidate on implementation of ERP | | | | | | | | | | | | |
| C5 | To orient to open source ERP and future directives | | | | | | | | | | | | |
| **SYLLABUS** | | | | | | | | | | | | | |
| **UNIT** | **Details** | | | | | | | **No. of Hours** | | | **Course Objectives** | | |
| I | ERP Introduction: Origin, Evolution and Structure and Benefits: o Conceptual Model of ERP, Scenario and Justification of ERP in India, Various Modules of ERP, Advantage of ERP. | | | | | | | 9 | | | C1 | | |
| II | Advancement of IT and Impact on organizations data management: Data warehousing, Data Mining, Online Analytic Processing (OLAP), Product Life Cycle Management (PLM). | | | | | | | 9 | | | C2 | | |
| III | ERP Marketplace and Marketplace Dynamics: Market Overview, Marketplace Dynamics, and The changing ERP Market. ERP- Functional Modules: Introduction, Functional Modules of ERP Software Integration of ERP, Supply chain and Customer Relationship Applications. | | | | | | | 9 | | | C3 | | |
| IV | ERP Implementation: Business Process mapping and re-engineering, ERP Implementation Life Cycle, Role of Consultants, Vendors and Employees. Critical Success Factors: Guiding Selection and Evaluation of ERP, Strategies and CSF for Successful ERP Implementation, Causes of ERP Failure. | | | | | | | 9 | | | C4 | | |
| V | Practical Module: ERP & E-Commerce, Future Directives- in ERP, Integrating ERP into organizational culture. Using an open source ERP tool for orienting students to ERP. | | | | | | | 9 | | | C5 | | |
|  | **Total** | | | | | | | **45** | | |  | | |
| **Course Outcomes** | | | | | | | | | | | | | |
| **Course Outcomes** | On completion of this course, students will; | | | | | | | **Program Outcomes** | | | | | |
| **CO1** | Define the basics of ERP models, structures and advantages | | | | | | | P01, P02, P07 | | | | | |
| **CO2** | Comprehend and categorize the advancement of IT and data management | | | | | | | P05, P06, P07 | | | | | |
| **CO3** | Summarise the ERP marketplace dynamics | | | | | | | P01, P02, P07 | | | | | |
| **CO4** | Compare and design implementation of ERP | | | | | | | P01, P02, P05. P06 | | | | | |
| **CO5** | Contrast and use open source ERP towards future directives | | | | | | | P03, P04,P05, P07, P08 | | | | | |
| **Reading List** | | | | | | | | | | | | | |
| 1. | Business Process Management Journal, Emerald insight | | | | | | | | | | | | |
| 2. | Journal of Business Research, Elsevier | | | | | | | | | | | | |
| 3. | [T Huang](https://scholar.google.com/citations?user=Tc7XOngAAAAJ&hl=en&oi=sra), K Yasud, [Comprehensive review of literature survey articles on ERP](https://www.emerald.com/insight/content/doi/10.1108/BPMJ-12-2014-0122/full/html?fullSc=1) - Business Process Management Journal, Emerald | | | | | | | | | | | | |
| 4. | H Klaus, [M Rosemann](https://scholar.google.com/citations?user=5aVOGFMAAAAJ&hl=en&oi=sra), [GG Gable](https://scholar.google.com/citations?user=Hfq-KXQAAAAJ&hl=en&oi=sra), [What is ERP?](https://link.springer.com/article/10.1023/A:1026543906354), Information systems frontiers, Springer | | | | | | | | | | | | |
|  | **Text Books** | | | | | | | | | | | | |
| 1. | Enterprise Resource Planning (ERP) Text and Case Studies, Mr. C.S.V. Murthy, Himalaya Publication, 2008. | | | | | | | | | | | | |
| 2. | Dr. Ashim Raj Singla, Enterprise Resource Planning 2nd Edition, Cengage Learning, 2019. | | | | | | | | | | | | |
| 3. | S. Sadagopan, ERP-A Managerial Perspective, McGraw Hill,1999. | | | | | | | | | | | | |
| 4. | K Ganesh; Sanjay Mohapatra; AnbuShankar,S P; Enterprise Resource Planning: Fundamentals of Design and Implementation; Springer; 2014 | | | | | | | | | | | | |
| 5. | S Parthasarathy; Enterprise Resource Planning: A Managerial and Technical Perspective; NewAge Publications; 2007 | | | | | | | | | | | | |
| **References Books** | | | | | | | | | | | | | |
| 1. | Alexis Leon , Enterprise Resource Planning McGraw Hill, 2nd Edition, 2018 | | | | | | | | | | | | |
| 2. | David L. Olson , Managerial Issues of Enterprise Resource Planning Systems, McGraw Hill, 2008. | | | | | | | | | | | | |
| 3. | F. Robert Jacobs and D. Clay Whybark, Why ERP? A primer on SAP Implementation, McGraw Hill, 2000. | | | | | | | | | | | | |

**CO-PO MAPPING**

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|  | **PO 1** | **PO 2** | **PO 3** | **PO 4** | **PO 5** | **PO 6** | **PO 7** | **PO 8** |
| **CO 1** | S | S |  |  |  |  | M |  |
| **CO 2** |  |  |  |  | S | S | M |  |
| **CO 3** | M | S |  |  |  |  | S |  |
| **CO 4** | S | M |  |  | S |  | S | S |
| **CO 5** |  |  | S | M | M |  | M | S |

**S-Strong M-Medium L-Low**

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| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | | **Inst. Hours** | **Marks** | | | |
| **CIA** | | **External** | **Total** |
|  | **Software Project and Quality management** | Elective | 3 | - | - | - | 3 | | 45 | 25 | | 75 | 100 |
| **Course Objectives** | | | | | | | | | | | | | |
| C1 | To comprehend and reflect on overview of project planning, project evaluation, project analysis and technical planning, software estimation | | | | | | | | | | | | |
| C2 | To elaborate and critically analyze Resource scheduling and management, CMM, key process indicators, process monitoring and control. | | | | | | | | | | | | |
| C3 | To generate and align Critical Chain Project Management, Test Maturity Model & Six Sigma and collate reports. | | | | | | | | | | | | |
| C4 | To evaluate existing Adaptive Project Framework and build quality models based on Six Sigma & Lean Process Model. | | | | | | | | | | | | |
| C5 | To contrast Software configuration management processes and audit quality standardisations. | | | | | | | | | | | | |
| **SYLLABUS** | | | | | | | | | | | | | |
| **UNIT** | **Details** | | | | | | | **No. of Hours** | | | **Course Objectives** | | |
| I | **Introduction:**Project Overview - Traditional Project Management - Scoping the Project - Identifying Project Activities-An overview of project planning, project evaluation, project analysis and technical planning, software estimation. Organizational quality goals, policy, quality plans, certification, accreditation, process measurements, audits. | | | | | | | 9 | | | C1 | | |
| II | **Requirements:** Estimating Duration, Resource Requirements and Cost - Constructing and Analyzing the Project Network Diagram - Finalizing the Schedule and Cost Based on Resource Availability - Organizing and Conducting the Joint Project Planning Session. Capability Maturity Model: CMM & CMMI, goals, commitment, ability, measurement & verification, maturity levels, key process areas, key process indicators, process monitoring and control. | | | | | | | 9 | | | C2 | | |
| III | **Project Teams:** Recruiting Organizing and Managing the Project Team - Monitoring and Controlling Progress - Closing out the Projects - Critical Chain Project Management - Activity planning, project schedules, sequencing and scheduling projects. Test Maturity Model & Six Sigma: Overview, Key Process Areas, TPI framework of test quality, levels of maturity, assessment, analysis, reporting. | | | | | | | 9 | | | C3 | | |
| IV | **Framework:** Introduction to the Adaptive Project Framework - Version Scope - Cycle Plan - Cycle Build - Client Checkpoint - Post-Version Review - network planning model, shortening project duration, Identifying critical activities. Six Sigma & Lean Process Model: quality criteria, quality metrics, frameworks, process wastages, operational processes, guidelines and templates | | | | | | | 9 | | | C4 | | |
| V | **Standardisations:** Variations to APF- Software configuration management, Basic functions, Responsibilities, standards configuration management, prototyping, models of prototyping. Organizational Considerations - Project Portfolio Management - Project Support Office Case study - PRINCE Project management standards. Audits: ISO, CMM, People CMM, TMM, Six Sigma. | | | | | | | 9 | | | C5 | | |
|  | **Total** | | | | | | | **45** | | |  | | |
| **Course Outcomes** | | | | | | | | | | | | | |
| **Course Outcomes** | On completion of this course, students will; | | | | | | | **Program Outcomes** | | | | | |
| **CO1** | Comprehend and reflect on overview of project planning, project evaluation, project analysis and technical planning, software estimation | | | | | | | P01, P02, P06, P07 | | | | | |
| **CO2** | Critically analyze Resource scheduling and management, CMM, key process indicators, process monitoring and control. | | | | | | | P05, P06, P07 | | | | | |
| **CO3** | Generate and align Critical Chain Project Management, Test Maturity Model & Six Sigma and collate reports. | | | | | | | P01, P02, P06 | | | | | |
| **CO4** | Evaluate existing Adaptive Project Framework and build quality models based on Six Sigma & Lean Process Model. | | | | | | | P01, P02, P05. P06 | | | | | |
| **CO5** | Contrast and conclude Software configuration management processes and audit quality standardisations. | | | | | | | P04, P05, P07, P08 | | | | | |
| **Reading List** | | | | | | | | | | | | | |
| 1. | S[oftware Quality Journal](https://www.springer.com/journal/11219/), Springer | | | | | | | | | | | | |
| 2. | International Journal of Project Management, Elsevier | | | | | | | | | | | | |
| 3. | [MJ Parzinger](https://scholar.google.com/citations?user=YfoTAgQAAAAJ&hl=en&oi=sra), R Nath, [A study of the relationships between total quality management implementation factors and software quality](https://www.tandfonline.com/doi/abs/10.1080/0954412006874), Total quality management, Taylor & Francis | | | | | | | | | | | | |
| 4. | [K Kautz](https://scholar.google.com/citations?user=ZLyMN08AAAAJ&hl=en&oi=sra), EÅ Larsen  [Diffusion theory and practice: Disseminating quality management and software process improvement innovations](https://www.emerald.com/insight/content/doi/10.1108/09593840010312726/full/html), Information Technology & People, Emerald | | | | | | | | | | | | |
|  | **Text Books** | | | | | | | | | | | | |
| 1 | Ashfaque Ahmed; Software Project Management: A process driven approach; T& F; 2011 | | | | | | | | | | | | |
| 2 | PankajJalote; Software Project Management in Practice; Pearson Education ; 2002 | | | | | | | | | | | | |
| 3 | PriyadarshiniTripathy; KshirasagarNaik; Software Testing and Quality Assurance; Wiley Publishing; 2011 | | | | | | | | | | | | |
| 4 | Bharat BhushanAgarwal; ShivangiDhall; Software Project Management; Laxmi Publication; 2011 | | | | | | | | | | | | |
| 5 | K K Singh; Akansha Singh; software Project management; Umesh Publication; 2011 | | | | | | | | | | | | |
| **References Books** | | | | | | | | | | | | | |
| 1. | Richard L. Chamberlain, Planning Quality Project Management of (EMR/EHR) Software Products (HIMSS Book Series), CRC Press, 1st Edition 2017. | | | | | | | | | | | | |
| 2. | Ronald Cummings - John, Owais Peer, Leading Quality: How Great Leaders Deliver High Quality Software and Accelerate Growth, ROI Press,1st Edition 2019. | | | | | | | | | | | | |
| 3. | Greg Caldwell, Lean Mastery: 8 Books in 1 - Master Lean Six Sigma & Build a Lean Enterprise, Accelerate Tasks with Scrum and Agile Project Management, Optimize with Kanban, and Adopt The Kaizen Mindset, Greg Caldwell Publishing, 1st Edition 2020. | | | | | | | | | | | | |
| 4. | [Tom C. Witt](https://www.amazon.in/Tom-C-Witt/e/B0068A91LU/ref=dp_byline_cont_book_1), IT Best Practices: Management, Teams, Quality, Performance, and Projects, CRC Press,1st Edition 2018. | | | | | | | | | | | | |
| 5. | [Linda Westfall](https://www.amazon.in/Linda-Westfall/e/B002JVAESG/ref=dp_byline_cont_book_1), The Certified Software Quality Engineer Handbook, ASQ Quality Press, 2nd Edition, 2017. | | | | | | | | | | | | |
| 6. | Stephan Goericke, The Future of Software Quality Assurance, 1st 2020, Springer Open. | | | | | | | | | | | | |

**CO-PO MAPPING**

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|  | **PO 1** | **PO 2** | **PO 3** | **PO 4** | **PO 5** | **PO 6** | **PO 7** | **PO 8** |
| **CO 1** | S | M |  |  |  | M | S |  |
| **CO 2** |  |  |  |  | S | M | S |  |
| **CO 3** | M | S |  |  |  | S |  |  |
| **CO 4** | S | M |  |  | S | S |  |  |
| **CO 5** |  |  |  | S | M |  | S | S |

**S-Strong M-Medium L-Low**

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| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | | **Inst. Hours** | **Marks** | | | |
| **CIA** | | **External** | **Total** |
|  | **Data Warehousing** | Elective | 3 | - | - | - | 3 | | 45 | 25 | | 75 | 100 |
| **Course Objectives** | | | | | | | | | | | | | |
| C1 | To provide insights to the characteristics and architecture of data warehouse. | | | | | | | | | | | | |
| C2 | To throw light on the fundamentals, classification and major issues in data mining. | | | | | | | | | | | | |
| C3 | To familiarize on APRIOIRI principle & Algorithm and Association rule generation. | | | | | | | | | | | | |
| C4 | To create awareness and importance of classification techniques, decision tree and Bayesian Belief Networks. | | | | | | | | | | | | |
| C5 | To elucidate on the various clustering techniques. | | | | | | | | | | | | |
| **SYLLABUS** | | | | | | | | | | | | | |
| **UNIT** | **Details** | | | | | | | **No. of Hours** | | | **Course Objectives** | | |
| I | **Data warehouse:** Introduction to Data warehouse, Difference between operational database systems and data warehouses, Data warehouse Characteristics, Data warehouse Architecture and its Components, Extraction-Transformation-Loading, Logical(Multi-Dimensional), Data Modeling, Schema Design, Star and Snow-Flake Schema, Fact Constellation, Fact Table, Fully Addictive, Semi-Addictive, Non-Addictive Measures; Fact-Less-Facts, Dimension Table Characteristics; OLAP Cube, OLAP Operations, OLAP Server Architecture-ROLAP, MOLAP and HOLAP. | | | | | | | 9 | | | C1 | | |
| II | **Data Mining:** Fundamentals of data mining, Data Mining Functionalities, Classification of Data Mining systems, Data Mining Task Primitives, Integration of a Data Mining System with a Database or Data Warehouse System, Major issues in Data Mining. Data Preprocessing: Need for Preprocessing the Data, Data Cleaning, Data Integration &Transformation, Data Reduction, Discretization and Concept Hierarchy Generation. | | | | | | | 9 | | | C2 | | |
| III | **Association Rules:** Problem Definition, Frequent Item Set Generation, The APRIORI Principle, Support and Confidence Measures, Association Rule Generation; APRIOIRI Algorithm, The Partition Algorithms, FP-Growth Algorithms, Compact Representation of Frequent Item Set- Maximal Frequent Item Set, Closed Frequent Item Set. | | | | | | | 9 | | | C3 | | |
| IV | **Classification:** Problem Definition, General Approaches to solving a classification problem, Evaluation of Classifiers , Classification techniques, Decision Trees-Decision tree Construction, Methods for Expressing attribute test conditions, Measures for Selecting the Best Split, Algorithm for Decision tree Induction; Naive-Bayes Classifier, Bayesian Belief Networks; K- Nearest neighbor classification-Algorithm and Characteristics, prediction: Accuracy and Error measures, Evaluating the accuracy of a classifier or a predictor, Ensemble methods. | | | | | | | 9 | | | C4 | | |
| V | **Clustering:** Clustering Overview, A Categorization of Major Clustering Methods, partitioning methods, hierarchical methods, , partitioning clustering-k-means algorithm, pam algorithm; hierarchical clustering-agglomerative methods and divisive methods, Basic Agglomerative Hierarchical Clustering Algorithm, Key Issues in Hierarchical Clustering, Strengths and Weakness, Outlier Detection. | | | | | | | 9 | | | C5 | | |
|  | **Total** | | | | | | | **45** | | |  | | |
| **Course Outcomes** | | | | | | | | | | | | | |
| **Course Outcomes** | On completion of this course, students will; | | | | | | | **Program Outcomes** | | | | | |
| **CO1** | Have insights to the characteristics and architecture of data warehouse. | | | | | | | P05, P06, P07 | | | | | |
| **CO2** | Possess knowledge on the fundamentals, classification and major issues in data mining. | | | | | | | P01, P02, P06 | | | | | |
| **CO3** | Possess knowledge on APRIOIRI principle & Algorithm and Association rule generation. | | | | | | | P01, P02, P06, P07 | | | | | |
| **CO4** | Have better understanding on classification techniques, decision tree and Bayesian Belief Networks. | | | | | | | P01, P05. P06 | | | | | |
| **CO5** | Learn and understand the various clustering techniques. | | | | | | | P04, P05, P07, | | | | | |
| **Reading List** | | | | | | | | | | | | | |
| 1. | Data Mining and Knowledge Discovery, Springer | | | | | | | | | | | | |
| 2. | [International Journal of Information Management](https://www.sciencedirect.com/journal/international-journal-of-information-management), Science Direct | | | | | | | | | | | | |
| 3. | [BH Wixom](https://scholar.google.com/citations?user=i_j_eP4AAAAJ&hl=en&oi=sra), [HJ Watson](https://scholar.google.com/citations?user=VkCIMo4AAAAJ&hl=en&oi=sra), [An empirical investigation of the factors affecting data warehousing success](https://www.jstor.org/stable/3250957), MIS quarterly, JSTOR | | | | | | | | | | | | |
|  |  | | | | | | | | | | | | |
|  | **Text Books** | | | | | | | | | | | | |
| 1. | [P Chandra](https://scholar.google.com/citations?user=ORDnr5sAAAAJ&hl=en&oi=sra), [MK Gupta](https://scholar.google.com/citations?user=jab7XG0AAAAJ&hl=en&oi=sra), [Comprehensive survey on data warehousing research](https://link.springer.com/article/10.1007/s41870-017-0067-y), International Journal of Information Technology, Springer | | | | | | | | | | | | |
| 2. | PaulrajPonniah, Data warehousing Fundamentals, Wiley Publications. 2nd Edition, 2012 | | | | | | | | | | | | |
| 3 | Parteek Bhatia; Data mining and data warehousing; Principles and Practical applications; Cambridge University Press; 2019 | | | | | | | | | | | | |
| 4 | Arshad khan; Data warehousing 101 : Concepts and Implementation; iUniverse; 2003 | | | | | | | | | | | | |
| 5 | Prabhu CSR; Data warehousing: Concepts, Techniques and Products; PHI Universal; 2008 | | | | | | | | | | | | |
| **References Books** | | | | | | | | | | | | | |
| 1. | George M. Marakas, Modern Data Warehousing, Mining and Visualization, Pearson Publications. 3rd Impression, 2009 | | | | | | | | | | | | |
| 2. | Jaiwei Ham and MichelineKamber, Data Mining concepts and techniques, Kauffmann Publishers, 2006 | | | | | | | | | | | | |
| 3. | W.H.Inmon, Building the Data Warehouse, 4th edition Wiley India Pvt. Ltd, 2005. | | | | | | | | | | | | |
| 4. | Michel Berry and Gordon Linoff, Data mining techniques for Marketing, Sales and Customer support, John Wiley, 2011 | | | | | | | | | | | | |

**CO-PO MAPPING**

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|  | **PO 1** | **PO 2** | **PO 3** | **PO 4** | **PO 5** | **PO 6** | **PO 7** | **PO 8** |
| **CO 1** |  |  |  |  | S | M | S |  |
| **CO 2** | M | S |  |  |  | M |  |  |
| **CO 3** | S | S |  |  |  | S | M |  |
| **CO 4** | S |  |  |  | S | S |  |  |
| **CO 5** |  |  |  | S | M |  | S |  |

**S-Strong M-Medium L-Low**

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| **Subject Code** | **Subject Name** | **Category** | **L** | **T** | **P** | **O** | **Credits** | | **Inst. Hours** | **Marks** | | | |
| **CIA** | | **External** | **Total** |
|  | **Deep Learning And Artificial Intelligence** | Elective | 3 | - | - | - | 3 | | 45 | 25 | | 75 | 100 |
| **Course Objectives** | | | | | | | | | | | | | |
| C1 | To familiarize the students on the modern practices of deep forward networks. | | | | | | | | | | | | |
| C2 | To provide insights on deep models, optimization techniques and algorithms with adaptive learning rates. | | | | | | | | | | | | |
| C3 | To throw light on foundation and applications of AI. | | | | | | | | | | | | |
| C4 | To elucidate on the approaches to knowledge representation. | | | | | | | | | | | | |
| C5 | To create awareness and importance of applications of expert systems and machine learning paradigms. | | | | | | | | | | | | |
| **SYLLABUS** | | | | | | | | | | | | | |
| **UNIT** | **Details** | | | | | | | **No. of Hours** | | | **Course Objectives** | | |
| I | **Deep Networks:** Deep Networks: Modern Practices: Deep Forward Networks: Example: Learning XOR -Gradient-Based Learning - Hidden Units - Architecture Design - Regularization for Deep Learning. | | | | | | | 9 | | | C1 | | |
| II | **Models:** Optimization for Training Deep Models: How Learning Differs from Pure Optimization -Challenges in Neural Network Optimization - Basic Algorithms - Parameter Initialization Strategies - Algorithms with Adaptive Learning Rates - Approximate Second-Order Methods - Optimization Strategies and Meta-Algorithms | | | | | | | 9 | | | C2 | | |
| III | **Intelligent Systems:** Introduction to Artificial Intelligence: Intelligent Systems - Foundations of AI - Applications -Tic-Tac-Toe Game Playing - Problem Solving: State-Space Search and Control Strategies: Introduction - General Problem Solving - Exhaustive Searches - Heuristic Search Techniques. | | | | | | | 9 | | | C3 | | |
| IV | **Knowledge Representation:** Advanced Problem-Solving Paradigm: Planning: Introduction - Types of Planning Systems -Knowledge Representation: Introduction - Approaches to Knowledge Representation -Knowledge Representation using Semantic Network - Knowledge Representation using Frames. | | | | | | | 9 | | | C4 | | |
| V | **Applications:** Expert Systems and Applications: Blackboard Systems – Truth Maintenance Systems –Applications of Expert Systems – Machine-Learning Paradigms: Machine-Learning Systems – Supervised and Unsupervised Learnings. | | | | | | | 9 | | | C5 | | |
|  | **Total** | | | | | | | **45** | | |  | | |
| **Course Outcomes** | | | | | | | | | | | | | |
| **Course Outcomes** | On completion of this course, students will; | | | | | | | **Program Outcomes** | | | | | |
| **CO1** | Identify the modern practices of deep forward networks. | | | | | | | P01, P02, P05, P07 | | | | | |
| **CO2** | Explain the deep models, optimization techniques and algorithms with adaptive learning rates. | | | | | | | P01, P02, P04, P06 | | | | | |
| **CO3** | Summarise on the foundation and applications of AI. | | | | | | | P04, P05, P06, P07 | | | | | |
| **CO4** | Criticise the approaches to knowledge representation. | | | | | | | P02, P06. P07 | | | | | |
| **CO5** | Organise the applications of expert systems and machine learning paradigms. | | | | | | | P04, P05, P07, P08 | | | | | |
| **Reading List** | | | | | | | | | | | | | |
| 1. | Artificial Intelligence – Elsevier | | | | | | | | | | | | |
| 2. | [International Journal of Machine Learning and Cybernetics](https://www.springer.com/journal/13042/), Springer | | | | | | | | | | | | |
| 3. | [DM Dimiduk](https://scholar.google.com/citations?user=hCSOvWQAAAAJ&hl=en&oi=sra), [EA Holm](https://scholar.google.com/citations?user=pPvNOjMAAAAJ&hl=en&oi=sra), [SR Niezgoda](https://scholar.google.com/citations?user=K84VPOkAAAAJ&hl=en&oi=sra), [Perspectives on the impact of machine learning, deep learning, and artificial intelligence on materials, processes, and structures engineering](https://link.springer.com/article/10.1007/s40192-018-0117-8), Integrating Materials and [and Manufacturing Innovation](https://link.springer.com/journal/40192) volume 2018 - Springer | | | | | | | | | | | | |
|  |  | | | | | | | | | | | | |
|  | **Text Books** | | | | | | | | | | | | |
| 1. | SarojKaushik, "Artificial Intelligence", Cengage Learning India Pvt. Ltd, 2011 | | | | | | | | | | | | |
| 2. | Deepak Khemani, "A First Course in Artificial Intelligence", McGraw Hill Education (India) Private Limited, New Delhi, 2013 | | | | | | | | | | | | |
| 3. | Elaine Rich, Kevin Night, Shivashankar B Nair, "Artificial Intelligence" 3rd Edition, McGraw Hill, 2008. | | | | | | | | | | | | |
| 4. | [A Sujith](https://scholar.google.com/citations?user=D3utzKkAAAAJ&hl=en&oi=sra), [GS Sajja](https://scholar.google.com/citations?user=8EptL6sAAAAJ&hl=en&oi=sra), [V Mahalakshmi](https://scholar.google.com/citations?user=2XT5Q2kAAAAJ&hl=en&oi=sra), [S Nuhmani](https://scholar.google.com/citations?user=N3YtVuEAAAAJ&hl=en&oi=sra), [Systematic review of smart health monitoring using deep learning and Artificial intelligence](https://www.sciencedirect.com/science/article/pii/S2772528621000285), [Neuroscience Informatics](https://www.sciencedirect.com/journal/neuroscience-informatics), Elsevier | | | | | | | | | | | | |
| 5. | Kanimozhi S; Suguna; Dhivya; Paiva, Sara; Artificial Intelligence: Recent trends and Applications; CRC Press; 2021 | | | | | | | | | | | | |
| **References Books** | | | | | | | | | | | | | |
| 1. | Ian Goodfellow, YoshuaBengio, Aaron Courville, “Deep Learning”, MIT Press, 2016. | | | | | | | | | | | | |
| 2. | Li Deng and Dong Yu, "Deep Learning Methods and Applications", Foundations and Trends in Signal Processing, 2014. | | | | | | | | | | | | |
| 3. | YoshuaBengio, "Learning Deep Architectures for AI", Foundations and Trends in Machine Learning, 2009 | | | | | | | | | | | | |

**CO-PO MAPPING**

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|  | **PO 1** | **PO 2** | **PO 3** | **PO 4** | **PO 5** | **PO 6** | **PO 7** | **PO 8** |
| **CO 1** | S | S |  |  | S |  | M |  |
| **CO 2** | M | S |  | S |  | S |  |  |
| **CO 3** |  |  |  | M | S | M | S |  |
| **CO 4** |  | S |  |  |  | S | S |  |
| **CO 5** |  |  |  | S | M |  | M | S |

**S-Strong M-Medium L-Low**

**Evaluation and Assessment**

The students will be Evaluated and Assessed on all the courses as given below:

|  |  |  |
| --- | --- | --- |
| **Methods of Evaluation** | | |
| **Internal Evaluation** | Continuous Internal Assessment Test | 25 Marks |
| Assignments |
| Seminars |
| Attendance and Class Participation |
| **External Evaluation** | End Semester Examination | 75 Marks |
|  | Total | 100 Marks |
| **Methods of Assessment** | | |
| **Recall (K1)** | Simple definitions, MCQ, Recall steps, Concept definitions | |
| **Understand/ Comprehend (K2)** | MCQ, True/False, Short essays, Concept explanations, Short summary or overview | |
| **Application (K3)** | Suggest idea/concept with examples, Suggest formulae, Solve problems, Observe, Explain | |
| **Analyze (K4)** | Problem-solving questions, Finish a procedure in many steps, Differentiate between various ideas, Map knowledge | |
| **Evaluate (K5)** | Longer essay/ Evaluation essay, Critique or justify with pros and cons | |
| **Create (K6)** | Check knowledge in specific or offbeat situations, Discussion, Debating or Presentations | |