COURSE STRUCTURE MBA (REGULAR) 2024-2025

(Effective for the students admitted into first year from the academic year 2024-2025)

MASTER OF BUSINESS ADMINISTRATION

I & II Semester

(Applicable for the Batch Admitted from 2024-25)

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA

KAKINADA-533003, Andhra Pradesh (India)

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA

(Established by Govt. of A.P., ACT No.30 of 2008)

KAKINADA – 533 003 (A.P) INDIA

MBACOURSE STRUCTURE & SYLLABUS

(Applicable for batches admitted from 2024-25)

I Year I Semester

S.No	Course Code	Courses	M	L	T	P	C
1	C-101	Management and Organizational Behavior	100	4	0	0	4
2	C-102	Managerial Economics	100	4	0	0	4
3	C-103	Accounting for Management	100	4	0	0	4
4	C-104	Quantitative Analysis for Business Decisions	100	4	0	0	4
5	C-105	Entrepreneurship Development	100	4	0	0	4
6	C-106	Business Environment	100	4	0	0	4
7	OE-101	A. Information Technology for Business B. Rural Development C. Intellectual Property Rights& Patents D. MOOCs : SWAYAM/NPTEL- (Related to Management Courses other than listed courses in the syllabus)	100	3	0	0	3
8	SE-101	PACE-UP(Personality Assessment Centre, Enhancement and Upgradation Processes) Programme	50	0	0	4	2
9	SE-102	Tally Lab	50	0	0	4	2
10	VA-101	Entrepreneur Project -I Identifying the area of interest, interacting with successful business [2] and submission of ground report.	50	0	0	4	2
Total			**850**	**27**	**0**	**12**	**33**

The Entrepreneur Project **can be done either individually or forming a group(limited to maximum of 4 members)**

I Year II Semester

S.No	Course Code	Courses	M	L	T	P	C
1	C-201	Financial Management	100	4	0	0	4
2	C-202	Human Resource Management	100	4	0	0	4
3	C-203	Operations Management	100	4	0	0	4
4	C-204	Marketing Management	100	4	0	0	4
5	C-205	Research Methods for Business Decisions	100	4	0	0	4
	C-206	Business Analytics	100	4	0	0	4
6	OE-201	A. Cross Cultural management B. Project Management C. Lean Management D. Database Management System	100	3	0	0	3
7	SE-201	R-Programming Lab	50	0	0	4	2
8	SE-202	IT Lab (Spread sheets and SQL)	50	0	0	4	2
9	VA-201	Entrepreneur Project –II Study on different loan approaches of State and Central Govt. Prepare the Business Development plan.	50	0	0	4	2
		Total	**850**	**27**	**0**	**12**	**33**

I Year I Semester

L	T	P	C
4	0	0	4

MANAGEMENT AND ORGANIZATIONAL BEHAVIOR

Objective of the course:
Objective of the course is to give a basic perspective of Management.
This will form foundation to study other functional areas of management and to provide the students with the conceptual framework and the theories underlying Organizational Behaviour.

Unit – I

Definition, Nature, Functions and Importance of Management – Evolution of Management thought – Scientific management, administrative management, Haw throne experiments – systems approach - Levels of Management - Managerial Skills - Planning – Steps in Planning Process – importance and Limitations – Types of Plans - Characteristics of a sound Plan - Management by Objectives (MBO) - Techniques and Processes of Decision Making - Social Responsibilities of Business

Unit-II

Organizing – Principles of organizing – Organization Structure and Design – Types of power - Delegation of Authority and factors affecting delegation – Span of control – Decentralization – Line and staff structure conflicts - Coordination definition and principles - Emerging Trends in Corporate Structure – Formal and Informal Organization- Nature and importance of Controlling, process of Controlling, Requirements of effective control and controlling techniques.

Unit – III

Organizational behavior: Nature and scope – Linkages with other social sciences – Individual roles and organizational goals – perspectives of human behavior - Perception– perceptual process – Learning - Learning Process- Theories - Personality and Individual Differences - Determinants of Personality - Values, Attitudes and Beliefs - Creativity and Creative thinking.

Unit – IV

Motivation and Job Performance – Content and process Theories of Motivation - Leadership - Styles - Approaches – Challenges of leaders in globalized era – Groups – stages formation of groups – Group Dynamics - Collaborative Processes in Work Groups - Johari Window- Transactional Analysis.

Unit – V:

Organizational conflict-causes and consequences-conflict and Negotiation Team Building, Conflict Resolution in Groups and problem solving Techniques – Organizational change - change process - resistance to change - Creating an Ethical Organization.

Relevant cases have to be discussed in each unit and in examination case is compulsory from any unit.

References:

1. Harold Koontz, Heinz Weihrich, A.R.Aryasri, Principles of Management, TMH, 2010.

2. Dilip Kumar Battacharya, Principles of Management, Pearson, 2012.

3. Kumar, Rao, Chhaalill "Introduction to Management Science" Cengage Publications,New Delhi

4. V.S.P.Rao, Management Text and Cases, Excel, Second Edition, 2012.

5. K.Anbuvelan, Principles of Management, University Science Press, 2013.

6. K.Aswathappa " Organisational Behaviour-Text, Cases and Games", Himalaya Publishing House, New Delhi,2008.

7. Steven L Mc Shane, Mary Ann Von Glinow, Radha R Sharma: "Organisational Behaviour", TMH Education, New Delhi,2008

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I Year I Semester

L	T	P	C
4	0	0	4

MANAGERIAL ECONOMICS

Course Objective:

1: Objective of the course is to introduce basic concepts and techniques of Managerial Economics and comprehend student with vital decisions of business.

2: Assimilate and apply the laws of economics in the business.

3: Acquire the knowledge about the various types of market structure for strategizing and wise decision making.

4: Practice the pricing strategies in the business management policies.

5: Achieve the knowledge about macroeconomics to foresee the external forces to the effective decisions in organisation.

Learning Outcomes: Use supply and demand to explain various economic phenomena and principles.

1. Explain the economic meaning of price, elasticity, and production costs. Describe the cause and effect of changes in all of these variables.

2. Draw and analyse cost and revenue curves that maximize profit.

3. Discuss differences and critically analyse the pros and cons of different market structures, including competitive, monopolistic and oligopolistic markets.

4. Pricing strategies to achieve and applicability in the market conditions

5. Knowledge about macroeconomics conditions and learn to applicable in the present context.

UNIT-I:

Introduction to Managerial Economics: Nature and Scope- of managerial Economics: Incremental reasoning, Concept of Time Perspective, Discounting Principle, Opportunity Cost Principle, Equi -Marginal Concept-Theory of Firm-profit measurement-social responsibility of business.

UNIT-II:

Demand Analysis and Forecasting: Concepts of Demand, Supply, Determinants of Demand and Supply, Elasticities of Demand and Supply- Methods of demand forecasting for established and new products-.

UNIT-III:

Cost and Production Analysis: Cost: Concept and types, Cost-Output Relationships, Cost Estimation, Reduction and Control- Economies and Diseconomies of Scale- Law of Variable Proportions- Returns to Scale- Isoquants-Cobb-Douglas and CES Production functions.

UNIT-IV:

Theory of Pricing: Price determination under Perfect Competition, Monopoly, Oligopoly and Monopolistic Competitions- Methods of Pricing.Market structures: Perfect and Imperfect Market Structurer. Price discrimination-degrees of price discrimination.

UNIT-V:

Macro Economics and Business: Concept, Nature and Measurement of National Income- - Fiscal and Monetary Policies.Inflation and Deflation: Inflation - Meaning and Kinds, Types, Causes and measurement of inflation Measures to Control Inflation, Deflation- - Philips curve- Stagflation-Theory of Employment- Business cycles: Policies to counter Business Cycles.

Relevant cases have to be discussed in each unit and in examination case is compulsory from any unit.

References:

1. D.M.Mithani, Managerial Economics, Himalaya Publishing House
2. Hirschey-Managerial economics,12th ed-cengage
3. Gupta G.S., Managerial Economics, TMH, 1988.
4. P.L. Mehta, Managerial Economics, PHI, 2001.
5. K .KDawett, Modern Economic Theory, Sultan Chand & Sons.
6. D.N. Dwivedi, Managerial Economics, 7th Ed, Vikas Publishing.
7. H.Craig Peterson, W.CrisLewis,managerialeconomics ,Pearson, 2005.

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L	T	P	C
4	0	0	4

ACCOUNTING FOR MANAGEMENT

COURSE OBJECTIVES:
The objective of this course is to acquaint the students regarding various accounting concepts and its application in managerial decision making.

Unit – I:
Financial Accounting- concept, Importance and scope, accounting principles, accounting cycle, journal ledger, trial balance, Preparation of final accounts with adjustments.

Unit – II:
Analysis and interpretation of financial statements – meaning, importance and techniques, ratio analysis, Fund flow analysis, cash flow analysis (AS - 3).

Unit – III:
Cost accounting–meaning, importance, methods, techniques; classification of costs and cost sheet; Inventory valuation methods- LIFO, FIFO, HIFO and weighted average method

Unit – IV:
Management accounting – concept, need, importance and scope; budgetary control-meaning, need, objectives, essentials of budgeting, different types of budgets and their preparation.

Unit-V:
Standard costing and variance analysis (materials, labour)-Marginal costing and its application in managerial decision making

Relevant cases have to be discussed in each unit and in examination case is compulsory from any unit.

References:

1. MAHESWARI AND MAHESWARI" Financial Accounting", Vikas Publishing House, New Delhi, 2013.
2. Pandey, I.M. Management Accounting, Vikas Publishing House, New Delhi.
3. Horngen, Sundem & Stratton, Introduction to Management Accounting, Pearson Education, New Delhi.
4. Hansen & Mowen, Cost Management, Thomson Learning.
5. Mittal, S.N. Management Accounting and Financial management, Shree Mahavir Book Depot, New Delhi.
6. Jain S.P. and Narang K.L. Advanced Cost Accounting, Kalyani Publishers Ludhiana.
7. Khan M.Y. and Jain, P.K. Management Accounting, TMH, N. Delhi.

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I Year I Semester

L	T	P	C
4	0	0	4

QUANTITATIVE ANALYSIS FOR BUSINESS DECISIONS

Course Objectives:

1: To develop a deeper understanding of meaning and importance of quantitative technique and its applications in managerial decisions.

2: Statistical tools like measures of central tendency & measures of variations and apply these tools to real life situations.

3: Students have more knowledge about the decision making concept, process of decision making and different environments like risk, uncertainty and certainty.

4: To have knowledge about Sampling and Sampling Distributions-Estimation-Point and Interval Estimates, Concepts of Testing Hypothesis.

5: Students would able to understand the concept of ANOVA, Chi-square Test of Independence and Goodness of fitness.

Course Outcomes:

At the end of the course students will be able to:

1 Basic importance and applications of quantitative techniques.
2 Study the various measures and applicability of probabilityrelated to thestatistics.
3 Justify the several decisions in decision theory.
4 Use and understand the different sampling distribution techniques.
5 Test the hypothesis for choosing best conclusion and inference.

UNIT-I:

Quantitative Techniques: Introduction - Meaning and Definition – Classification of QT -QT and other disciplines – Application of QT in business ~~9~~ Limitations.

UNIT -II:

Measure of Central Tendency and Dispersions- Arithmetic Mean; Geometric Mean; Harmonic Mean; Median:Mode, Standard Deviation. Simple correlation- Karl Pearson's Coefficient of correlation, Rank correlation. Simple Regression Analysis – Concept of Probability-Probability Rules-Joint and Marginal probability-Baye's Theorem-Probability Distributions - Binominal, Poisson, Normal & Exponential Probability Distributions.

UNIT- III:

Introduction of Decision Theory: Steps involved in decision making, different environments in which decisions are made, Criteria for decision making, Decision making under uncertainty, Decision making under conditions of Risk-Utility as a decision criterion, Decision trees, Graphic displays of the decision-making process, Decision making with an active opponent.

UNIT- IV:

Concept of Estimation and Sampling: Inferential Analysis-Point Estimates and Interval Estimates of Averages and Proportions of small and large samples. Sampling –Meaning, Steps in Sampling Process-Sample Size- Probability and non- probability sampling techniques, Errors in sampling.Tests of significance- Types- Hypothesis- Types- Hypothesis testing and Confidence Intervals. Parametric Tests for means, Proportions, Variance and Paired Observations.

UNIT- V:

Analysis of Variance (ANOVA): One-way and Two Way ANOVA, Non Parametric tests- Chi–Square- Test of Independence, Test of Goodness of Fit.

Relevant cases have to be in each unit and in examination case is compulsory for every unit.

References:

1 N.D. Vohra “Quantitative Techniques in Management”, Tata-McGraw Hill PrivateLimited, New Delhi, 2011.
2 Gupta S.P “Statistical Methods’’, S. Chand and Sons, New Delhi.
3 Anand Sharma “Quantitative Techniques for Business decision Making HimalayaPublishers, New Delhi, 2012.
4 D.P. Apte “Operation Research and Quantitative Techniques”, Excel Publications, NewDelhi, 2013.
5 Hamdy, A. Taha “Operation Research. An Introduction”, Prentice-Hall of India, NewDelhi, 2003.
6 Anderson “Quantitative Methods for Business”, Cengage Learning, New Delhi, 2013.

I Year I Semester

L	T	P	C
4	0	0	4

ENTREPRENEURSHIP DEVELOPMENT

UNIT -I

Introduction: Definition of Entrepreneur, Entrepreneurial motivation and barriers; Internal and external factorsEconomic Barriers to Entrepreneurship –Non-Economic Barriers to Entrepreneurship- Theories of entrepreneurship; Classification of Entrepreneurship- Entrepreneurship in Developing Economy – Entrepreneurial Values and Attitudes

UNIT- II

Problems & Support: Incubation and Take-off, Problems encountered Structural, Financial and Managerial Problems, Types of Uncertainty. -Institutional support for new ventures: Supporting organizations; Incentives and facilities; Financial Institutions and Small-scale Industries, Govt. Policies for SSIs. -Role of SIDBI in Project Management.

UNIT -III

Types of Entrepreneurs: Family and non-family entrepreneurs - Role of Professionals, Professionalism vs. family entrepreneurs–-Sick industries, Reasons for Sickness, Remedies for Sickness, Role of BIFR in revival, Bank Syndications.

Unit -IV

Project Analysis: Meaning and Definition of Project, Types & Characteristics – Project Phases – Project Life Cycle – Project Family Tree – Feasibility Analysis and Project Report.

Unit -V

Development of Enterprise: Concept and development of Enterprise - Procedure of starting Enterprise – Vital Decision to make during start up: Project Report Preparation, Choice of Enterprise, and Market Assessment of Enterprise.

References:

1) Couger, C-Creativity and Innovation (IPP, 1999)
2) Nina Jacob, -Creativity in Organisations (Wheeler, 1998)
3) Jonne&Ceserani-Innovation&Creativity(Crest) 2001.
4) BridgeSetal-Understanding Enterprise: Entrepreneurship and Small Business (Palgrave,2003)
5) Holt-Entrepreneurship: New Venture Creation (Prentice-Hall) 1998.
6) Singh P&Bhanderkar A-Winning the Corporate Olympiad:TheRenaissancearadigm(Vikas)
7) Dollinger M J-Entrepreneurship (Prentice-Hall, 1999).
8) Tushman, M.L. & Lawrence, P.R. (1997)-Managing Strategic Innovation & Change Oxford.
9) Jones T. (2003)-Innovating at the Edge: How Organizations Evolve and Embed Innovation Capability.Butterwork Heinemann, U. K.
10) Amidon, D. M.(1997)-Innovation Strategy for the Knowledge Economy:TheKanawakening. Butterwork-Heinemann, New Delhi, India.

I Year I Semester

L	T	P	C
4	0	0	4

BUSINESS ENVIRONMENT

OBJECTIVES:

The objective of this paper is to make the students more clear about the importance of business organisation wants to achieve, to earn profit for its growth and development, to provide quality goods to its customers, to protect the environment, etc.

UNIT – I: Introduction: The Concept of Business Environment - its Nature and Significance -Components of Business Environment - Impact of environment on business and strategic decisions.

UNIT – II: Social and Cultural Environment: Introduction - Social environment - Cultural environment - Impact of Foreign Culture on Business - Types of Social Organization - Social Responsibilities of Business.

UNIT – III: Economic Environment: Introduction - Economic environment of Business - Economic systems - Macroeconomic parameters and their impact of business - Economic policies - Five Year Plans in India.

UNIT – IV: Political and Legal Environment: Introduction -Political environment - Relationship between Government and Business in India - Role of Government in Business - Constitutional provisions regarding regulation of business in India. Legal Environment - Implementations of Business - Corporate Governance.
Relevant cases have to be discussed in each unit and in examination

UNIT – V: Technological and Natural Environment: Features of Technological Environment -Factors and Impact of Technological Environment - Technological Environment in India - Elements of Natural Environment - Environmental Pollution.case is compulsory from any unit.

References:

1. Shaikh Saleem: "Business Environment", Pearsons, New Delhi,
2. Veena Keshav Pailwar: "Economic Environment of Business", PHI Learning, New Delhi, 2012
3. Rosy Joshi, Sangam Kapoor: "Business Environment", Kalyani Publishers, New Delhi, 2011.
4. Aswathappa K: "Essentials of Business Environment", Himalaya Publishing House, New Delhi, 2011.
5. Vivek Mittal: "Business Environment Text and Cases", Excel Books New Delhi, 2011.

6. Sundaram and Black: "International Business Environment Text and Cases", PHI Private Limited, New Delhi.
7. Avid W Conklin: "Cases in Environment of Business", Sage Publication India Private Ltd, New Delhi. 8. Raj Kumar: "International Business Environment", Excel Publication, New Delhi, 2012.

9. Palle Krishna Rao: "WTO-Text and Cases", Excel Publication, New Delhi.

10. Government of India, Latest Economic Survey Report.

I Year I Semester

L	T	P	C
3	0	0	3

INFORMATION TECHNOLOGY FOR BUSINESS

Course Objectives:

- To understand business processes and information technology in business.
- To manage and understand IT in business organizations.
- To build and develop technology trends.
- To understand the challenges on using Technology for business
- To learn ethical issues in information technology

At the end of this course students will be able to:

1: Clear understanding of Information Technology in business scenarios.
2: Importance of Technology in business processes.
3: Significance of intelligent systems in business.
4: Usage of various digital platforms across the business.
5: exploring e-commerce and ERP scenario.

UNIT-I

Business and Information Technology - Business in the Information Age, Information system, CBIS, Trends in IT Evolution and types of Information Systems, Managing IT in organization.

UNIT-II

Information Technology Infrastructure - Computer Hardware, Software, Managing and Organization of Data and Information - Telecommunication and Networks. The Internet and Intranet (I.O.T).

UNIT-III

Information Technology for Competitive advantage - Inter Organizational Information Systems, Global Information Systems, Electronic Data Interchange (EDI) and Electronic Funds Transfer (EFT). Enterprise Resource Planning, Data Knowledge, and Decision Support.

UNIT-IV

Intelligent Systems in Business - Artificial intelligence and Intelligent Systems - Expert Systems, Intelligent Agents, Virtual Reality, Ethical and global issues of Intelligent systems.

UNIT-V

Electronic Commerce - Foundation, Business to Consumer Applications, Business to Business Applications, Consumer Market Research and other Support, Legal and Ethical issues in E-commerce Strategy, Information Systems, Strategic Advantage, Porter's Competitive Forces model on IT, Business Process Re-engineering, Virtual Corporations, E-Learning, CBI, Information Systems Development Life Cycle (SDLC), Building Internet and Intranet Applications.

Text Books:

1. Turban Rainer and Potter: Introduction to Information Technology, John & Wiley Sons.
2. James O'Brien: Introduction to Information Systems, McGraw Hill Book Company.

I Year I Semester

L	T	P	C
3	0	0	3

RURAL DEVELOPMENT

Course Objectives:

1. To facilitate the students to understand the basic nature of rural society in India
2. To appraise students about the Rural Local Administration
3. To provide insights on rural demography and rural economy in India
4. To provide insights on various processes and challenges of agriculture in India
5. To make students aware of the rural market structure in India

Outcomes of the course:

1. Describe the key aspects of rural society in India
2. Describe the rural local administration
3. Analyse the dynamics of local rural population and local rural economy
4. Explain the processes and challenges of agriculture in India
5. Summarise the components and implications of land tenure systems and land reforms in India**.**

Unit-I

Rural Development: Concept, Importance, Nature and scope, Characteristics of rural economy, human capital of development- Distinction between development and growth, Indicators of rural development, problems & issues in rural development.

Unit – II

Rural Management: Nature, Scope and challenges in marketing operations, human and financial resources in rural areas. Entrepreneurship opportunities in rural areas, Agricultural production, productivity and backwardness, Social and Economic structure of rural India and its economic development.

Unit – III

Rural Community Development: M.D.G -Concept of community, Function of Community,PURA model, Community profile: Process and tools. Community development: Characteristics, Principles andscope, Panchayat Raj and community development in India.; Zilla Parishad - structure, powers,function, working and problems in Rural Administration.

Unit – IV

Sustainable Development: Biodiversity and its conservation, Environmental pollution, air, water and soil pollution., Rainwater harvesting Watershed management. Social security schemes in India-DDP-CRSP-NHRDP-DWACRA-DRDA-Health care programmes.

Unit-V

Concept and Scope of Rural Market, Characteristics of rural markets, Environmental factors: Micro and Macro marketing environment, Marketing planning process, Introduction to services marketing. Fundamentals of Rural Demography and Economics: Rural population –process of development-GATT-WTO-SEZ-CSR-NAIS.

Reference:

1.Satya Sundram, I. "Rural Development" Himalaya Publishing House, New Delhi.

2.K. Venkatareddy-Aricultural and rural Development-Himalaya publishing house

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I Year I Semester

L	T	P	C
3	0	0	3

INTELLECTUAL PROPERTY RIGHTS& PATENTS

Course Objective:

1. The main objective of the IPR is to make the students aware of their rights for the protection of their invention done in their project work.

2. To get registration in our country and foreign countries of their invention, designs and thesis or theory written by the students during their project work and for this they must have knowledge of patents, copy right, trademarks, designs and information Technology Act.

3. Further the teacher will have to demonstrate with products and ask the student to identify the different types of IPR's.

Course outcomes:

- The students once they complete their academic projects, they get awareness of acquiring the patent
- They also learn to have copyright for their innovative works.
- They also get the knowledge of plagiarism in their innovations which can be questioned legally.

Unit-I

INTRODUCTION TO IPR: Meaning of property, Origin, Nature, Meaning of Intellectual Property Rights –Kinds of Intellectual property rights—Copy Right, Patent, Trademark, Trade Secret and trade dress, Design, Layout Design, Geographical Indication, Plant Varieties and Traditional Knowledge.

Unit-II

PATENT RIGHTS AND COPY RIGHTS— Origin, Meaning[18] of Patent, Types, Inventions which are not patentable, Registration Procedure, Rights and Duties of Patentee, Assignment and license, Restoration of lapsed Patents, Surrender and Revocation of Patents, Infringement, Remedies & Penalties. COPY RIGHT—Origin, Definition &Types of Copy Right, Registration procedure, Assignment & license, Terms of Copy Right, Piracy, Infringement, Remedies, Copy rights with special reference to software.

Unit-III

TRADEMARKS— Origin, Meaning & Nature of Trademarks, Types, Registration of Trade Marks, Infringement & Remedies, Offences relating to Trade Marks, Passing Off, Penalties.

Unit-IV

DESIGN- Meaning, Definition, Object, Registration of Design, Cancellation of Registration, International convention on design, functions of Design. Semiconductor Integrated circuits and layout design Act-2000.

Unit-V

BASIC TENENTS OF INFORMATION TECHNOLOGY ACT-2000 – IT Act - Introduction E-Commerce and legal provisions E- Governance and legal provisions Digital signature and Electronic Signature. Cybercrimes

TEXTBOOKS:

1. Intellectual Property Rights and the Law, Gogia Law Agency, by Dr. G.B. Reddy

2. Law relating to Intellectual Property, Universal Law Publishing Co, by Dr.B.L.Wadehra

3. IPR by P. Narayanan

4. Law of Intellectual Property, Asian Law House, Dr.S.R. Myneni

I Year I Semester

L	T	P	C
3	0	0	3

MOOCs : SWAYAM/NPTEL- Related to Management Courses other than listed courses in the syllabus

NOTE: Students opting for SWAYAM should register for 12 weeks course and need to produce the Pass certificate with minimum 40% (Percentage) for receiving the Academic Credits. The actual percentage mentioned on the certificate will be transferred to the marks memo.

I Year I Semester

L	T	P	C
0	0	4	2

PACE UP

(Personality Assessment Centre, Enhancement and Upgradation Processes)

Course Objectives:

Business Etiquettes and Professionalism has been designed to meet the following objectives:

a) To learn the principles of business etiquettes and professional behaviour

b) To understand the etiquettes for making business correspondence effective

c) To be able to present yourself confidently at various business situations

d) Develop awareness of dining and multicultural etiquettes

Learning Outcome:

After completion of course students will be able to:

a) Demonstrate an understanding of professionalism in terms of workplace behaviours and workplace relationships.

b) Adopt attitudes and behaviours consistent with standard workplace expectations.

c) Presenting oneself with finesse and making others comfortable in a business setting.

d) Developing basic life skills or etiquettes in order to succeed in corporate culture.

Unit: I

Business Etiquettes- An Overview: Significance of Business Etiquettes in 21st Century Professional Advantage; Need and Importance of Professionalism

Workplace Etiquette: Etiquette for Personal Contact- Personal Appearance, Gestures, Postures, Facial Expressions, Eye-contact, Space distancing

E-Mail Etiquette: Significance of Netiquette, E-mail: Way of professional communication,

Basic Email Etiquettes: Proper Grammar, Spelling, Punctuation, Styling and Formatting, Body of Email, Response, Privacy

Unit – II

Telephone Etiquettes: Telephone Communication Techniques -Placing Telephone calls, Answering Calls, Transferring Calls, Putting Calls on Hold, Taking Messages, Handling Rude Callers, Tactful Responses, Leaving Professional Messages; Developing Cell Phone Etiquettes; Voicemail Etiquette; Telephonic Courtesies

Dining Etiquette: Basics of Dining Etiquettes; Basic essentials of dining table etiquettes - Napkin Etiquette, Seating arrangements, laying the table, how to use Cutlery, Posture &Behaviour, Do's and Don'ts; International Dining Etiquettes.

Multi-Cultural Challenges: Cultural Differences and their Effects on Business Etiquette

Unit – III

Communication Skills: Understanding Human Communication, Constitutive Processes of Communication, Language as a tool of communication, Barriers to Effective communication, Strategies to Overcome the Barriers.

Emotional intelligence: Importance, concept, theory and measurements.

Stress Management: Strategies for preventing and relieving stress.

Time management: Meaning; Techniques and styles.

Unit – IV

Interview Skills: Interview Skills: in-depth perspectives, Interviewer and Interviewee, Before, During and After the Interview, Tips for Success.

Meeting Etiquette: Managing a Meeting-Meeting agenda, Minute taking; Duties of the chairperson and secretary; Effective Meeting Strategies - Preparing for the meeting, Conducting the meeting, Evaluating the meeting

Presentation Etiquettes: Importance of Preparation and Practice; Effective Delivery Techniques, Audience Analysis, Handling Stage Fright.

Unit- V

Teamwork and Leadership Skills: Concept of Teams; Building effective teams; Concept of Leadership and honing Leadership skills.

Personality: Meaning & Definition, Determinants of Personality, Personality Traits, Personality and Organisational Behaviour

Motivation: Nature & Importance, Herzberg's Two Factor theory, Maslow's Need Hierarchy theory, Alderfer's ERG theory

Decision-Making and Problem-Solving Skills: Meaning, Types and Models, Group and Ethical Decision-Making, Problems and Dilemmas in application of these skills.

Conflict Management: Conflict - Definition, Nature, Types and Causes; Methods of Conflict Resolution.

Human Resource Management: Introduction to HRM, Selection, Orientation, Training& Development, Performance Appraisal, Incentives

Case Study Analysis

Suggested Readings:

• Barbara Pachter, Marjorie Brody. Complete Business Etiquette Handbook. Prentice Hall, 2015.

• Dhanavel, S.P. English and Soft Skills. Hyderabad: Orient BlackSwan, 2021.
• Koneru, Aruna. Professional Communication. Delhi: McGraw, 2008.
• Mahanand, Anand. English for Academic and Professional Skills. Delhi: McGraw, 2013. Print.
• Nancy Mitchell. Etiquette Rules: A Field Guide to Modern Manners. Wellfleet Press, 2015.
• Rani, D Sudha, TVS Reddy, D Ravi, and AS Jyotsna. A Workbook on English Grammar and Composition. Delhi: McGraw, 2016.
• Raghu Palat, Indian Business Etiquette, Jaico Books, 2015.
• Rizvi, M. Ashraf. Effective Technical Communication. Delhi: McGraw, 2018.
• Pease, Allan and Barbara Pease. The Definitive Book of Body Language. New Delhi: Manjul Publishing House, 2005.
• Tengse, Ajay R. Soft Skills: A Textbook for undergraduates, Orient BlackSwan, 2015

I Year I Semester

L	T	P	C
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TALLY LAB

Objective:
To Understand the students' basics of the Computers Knowledge with Financial Software Knowledge

Unit- I
FUNDAMENTALS OF TALLY.ERP: tally origin - Company features -Configuration - Getting functions with Tally.ERP9 - Creation / setting up of Company - Chart of Groups - Groups -Multiple Groups - Ledgers -Multiple Ledgers

Unit -II
INVENTORY MASTERS IN TALLY.ERP9 - Stock Groups - Multiple Stock Groups - Stock Categories - Multiple Stock Categories - Units of Measure- Stock Items- vouchers entries - Types of Vouchers - Chart of Vouchers - Accounting Vouchers - Inventory Vouchers - Invoicing

Unit -III
ADVANCE ACCOUNTING & INVENTORY TALLY.ERP9 - Bill-wise details - Cost centers and Cost Categories - Multiple currencies - Interest calculations - Budget and controls - Scenario management - Bank Reconciliation - Order Processing - Recorder Levels - Batch-wise details - Bill of Materials - Price Lists - Zero-Valued Entries - Additional cost details - POS

Unit – IV
TAXES IN TALLY.ERP9 - TDS - TDS Reports - TDS Online Payment - TDS Returns filing - TDS Certificate issuing - 26AS Reconciliation - TCS - TCS Reports - GST - GST Returns ¬ EPF - ESIC - Professional Tax

Unit V 24
GENERATING REPORTS IN TALLY.ERP9 - Financial Statements - Trading Account - Profit & Loss Account - Balance Sheet - Accounts Books and Reports - Inventory Books and Reports - Exception Reports - Statutory Reports - Payroll Reports - Trail balance - Day Book ¬ -List of Accounts - Stock Summary - Outstanding Statement

Reference Books:

1. TallyPrime Book (2023) by Sanjay SatpathySWAYAM EDUCATION MandalBagicha, Hemkapada, Sunhat, Balasore,Odisha-756003 (INDIA)
2. Tally power of simplicity (2011) by ArunaPrakashanHindvi Computer, Latur
3. Financial Accounting and Analysis - Discovery Publishing House Pvt. Ltd., New Delhi
4. Management and Cost accounting - - Discovery Publishing House Pvt. Ltd., New Delhi

I Year I Semester

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ENTREPRENEUR PROJECT -1

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I Year II Semester

FINANCIAL MANAGEMENT

UNIT -I

Financial Management: Concept - Nature and Scope - Evolution of financial Management - The new role in the contemporary scenario – Goals and objectives of financial Management - Firm's mission and objectives - Profit Maximization Vs. Wealth maximization – Maximization Vs Satisfying - Major decisions of financial manager.

UNIT -II

Financing Decision: Sources of finance - Concept and financial effects of leverage – EBIT – EPS analysis. Cost of Capital: Weighted Average Cost of Capital– Theories of Capital Structure.

UNIT-III

Investment Decision: Concept and Techniques of Time Value of Money – Nature and Significance of Investment Decision – Estimation of Cash flows – Capital Budgeting Process – Techniques of Investment Appraisal – Discounting and Non Discounting Methods.

UNIT-IV

Dividend Decision: Meaning and Significance – Major forms of dividends – Theories of Dividends – Determinants of Dividend – Dividends Policy and Dividend valuation – Bonus Shares –Stock Splits – Dividend policies of Indian Corporate.

UNIT-V

Liquidity Decision: Meaning - Classification and Significance of Working Capital – Components of Working Capital – Factors determining the Working Capital – Estimating Working Capital requirement – Cash Management Models – Accounts Receivables –Credit Policies – Inventory Management.

Relevant cases have to be discussed in each unit and in examination case is compulsory from any unit.

References:

1. I.M. Pandey: "**Financial Management",** Vikas Publishers, New Delhi, 2013.
2. Khan and Jain: Financial Management, Tata McGraw Hill, New Delhi,
3. Prasanna Chandra: "**Financial Management Theory and Practice**", Tata McGrawHill 2011.
4. P.Vijaya Kumar, M.Madana Mohan, G. Syamala Rao: "**Financial Management",** Himalaya Publishing House, New Delhi, 2013.
5. Brigham,E.F: "**Financial Management Theory and Practice**", Cengae Learning, New Delhi, 2013
6. RM Srivastava, Financial Management, Himalaya Publishing house, 4th edition.

I Year II Semester

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HUMAN RESOURCE MANAGEMENT

Course Objectives:

1: To acquaint students with a broad perspective on themes and issues of Human Resource Management.
2:To familiarize the student with Investment perspectives of HRM.
3:To familiarize students with the concepts of career development, counseling and gain knowledge about current compensation trends.
4: To gain knowledge about Wage determinants and welfare measures.
5: To familiarize the students with industrial relations concepts , disputes and grievance mechanism , safety in the work places.

Course Outcomes:

At the end of the Course, Student will be able to:

1 **:** Cite evolution and emerging trends of HRM.
2 **:** Critically analyze Investment and HRD concepts.
3 **:** List different appraisal and Compensation system.
4 **:** Evaluate incentive payment system and welfare measures given to employees.
5 **:** Interpret industrial relations in organization.

UNIT -I

HRM: Concept, Nature, Scope- and Functions – evolution of HRM- Principles - Ethical Aspects of HRM- HR policies, Strategies to increase firm performance - Role and position of HR department – Strategic HR in changing environment – Emerging trends in HRM.

UNIT -II

Investment perspectives of HRM: HR Planning – Demand and Supply forecasting – Job Analysis-Job Design-Job Evaluation. Recruitment and Selection- Sources of recruitment – e-recruitment. Steps in Selection Procedures- Tests and Interview Techniques - Induction- Training and Development – Need and Importance-Methods and of Training. Concept of HRD.

UNIT -III

Performance Appraisal: Importance – Methods – Traditional and Modern methods – Latest trends in performance appraisal - Career Development and Counseling- Compensation - Concepts and Principles- Influencing Factors- Current Trends in

Compensation- Methods of Payments in detail - Incentives rewards compensation mechanisms.

UNIT -IV

Wage and Salary Administration: Concept- Wage Structure- Wage and Salary Policies- Legal Frame Work- Determinants of Payment of Wages- Wage Differentials - Incentive Payment Systems. Welfare management: Nature and concepts – statutory and non-statutory welfare measures.

UNIT-V

Managing Industrial Relations: Nature- Importance -Trade Unions - Employee Participation Schemes-Collective Bargaining – Grievances and disputes resolution mechanisms – Managing employee safety and health. Relevant cases have to be discussed in each unit and in examination case is compulsory from any unit.

References:

1. K Aswathappa: "Human Resource and Personnel Management", Tata McGraw Hill, New Delhi, 2013.
2. N. Sambasiva Rao and Dr. Nirmal Kumar: "Human Resource Management and Industrial Relations", Himalaya Publishing House, Mumbai.
3. Mathis, Jackson, Tripathy: "Human Resource Management: A south-Asin Perspective", Cengage Learning, New Delhi, 2013.
4. Subba Rao P: "Personnel and Human Resource Management-Text and Cases", Himalaya Publications, Mumbai, 2013.
5. Madhurima Lall, Sakina Qasim Zasidi: "Human Resource Management", Excel Books, New Delhi,2010.

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I Year II Semester

OPERATIONS MANAGEMENT

Objectives:
This Course is designed to make student understand the strategic significance of Operation management, to acquaint them with application of discipline to deal with real life business problem.

UNIT I:
Introduction to Operation Management: Nature & Scope of Operation/ Production Management, Relationship with other functional areas, Recent trend in Operation Management, Manufacturing & Theory of Constraint, Types of Production System, Just in Time (JIT) & lean system.

UNIT II:
Product Design & Process Selection: Stages in Product Design process, Value Analysis, Facility location & Layout: Types, Characteristics, Advantages and Disadvantages, Work measurement, Job design.

UNIT III:
Forecasting & Capacity Planning: Methods of Forecasting, Overview of Operation Planning, Aggregate Production Planning, Production strategies, Capacity Requirement Planning, MRP, Scheduling, Supply Chain Management, Purchase Management, Inventory Management.

Unit- IV:
Productivity: Factors, Affecting Productivity – Job Design – Process Flow Charts – Methods Study – Work Measurement – Engineering and Behavioral Approaches.

UNIT V:
Quality Management: Quality- Definition, Dimension, Cost of Quality, Quality Circles- Continuous improvement (Kaizen), ISO (9000&14000 Series), Statistical Quality Control: Variable & Attribute, Process Control, Control Charts -Acceptance Sampling Operating Characteristic Curve (AQL , LTPD, Alpha & Beta risk), Total Quality Management (TQM).

Relevant cases have to be discussed in each unit and in examination case is compulsory from any unit.

References:

1. Krajewski & Ritzman (2004). Operation Management -Strategy and Analysis. Prentice Hall of India.
2. Panner Selvem, Production and Operation Management, Prentice Hall of India.
3. Chunnawals, Production & Operation Management Himalaya, Mumbai
4. Charry, S.N (2005). Production and Operation Management- Concepts, Methods Strategy. John Willy & Sons Asia Pvt Limited.
5. K Aswathappa & Sridhar Bhatt, Production & Operations Management, Himalaya, Mumbai.

I Year II Semester

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MARKETING MANAGEMENT

Objectives:

The Course is designed for the students to understand the Marketing concepts and to identify, enrich and fulfill the needs of customers and markets.

UNIT -I

Introduction to Marketing: Needs - Wants – Demands - Products - Exchange - Transactions - Concept of Market and Marketing and Marketing Mix - Production Concept- Product Concept - Sales and Marketing Concept - Societal Marketing Concept - Green Marketing concept - Indian Marketing Environment.

UNIT -II

Market Segmentation, Targeting and Positioning: Identification of Market Segments - Consumer and Institutional/corporate Clientele - Segmenting Consumer Markets - Segmentation Basis – Evaluation and Selection of Target Markets – Positioning significance - Developing and Communicating a Positioning Strategy.

UNIT -III

Product and Pricing Aspects: Product – Product Mix - Product Life cycle -Obsolescence- Pricing- Objectives of Pricing - Methods of Pricing - Selecting the Final price - Adopting price - Initiating the price cuts - Imitating price Increases-Responding to Competitor's price changes.

UNIT -IV

Marketing Communication: Communication Process – Communication Mix – Integrated Marketing Communication - Managing Advertising Sales Promotion - Public relations and Direct Marketing - Sales force – Determining the Sales Force Size - Sales force Compensation.

UNIT V

Distribution, Marketing Organization and Control: Channels of Distribution-Intensive, Selective and Exclusive Distribution- Organizing the Marketing Department - Marketing Implementation - Control of Marketing Performance - Annual Plan Control - Profitability Control - Efficiency Control - Strategic Control.

Relevant cases have to be discussed in each unit and in examination case is compulsory from any unit.

References

1. Phillip Kotler: "**Marketing Management** ", Pearson Publishers, New Delhi, 2013.
2. Rajan Saxena: "**Marketing Management**", Tata McGraw Hill, New Delhi, 2012.
3. V S Ramaswamy & S Namakumari, Marketing Management Global Perspective Indian Context 4th Edition, Mac Millan Publishers 2009.
4. Tapan K Panda: **"Marketing Management**", Excel Books, New Delhi, 201**2**
5. Paul Baines, Chris Fill, Kelly Page Adapted by Sinha K: "**Marketing**", Oxford University Press, Chennai, 2013

I Year II Semester

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RESEARCH METHODS FOR BUSINESS DECISIONS

Course Objective:

To develop understanding of the basic framework of research process.Developing the students in Research orientation and to acquaint them with fundamental of research methods

To identify various sources of information for literature review and data collection

To understand the data analysis and presentation

To understand various statistical tools and their applicability in research.

To enable them to write a research report and thesis.

Course Outcomes:

1 Understand advanced design, methodologies and analysis in business research methods, including key terms, classifications and systematic applications to the research data and design of a research project

2 Apply knowledge in collecting data from various sources.

3Demonstrate knowledge in data analysis and interpretation.

4 Applying appropriate statistical techniques in the analysis of data

5 Demonstrate the abilities in preparing research reports.

UNIT- I

Introduction: Nature and Importance of Research, the role of Business Research, aims of social research, Types of Research- Pure research vs. Applied research, Qualitative research vs. Quantitative research, Exploratory research, Descriptive research and Experimental research, ethical issues in business Research-Defining Research Problem, Steps in Research process.

UNIT- II

Data Base: Discussion on primary data and secondary data, tools and techniques of collecting data. Methods of collecting data. Sampling design and sampling procedures. Random vs. Non-random sampling techniques, determination of sample size and an appropriate sampling design. Designing of Questionnaire –Measurement and Scaling – Nominal Scale – Ordinal Scale – Interval Scale – Ratio Scale – Guttmann Scale – Likert Scale – Schematic Differential Scale.

UNIT- III

Survey Research and data analysis: Selection of an appropriate survey research design, the nature of field work and Field work management. Media used to communicate with Respondents, Personal Interviews, Telephone interviews, Self-administered Questionnaires-

Editing – Coding – Classification of Data – Tables and Graphic Presentation –Preparation and Presentation of Research Report.

UNIT- IV

Statistical Inference: Formulation of Hypothesis –Tests of Hypothesis - Introduction to Null hypothesis vs. alternative hypothesis, parametric vs. non-parametric tests, procedure for testing of hypothesis, tests of significance for small samples, application, t-test, Chi Square test.

UNIT- V

Multivariate Analysis: Nature of multivariate analysis, classifying multivariate techniques, analysis of dependence, analysis of interdependence. Bi-Variate analysis-tests of differences-t test for comparing two means and z-test for comparing two proportions and ANOVA for complex experimental designs.

Relevant cases have to be discussed in each unit and in examination case is compulsory from any unit.

References

1. C.R. Kothari: Research Methodology, methods and Techniques New Age International Publisher.
2. Navdeep and Guptha : "**Statistical Techniques & Research Methodology**", Kalyani Publishers
3. Willam G.Zikmund, Adhkari: "***Business Research Methods***", Cengage Learning, New Delhi, 2013.
4. A.N. Sadhu, Amarjit singh, Research methodology in social sciences, 7th Edition Himalaya Publications.
5. A Bhujanga rao , Research methodology, Excel Books, 2008.

I Year II Semester

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BUSINESS ANALYTICS

Course Objectives:

- To understand the importance, difference and practices of analytics in business.
  - Understand business communication through data-driven information,
  - Apply knowledge and explain natural processes by relating them to a certain distribution of data
- To understand the data visualization tools, application and statistical methods.
- To learn the measure of variability in decision making
  - Evaluate and compare descriptive and predictive analytics with use case scenarios.

Unit- I

Introduction to Data Analytics: Introduction to Data analytics - Role of Data in Organization, Data lifecycle. (Data source, data changes, processes, usage) -Various Data Types - Significance of Analytics- Role of Data Analyst - Difference between Data analytics and Business Analytics – real-world data analytics examples.

Unit -II

Tools & Techniques: Typical Data Analysis Process - Data analytics techniques: Regression analysis, Factor analysis, Cohort analysis, Cluster analysis-Time-series analysis. Data analytics tools -Microsoft Excel, Tableau, SAS, RapidMiner, Power BI.

Unit -III Concepts of data cleaning - Data Visualization: Over view of Data visualization – Data Visualization tools, Statistical methods for summarizing data – How to create pivotal tables using excel - Exploring data using pivot table –Cross Tabulation _ Creating Charts: -1. Scatter charts, 2. Line charts, 3. Bar charts and column, 4. Pie Charts and 3-D charts, 4. Bubble charts, - Effective use of Dashboards, Power BI and Tableau.

Unit -IV Descriptive Analytics: Concept of Descriptive Analytics –Measures of central Tendency –Measuring and calculation of Arithmetic Mean, Mode, Median - Calculation of application of Weighted Arithmetic Mean, Geometric and Harmonic mean using MS Excel-Measures of Variability-Range, Variance, Standard Deviation, Coefficient of Variation using MS Excel

Unit -V Predictive Analytics: Karl Pearson Correlation Techniques - Spearman's Rank correlation -Simple and Multiple regression -Regression by the method of least squares – Building good regression models – Regression with categorical independent variables.

References:

1. R for Data Science: Import, Tidy, Transform, Visualize, and Model Data,Hadley Wickham & Garrett Grolemund.O'REILLY.
2. Mohiuddin Ahmed, Al-Sakib Khan Pathan, Data Analytics: Concepts, Techniques, and Applications, Taylor & Francis Group, 2020
3. James Evans, Business Analytics, 2e, Pearson, 2017.

4. Camm, Cochran, Fry, Ohlmann, Anderson, Sweeney, Williams Essential of Business Analytics, Cengage Learning, 2020.
5. Thomas Eri, Wajid Khattack & Paul Buhler: Big Data Fundamentals, Concepts, drVers and Techniques by Prentice Hall of India, New Delhi, 2015.
6. Akil Maheswari, Big Data, Upskill ahead by Tata McGraw Hill, New Delhi, 2016.

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA
(Established by Govt. of A.P., ACT No.30 of 2008)
KAKINADA – 533 003 (A.P) INDIA
MBACOURSE STRUCTURE & SYLLABUS
(Applicable for batches admitted from 2024-25)

I Year II Semester

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CROSS CULTURAL MANAGEMENT

Objective:
The objective of this course is to enhance the ability of class members to interact effectively with people from cultures other than their own, specifically in the context of international business. The course is aimed at significantly improving the ability of practicing managers to be effective global managers.

Unit – I
Introduction – Concept of Culture for a Business Context; Brief wrap up of organizational culture & its dimensions; Cultural Background of business stakeholders [managers, employees, shareholders, suppliers, customers and others] – An Analytical framework.

Unit – II
Culture and Global Management – Global Business Scenario and Role of Culture. Framework for Analysis; Elements & Processes of Communication across Cultures; Communication Strategy for/ of an Indian MNC and Foreign MNC & High-Performance Winning Teams and Cultures; Culture Implications for Team Building.

Unit – III
Cross Culture – Negotiation & Decision Making – Process of Negotiation and Needed Skills & Knowledge Base – Overview with two illustrations from multicultural contexts [India – Europe/ India – US settings, for instance]; International and Global Business Operations-Strategy Formulation & Implementation; Aligning Strategy, Structure & Culture in an organizational Context.

Unit – IV
Global Human Resources Management – Staffing and Training for Global Operations – Expatriate – Developing a Global Management Cadre. Motivating and Leading; Developing the values and behaviours necessary to build high-performance organization personnel [individuals and teams included] – Retention strategies.

Unit – V

Corporate Culture – The Nature of Organizational Cultures Diagnosing the as is Condition; Designing the Strategy for a Culture Change Building; Successful Implementation of Culture Change Phase; Measurement of ongoing Improvement.

Relevant cases have to be discussed in each unit and in examination case is compulsory from any unit.

References:1. Cashby Franklin, Revitalize your corporate culture: PHI, Delhi

2. Deresky Helen, International Management: Managing Across Borders and Cultures, PHI, Delhi

3. Esenn Drlarry, Rchildress John, The Secret of a Winning Culture: PHI, Delhi

I Year II Semester

L	T	P	C
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PROJECT MANAGEMENT

Objective:

The objective of this course is to enable the students to gain basic knowledge about the concept of project, project management, project life-cycle, project appraisal; to acquaint the students about various issues of project management.

1. To know the concept and element of the project
2. To understand various stages in project life cycles.
3. The objective of this course is to enable the students to gain basic knowledge about the concept of project.
4. Project management, project life-cycle, project appraisal.
5. Acquaint the students about various issues of project management.

Outcomes:

1. Best practice for increase profit and cost advantage
2,Enhance ability to planed implement and control the projects.
3.It's a technical toll for managing project completion
4.To provide investment strategies the project proposals.
5,Strength and relevant behavioural and leadership capabilities

Unit -I:

Basics of Project Management –Concept– Project environment – Types of Projects – Project life cycle – Project proposals – Monitoring project progress – Project appraisal and Project selection – Causes of delay in Project commissioning– Remedies to avoid overruns. Identification of Investment opportunities – Sources of new project ideas, preliminary screening of projects – Components for project feasibility studies.

Unit- II:

Market feasibility -Market survey – Categories of Market[38] survey – steps involved in conducting market survey – Demand forecasting techniques, sales projections., business environment for project management.

Unit- III:

Technical and Legal feasibility: Production technology, materials and inputs, plant capacity, site selection, plant layout, Managerial Feasibility Project organization and responsibilities. Legalities – Basic legal provisions. Development of Programme Evaluation & Review Technique (PERT) –Construction of PERT (Project duration and valuation, slack and critical activities, critical path interpretation) – Critical Path Method (CPM)

Unit -IV:

Financial feasibility – Capital Expenditure – Criteria and Investment strategies – Capital Investment Appraisal Techniques (Non DCF and DCF) – Risk analysis – Cost and financial feasibility – Cost of project and means of financing — Estimation of cash flows – Estimation of Capital costs and operating costs; Revenue estimation – Income – Determinants – Forecasting income –Operational feasibility - Breakeven point – Economics of working.

Unit- V:

Project Implementation and Review: Forms of project organization – project planning – project control – human aspects of project management – prerequisites for successful project implementation – project review – performance evaluation – abandonment analysis.

Relevant cases have to be discussed in each unit and in examination case is compulsory from any unit.

References:

1. Prasanna Chandra, "Projects, Planning, Analysis, Selection, Financing, Implementation and Review", Tata McGraw Hill Company Pvt. Ltd., New Delhi 1998.
2. Gido: Effective Project Management, 2e, Thomson, 2007.
3. Singh M.K, "Project Evaluation and Management".
4. Vasanth Desai, Project Management, 4th edition, Himalaya Publications 2018.
5. Clifford F. Gray, Erik W. Larson, "Project Management, the Managerial Emphasis", McGraw Hill, 2000.

I Year II Semester

L	T	P	C
3	0	0	3

LEAN MANAGEMENT

Objective:

To understand issues and challenges in implementing and development in lean manufacturing techniques from TPS and its contribution for improving organizational performance.

Unit- I

Introduction: Mass production system, Craft Production, Origin of Lean production system , Why Lean production , Lean revolution in Toyota , Systems and systems thinking , Basic image of lean production , Customer focus , Waste Management.

UNIT- II

Just in Time: Why JIT, Basic Principles of JIT, JIT system, Kanban, Six Kanban rules, Expanded role of conveyance, Production levelling, Three types of Pull systems, Value stream mapping. JIDOKA, Development of Jidoka concept, Why Jidoka, Poka, Yoke systems, Inspection systems and zone control – Types and use of Poka-Yoke systems, Implementation of Jidoka

UNIT -III

Kaizen: Six – Sigma philosophy and Methodologies,QFD, FMEA Robust Design concepts; SPC, QC circles standardized work in lean system, Standards in the lean system, 5S system.

UNIT -IV

Total Productive Maintenance: Why Standardized work, Elements of standardized work, Charts to define standardized work, Kaizen and Standardized Work Common layouts.

UNIT- V

Hoshin Planning & Lean Culture: Involvement, Activities supporting involvement, Quality circle activity, Kaizen training, Key factors of PKT success, Hoshin Planning System, Four Phases of Hoshin Planning, Why Lean culture – How lean culture feels.

References

1. Jeffrey Liker, The Toyota Way: Fourteen Management Principles from the World's Greatest Manufacturer, McGraw Hill, 2004.
2. Debashish Sarkar, Lessons in Lean Management,
3. Dale H., Besterfield , Carol, Besterfield, etal, Total Quality Management (TQM) 5e by Pearson 2018.

I Year II Semester

L	T	P	C
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DATA BASE MANAGEMENT SYSTEM

Objective:

The course is to present an introduction to database management systems, with an emphasis on how to organize, maintain and retrieve - efficiently, and effectively - information from a DBMS.

UNIT- I

Introduction to Database Systems: Data - Database Applications - Evolution of Database - Need for Database Management – Data models - Database Architecture - Key Issues and Challenges in Database Systems.

UNIT- II

ER and Relational Models: ER Models – ER to Relational Mapping –Object Relational Mapping - Relational Model Constraints - Keys - Dependencies - Relational Algebra - Normalization - First, Second, Third & Fourth Normal Forms - BCNF – Join Dependencies.

UNIT- III

Data Definition and Querying: Basic DDL - Introduction to SQL - Data Constraints - Advanced SQL - Views - Triggers - Database Security – Embedded & Dynamic SQL.

UNIT- IV

Transactions and Concurrency: Introduction to Transactions - Transaction Systems - ACID Properties - System & Media Recovery - Need for Concurrency - Locking Protocols – SQL for Concurrency – Log Based Recovery - Two Phase Commit Protocol - Recovery with SQL- Deadlocks & Managing Deadlocks.

UNIT- V

Advanced Topics in Databases: Indexing & Hashing Techniques - Query Processing & Optimization - Sorting & Joins – Database Tuning - Introduction to Special Topics - Spatial & Temporal Databases – Data Mining and Warehousing.

Relevant cases have to be discussed in each unit and in examination case is compulsory from any unit.

REFERENCES:

1. Abraham Silberschatz, Henry F. Korth, S. Sudharshan, ―Database System Concepts‖, Sixth Edition, Tata McGraw Hill, 2010.
2. Ramez Elmasri, Shamkant B. Navathe, ―Fundamentals of Database Systems‖, Sixth Edition, Pearson/Addison - Wesley, 2010.
3. C.J. Date, A. Kannan and S. Swamynathan, ―An Introduction to Database Systems‖, Pearson Education, Eighth Edition, 2006.
4. Raghu Ramakrishnan, ―Database Management Systems‖, Fourth Edition, McGraw Hill, 2015.

I Year II Semester

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R-PROGRAMMING LAB

OBJECTIVE:

After taking the course, students will be able to

- Use R for statistical programming, computation, graphics, and modeling,
- Write functions and use R in an efficient way,
- Fit some basic types of statistical models
- Use R in their own research,
- Be able to expand their knowledge of R on their own.

OUTCOMES:

At the end of this course, students will be able to:

• List motivation for learning a programming language
• Access online resources for R and import new function packages into the R workspace
• Import, review, manipulate and summarize data-sets in R
• Explore data-sets to create testable hypotheses and identify appropriate statistical tests
• Perform appropriate statistical tests using R Create and edit visualizations with

SYLLABUS:

UNIT-I:

All the theory content here below shall be executed with examples.

Introduction, how to run R, R Sessions and Functions, Basic Math, Variables, Data Types, Vectors, Conclusion, Advanced Data Structures, Data Frames, Lists, Matrices, Arrays, Classes.

UNIT-II:

All the theory content here below shall be executed with examples.

R Programming Structures, Control Statements, Loops, - Looping Over Non vector Sets, - If-Else, Arithmetic and Boolean Operators and values, Default Values for Argument, Return Values, Deciding Whether to explicitly call return- Returning Complex Objects, Functions are Objective, No Pointers in R, Recursion, A Quicksort Implementation-Extended Extended Example: A Binary Search Tree.

UNIT-III:

All the theory content here below shall be executed with examples.

Doing Math and Simulation in R, Math Function, Extended Example Calculating Probability-Cumulative Sums and Products-Minima and Maxima- Calculus, Functions Fir Statistical Distribution, Sorting, Linear Algebra Operation on Vectors and Matrices, Extended Example:

Vector cross Product- Extended Example: Finding Stationary Distribution of Markov Chains, Set Operation, Input /output, Accessing the Keyboard and Monitor, Reading and writer Files,

UNIT-IV:

All the theory content here below shall be executed with examples.

Graphics, Creating Graphs, The Workhorse of R Base Graphics, the plot () Function – Customizing Graphs, Saving Graphs to Files.

UNIT-V:

All the theory content here below shall be executed with examples.

Probability Distributions, Normal Distribution- Binomial Distribution- Poisson Distributions Other Distribution, Basic Statistics, Correlation and Covariance, T-Tests, -ANOVA.

REFERENCE BOOKS:

1) The Art of R Programming, Norman Matloff, Cengage Learning
2) R for Everyone, Lander, Pearson
3) R Cookbook, PaulTeetor, Oreilly
4) R Programming By Dr.T. Murali Mohan, S.Chand Publications.
5) Garrett Grolemund, Hands on Programming with R, Oreilly

I Year II Semester

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IT LAB (SPREAD SHEETS AND SQL)

UNIT- I

Introduction to Information Technology, Classification of Software - Basics of MS Word and Basics of MS PowerPoint.

UNIT –II

The MS Excel interface, Formatting Cells, Data Entry- Inserting, Deleting, Selecting, Copying, Cutting, and Pasting. Methods of applying Formulas. Basic calculations.

UNIT- III

Conditional Formatting, Cell References & addressing, Conditional functions, IF functions, - Look up functions, Sorting & Filtering Data.

UNIT- IV

Demonstrating Statistical Functions and Financial functions in excel,
Different types of Charts preparation and representation.

UNIT- V

Introduction to SQL – SQL commands, Data types, Creating Tables. SQL constraints.
Functional queries.

Reference:

1) Excel: Quick Start Guide from Beginner to Expert (Excel, Microsoft Office)- by William Fischer
2) Peeking into computer science- Excel Lab Manual- Jalal Kawash
3) SQL Tutorial (w3schools.com)

I Year II Semester

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ENTREPRENEUR PROJECT

ARTIFICIAL INTELLIGENCE

III SEMESTER

S. No	Course Code	SUBJECT TITLE
1	EAI-301	Management Information's Systems
2	EAI-302	Principles of Artificial Intelligence
3	EAI-303	Data Structures
4	EAI-304	Systems Analysis and Design
5	EAI-305	Reinforcement Learning

IVSEMESTER

S. No	Course Code	SUBJECT TITLE
1	EAI-401	People Analytics
2	EAI-402	Marketing Analytics
3	EAI 403	Database Management System
4	EAI -404	Artificial Intelligence and Security
5	EAI -405	Project Work & Comprehensive Viva

MANAGEMENT INFORMATION'S SYSTEM (EA1-301)

Course objective: This course is designed to provide students with a basic understanding of how Information Systems are used in organizations for meeting strategic and operational goals. To that end, students will acquire skills using current end-user software for communication, data transformation, collaboration, and problemsolving. The course also covers software and hardware components, information structures, basic business organization and processes, information system security, and networks

UNIT–I

INTRODUCTION TO MANAGEMENT INFORMATION SYSTEMS: Nature of MIS, Scope of MIS, Objectives of MIS, Limitations of MIS, Role of MIS in Business functions and organizations Operating Elements of MIS, Information Systems Pyramid Structure Based and Management Activity Based role of MIS ,MIS Structure Based on Organizational Function, Advantages and Disadvantages

UNIT –II

CLASSIFICATION OF INFORMATION SYSTEMS: TPS: Concepts/Types/Functions/, MIS: concept as management support tool ESS: Concepts/Types/Functions/, DSS: Concepts/Types/Functions/, EIS: Concepts/Types/Functions/ Office Automation Systems: Concepts/Types/Functions /Tools of Office Automation Systems Artificial Intelligence: concepts/components/functions, Concepts/Meaning and Definition Components of Artificial Intelligence, Advantages and Disadvantages Robotics: concepts/functions Expert Systems: concepts/components/functions/ Knowledge Work Systems Concepts/Types/Functions /Activities

UNIT –III

DECISION MAKING PROCESS : TYPES AND MODELS: Concepts of Decision Making, Types of Decisions Decision Making Process, Models of Decision Making UNIT –IV-COMPUTER SYSTEMS: A TOOL FOR MIS: Functions of a computer, Computer Hardware, Computer Software Communication Technology

UNIT –V

CONCEPTS OF INFORMATION: Information: Concepts and Meaning, Data: Concepts and Meaning, Characteristics of Information Source Types: Type of Decisions and source.TELECOMMUNICATIONS AND NETWORKS: Concepts of Networking Internet/Intranet: Concepts/Roles/ Advantages/Disadvantages Types of Telecommunication Networks Problems of Networked Enterprise

Reference Books::

1. Introduction to Information Systems- James A O'brien
2. Management Information Systems- Gorden B. Davis &MargrettheH.Olson
3. Management Information Systems-Dharminder Kumar and Sangeeta Gupta
4. Management Information Systems in Knowlwdge Economy- Joseph S.J. Mahapatra
5. Fundamentals of Computers- Peter Norton

PRINCIPALES OF ARTIFICIAL INTELLIGENCE (EAI-302)

OBJECTIVES: • To understand the various characteristics of Intelligent agents • To learn about the different search strategies in AI • To learn to represent knowledge in solving AI problems • To understand the different ways of designing software agents • To know about the various applications of AI.

UNIT I INTRODUCTION - Introduction–Definition - Future of Artificial Intelligence – Characteristics of Intelligent Agents– Typical Intelligent Agents – Problem Solving Approach to Typical AI problems.

UNIT II PROBLEM SOLVING METHODS - Problem solving Methods - Search Strategies-Uninformed - Informed - Heuristics - Local Search Algorithms and Optimization Problems - Searching with Partial Observations - Constraint Satisfaction Problems – Constraint Propagation - Backtracking Search - Game Playing - Optimal Decisions in Games – Alpha - Beta Pruning - Stochastic Games

UNIT III KNOWLEDGE REPRESENTATION - First Order Predicate Logic – Prolog Programming – Unification – Forward Chaining-Backward Chaining – Resolution – Knowledge Representation - Ontological Engineering-Categories and Objects – Events - Mental Events and Mental Objects - Reasoning Systems for Categories - Reasoning with Default Information

UNIT IV SOFTWARE AGENTS - Architecture for Intelligent Agents – Agent communication – Negotiation and Bargaining – Argumentation among Agents – Trust and Reputation in Multi-agent systems.

UNIT V APPLICATIONS - AI applications – Language Models – Information Retrieval-Information Extraction – Natural Language Processing - Machine Translation – Speech Recognition – Robot – Hardware – Perception – Planning – Moving

REFERENCES:

1 S. Russell and P. Norvig,‖Artificial Intelligence: A Modern Approach‖, Prentice Hall, Third Edition, 2009.
2 I. Bratko, ―Prolog: Programming for Artificial Intelligence‖, Fourth edition, Addison-Wesley Educational Publishers Inc., 2011.:
1. M. Tim Jones, ―Artificial Intelligence: A Systems Approach(Computer Science)‖, Jones and Bartlett Publishers, Inc.; First Edition, 2008
2. Nils J. Nilsson, ―The Quest for Artificial Intelligence‖, Cambridge University Press, 2009.
3. William F. Clocksin and Christopher S. Mellish,‖ Programming in Prolog: Using the ISO Standard‖, Fifth Edition, Springer, 2003.
4. Gerhard Weiss, ―Multi Agent Systems‖, Second Edition, MIT Press, 2013.
5. David L. Poole and Alan K. Mackworth, ―Artificial Intelligence: Foundations of Computational Agents‖, Cambridge University Press, 2010.

DATA STRUCTURES (EAI-303)

OBJECTIVES: • To design, analyze and implement of basic data structures and algorithms using C. • To solve problems using linear and Non-linear data Structures. • To judge efficiency trade-offs among alternative data structure implementations or combinations.

UNIT I C POINTERS - Pointers – Arrays and Pointers - Pointers and strings - Pointer and Address Arithmetic - TwoDimensional Arrays and Pointers - Pointers to Functions - Dynamic Memory Allocation - Unions - Enumeration Types - Bit fields - Files.

UNIT II ARRAY BASED LINEAR DATA STRUCTURES - Data abstraction - Abstract Data Types (ADT) - Array ADT - Linear List ADT (Polynomials) - Stack ADT - Queue ADT - Evaluation of expressions. 31

UNIT III LINKED LIST BASED LINEAR DATA STRUCTURES - Singly Linked Lists - Linked Stacks and Queues - Polynomial ADT - Circularly Linked Lists - Doubly Linked Lists

UNIT IV NON LINEAR DATA STRUCTURES - Trees - Binary Trees - Traversals - Operations - Threaded Binary Trees - Binary Search Trees - Disjoint Sets

UNIT V SORTING - Insertion Sort – Shell Sort – Heap Sort - Merge Sort – Bucket Sort – External Sorting – Multiway Merge – Polyphase Merge – Replacement Selection

REFERENCES

1. Pradip Dey and Manas Ghosh, ―Programming in C‖, Second Edition, Oxford University Press, 2011.
2. Ellis Horowitz, Sartaj Sahni, Susan Anderson-Freed, ―Fundamentals of Data Structures in C‖, Second Edition, University Press, 2008.
3. Mark Allen Weiss, ―Data Structures and Algorithm Analysis in C‖, Second Edition, Pearson Education, 1996
4. Alfred V. Aho, John E. Hopcroft and Jeffrey D. Ullman, ―Data Structures and Algorithms‖, Pearson Education, 1983.
5. Robert Kruse, C.L.Tondo, Bruce Leung, Shashi Mogalla , ― Data Structures and Program Design in C‖, Second Edition, Pearson Education, 2007
6. Jean-Paul Tremblay and Paul G. Sorenson, ―An Introduction to Data Structures with Applications‖, Second Edition, Tata McGraw-Hill, 1991.

SYSTEM ANALYSIS AND DESIGN (EAI -304)

Course objective: This to as to introduce variety of new software used by analysts, designers to manage projects, analyze and document systems, design new systems and implement their plans. It introduces also a recent coverage of UML, wireless technologies and ERP; web based systems for e-commerce and expanded coverage on RAD and GUI design. Course Components • System Analysis Fundamentals • Information requirements analysis • The analysis process • The essentials of design • Software engineering and implementation

Unit 1: Introduction to System: Introduction: Definition of a System, Types of Systems, Delineating Systems, Products, and Tools, Precedented versus Unprecedented Systems: Analytical Representation of a System: Systems that require engineering: Data and Information: Types of information: operational, tactical, strategic and statutory – why do we need information systems – management structure – requirements of information at different levels of management – functional allocation of management – requirements of information for various functions – qualities of information-small case studies.

Unit 2: System Attributes, Properties, and Characteristics: Introduction: Overview of Attributes, Properties, Characteristics and elements of system: Every System has its own unique identity: Understanding System Performance: System Characteristics: The System's State of Equilibrium: The Architecture of Systems: Introduction: Introducing the System Architecture Construct: Introduction of the System Elements: Understanding System Element Entity Relationships: Guiding Principles- Systems analysis and design in the era of electronic commerce: B2B, B2C and C2C; e-commerce – advantages and disadvantages of e-commerce. Ecommerce system architecture – physical networks, logical network, World Wide Web, web-services – html, XML.

Unit 3: The Systems Development Life Cycle: Feasibility: Analysis: Planning and Design: Implementation: Testing, Maintenance. Requirements determination, requirements specifications, Feasibility analysis, final specifications, hardware and software study, Role of systems analyst – attributes of a systems analyst – tools used in system analysis- System Design: System design, system implementation, system evaluation, system modification, Structured Design, Input design, and Output design, Form Design. Object oriented systems modelling: What are objects? – Why objects? – Objects and their properties – classes – inheritance – polymorphism – how to identify objects in an application – how to model systems using objects – some cases of object oriented system modeling

Unit 4: Systems Development Methodologies: Rapid Application Development, Newer (current) methodologies, selecting the Appropriate Development Methodology-

System Analysis-I: Introduction to System analysis, Problem Definition, Information requirements, Information gathering tools, Tools of structured Analysis – Data Flow Diagrams, Data Dictionary, Decision Tree, Decision tables and structured English. Project Team Skills and Roles: Skills and Roles of a Project Team, Business Analyst, Systems Analyst, Infrastructure Analyst, Change Management Analyst, Project Manager

Unit5: System Analysis-II: File Organization, Sequential Indexed Sequential, Chaining and Inverted list organization. System Testing: Test Plan AND test data, types of system test. System Implementation: Implementation Plan, activity network for conversion, combating resistance to change. Hardware/Software Selection: Procedure for selection, Major phases in selection, Make v/s buy decision, Criteria for software selection.-: Data oriented systems design: Entity relationship model – E-R diagrams – relationships cardinality and participation – normalizing relations – various normal forms and their need – some examples of relational data base design.

Reference Books:

1. KENNETH E KENDALL – JULIE E KENDALL – System Analysis and Design Fifth Edition, Prentice Hall of India, New Delhi, 2002.
2. JAMES A. SENN, Analysis and design of Information System McGraw Hill International Edition.
3. R.G. MURCLICK, Misconcepts and Design – Prentice Hall of India, New Delhi.
4. AWARD, System Analysis and Design – Galgotia Publicaiton.
5. C.S. PARKEN, Management Information System – McGraw Hill Book Co.
6. V.RAJARAMAN, Analysis and Design of Information Systems – Prentice Hall of India (P) Ltd., New Delhi, 2002.
7. MARVN GURE and J. STUBBE Elements of System Analysis Galgotia Book Source Publication.
8. IGOR HAWRYSZKIEWYCZ – Systems Analysis and Design – Fourth Edition – Prentice Hall of India, New Delhi.

REINFORCEMENT LEARNING (EAI-305)

Objectives:

• Learn how to define RL tasks and the core principals behind the RL, including policies, value functions, deriving Bellman equations, Implement in code common algorithms following code standards and libraries used in RL , Understand and work with tabular methods to solve classical control problems, Understand and work with approximate solutions (deep Q network based algorithms Learn the policy gradient methods from vanilla to more complex cases. Explore imitation learning tasks and solutions. Recognize current advanced techniques and applications in RL

Unit 1: Introduction and Basics of RL: Defining RL Framework and Markov Decision Process. Polices, Value Functions and Bellman Equations. Exploration vs. Exploitation. Code Standards and Libraries used in RL (Python/Keras/Tensorflow)

Unit-2: Tabular methods and Q-networks: Planning through the use of Dynamic Programming and Monte Carlo. Temporal-Difference learning methods (TD (0), SARSA, Q-Learning). Deep Q-networks (DQN, DDQN, Dueling DQN, Prioritized Experience Replay)

Unit-3: Policy optimization. Introduction to policy-based methods. Vanilla Policy Gradient. REINFORCE algorithm and stochastic policy search. Actor-critic methods (A2C, A3C). Advanced policy gradient (PPO, TRPO, DDPG)

Unit-4: Model based RL. Model-based RL approach Recent Advances and Applications. Meta-learning. Multi-Agent Reinforcement Learning. Partially Observable Markov Decision Process.

Unit-5: Ethics in RL: Applying RL for real-world problems. **Policy Gradients:** Getting started with policy gradient methods, Log-derivative trick, Naive REINFORCE algorithm. Reducing variance in policy gradient estimates.

Reference Books:

• Richard S. Sutton and Andrew G. Barto, "Reinforcement learning: An introduction", Second Edition, MIT Press, 2019

• Li, Yuxi. "Deep reinforcement learning." arXiv preprint arXiv:1810.06339 (2018).

• Wiering, Marco, and Martijn Van Otterlo. "Reinforcement learning." Adaptation, learning, and optimization 12 (2012): 3..

• Russell, Stuart J., and Peter Norvig. "Artificial intelligence: a modern approach."Pearson Education Limited, 2016.

• Goodfellow, Ian, Yoshua Bengio, and Aaron Courville. "Deep learning." MIT press, 2016.

• David Silver's course on Reinforcement Learning (link)

PEOPLE ANALYTICS (EAI-401)

Course objective: This course, you'll understand how and when hard data is used to make soft-skill decisions about hiring and talent development, so that you can position yourself as a strategic partner in your company's talent management decisions. This course is intended to introduced you to Organizations flourish when the people who work in them flourish. Analytics can help make both happen. This course in People Analytics is designed to help you flourish in your career, too.

Unit -1

Introduction to People Analytics, and Performance Evaluation-Performance Evaluation. Performance evaluation plays an influential role in our work lives, whether it is used to reward or punish and/or to gather feedback. Yet its fundamental challenge is that the measures we used to evaluate performance are imperfect: we can't infer how hard or smart an employee is working based solely on outcomes.

Unit 2

Staffing -the staffing cycle: hiring, internal mobility and career development, and attrition. You'll explore different analytic approaches to predicting performance for hiring and for optimizing internal mobility, to understanding and reducing turnover, and to predicting attrition. You'll also learn the critical skill of understanding causality so that you can avoid using data incorrectly

Unit -3

Collaboration-collaboration between employees inside an organization so they can work together more successfully. You'll explore how data is used to describe, map, and evaluate collaboration networks, as well as how to intervene in collaboration networks to improve collaboration using examples from real-world companies. By the end of this module, you'll know how to deploy the tools and techniques of organizational network analysis to understand and improve collaboration patterns inside your organization to make your organization, and the people working within in it, more productive, effective, and successful.

Unit -4

Talent Management and Future Directions-talent assessment and development to maximize employee ability. You'll learn how to use data to move from performance evaluation to a more deeper analysis of employee evaluation so that you may be able to improve the both the effectiveness and the equitability of the promotion process at your firm. By the end of this module, you'll will understand the four major challenges of talent analytics: context, interdependence, self-fulfilling prophecies, and reverse causality, the challenges of working with algorithms, and some practical tips for incorporating data sensitively, fairly, and effectively into your own talent assessment and development processes to make your employees and your organization more successful

Unit 5

Challenges- the challenges of working with algorithms, and some practical tips for incorporating data sensitively, fairly, and effectively into your own talent assessment and development processes to make your employees and your organization more successful. In the course conclusion, you'll also learn the current challenges and future directions of the field of people analytics, so that you may begin putting employee data

Reference Books:

1. Michael Mineli, Michele Chambers, Ambiga Dhiraj, "Big Data, Big Analytics:
2. Emerging Business Intelligence and Analytic Trends for Today's Businesses", Wiley Publications, 2013.
3. Anderson, Sweeney and Williams ―Statistic Learning, 2021

MARKETING ANALYTICS (EAI-402)

Objective of course: The field of marketing analytics is witnessing worldwide growth. Demand for knowledgeable managers with ability to use big data analysis to make effective decisions is growing rapidly

Unit- 1

Customer Analytics - introduces statistical modeling and coding techniques that help individuals manage the customer relationship from acquisition to development to retention. Special attention is directed to models that help firms appropriately value customers and target them with the right offer at the right time.

Unit-2 Analytics for Marketing Decisions -identifies analytic models that can be applied to real, large-scale databases to improve and automate firm-level marketing decisions. In particular, analytics are used to improve decisions around product design, pricing, promotion/advertising, and digital and mobile channel management.

Unit -3 Digital Marketing Analytics- covers search and display advertising, email marketing, attribution models, social media strategies, and two-sided platforms. The course takes a quantitative and data-driven approach for analyzing and improving digital marketing strategies.

Unit -4 Strategic Pricing -blends marketing strategy, micro-economic theory, and data analytics to formulate actionable pricing strategies. The course combines cases and data analytics assignments to teach students how to design and execute pricing decisions and co-ordinate these decisions with other marketing decisions

Unit-5 McKinsey & Company forecast a shortage- analytics skills and business knowledge-practices in analytics such as Amazon, Microsoft, Expedia, and Starbucks.

Reference Books:

1. Stephan Sorger, ―MarkStrategicng ModelsAnalyticsand Metri 2013.
2. Mark Jeffery, ―Data Driven Marketing:should The know‖, Wiley, 2013.
3. Paul W. Farris, Neil T. Bendle, Phillip E. The Definitive Guide to Measuring Marketin

DATABASE MANAGEMENT SYSTEMS (EAT-403)

Course Objective : • As the end user applications has changed significantly in last few decades, there is a challenge to store the large amount of information, retrieve and manage this information in timely manner. This can be achieving today by making use of services of Database Management System (DBMS).

Unit: 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.

Unit: 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.

Unit: III

Integrity constraints – Domain constraints – referential integrity – assertions – triggers – functional dependencies – relational database design – decomposition – normalization using functional, multi valued, Join dependencies – Domain – Key Normal form – alternative approaches.

Unit: 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.

Unit: 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.

Text Book

1. Henry F. Korth and Abraham Silberschatz, S. Sudarshan, Database System Concepts, 3rd edition, McGraw-Hill, 1997.

Reference Books

1. Bipin C. Desai, An Introduction to Database Systems, West Publications, 6th edition, 1995.
2. C.J.Date, An introduction to database systems, Addison Wesley publications, 6th edition 1995.
3. Gary W.Hansen and James V.Hansen, "Database Management and Design" Prentice Hall, 1996.
4. Jeffrey A. Hoffer, Mary B. Prescott, Fred R. Mcfadden, "Modern Database Management", Prentice Hall, 6th edition, 2002, 7th edition.
5. Ronald J.Norman, 'Object Oriented Systems Analysis and Design', Prentice Hall 1996.

ARTIFICIAL INTELLIGENCE AND SECURITY (EAI- 404)

Course Objectives: To train the students to understand different types of AI agents, various AI search algorithms, fundamentals of knowledge representation, building of simple knowledge-based systems and to apply knowledge representation, reasoning. Study of Markov Models enable the student ready to step into applied AI.

UNIT - I Introduction: AI problems, Agents and Environments, Structure of Agents, Problem Solving Agents Basic Search Strategies: Problem Spaces, Uninformed Search (Breadth-First, Depth-First Search, Depth-first with Iterative Deepening), Heuristic Search (Hill Climbing, Generic Best-First, A*), Constraint Satisfaction (Backtracking, Local Search)

UNIT - II Advanced Search: Constructing Search Trees, Stochastic Search, A* Search Implementation, Minimax Search, Alpha-Beta Pruning Basic Knowledge Representation and Reasoning: Propositional Logic, First-Order Logic, Forward Chaining and Backward Chaining, Introduction to Probabilistic Reasoning, Bayes Theorem

UNIT - III Advanced Knowledge Representation and Reasoning: Knowledge Representation Issues, Nonmonotonic Reasoning, Other Knowledge Representation Schemes Reasoning Under Uncertainty: Basic probability, Acting Under Uncertainty, Bayes' Rule, Representing Knowledge in an Uncertain Domain, Bayesian Networks

UNIT - IV Learning: What Is Learning? Rote Learning, Learning by Taking Advice, Learning in Problem Solving, Learning from Examples, Winston's Learning Program, Decision Trees. Expert Systems: Representing and Using Domain Knowledge, Shell, Explanation, Knowledge Acquisition.

Unit –V Security: Organizational Implications: Introduction cost of cybercrimes and IPR issues, web threats for organizations, security and privacy implications, social media marketing: security risks and perils for organizations, social computing and the associated challenges for organizations. Cybercrime and Cyber terrorism: Introduction, intellectual property in the cyberspace, the ethical dimension of cybercrimes the psychology, mindset and skills of hackers and other cyber criminals

REFERENCE BOOKS:

1. Russell, S. and Norvig, P, Artificial Intelligence: A Modern Approach, Third Edition, PrenticeHall, 2010.
2. Artificial Intelligence, Elaine Rich, Kevin Knight, Shivasankar B. Nair, The McGraw Hill publications, Third Edition, 2009.
3. George F. Luger, Artificial Intelligence: Structures and Strategies for Complex Problem Solving, Pearson Education, 6th ed., 2009.