

NOORUL ISLAM CENTRE FOR HIGHER EDUCATION

(Deemed to be University Under Section 3 of the UGC Act, 1956)
Kumaracoil, Thuckalay

DEPARTMENT OF MANAGEMENT STUDIES



MASTER OF BUSINESS ADMINISTRATION **CURRICULUM AND SYLLABI**

REGULATION 2021

NOORUL ISLAM CENTRE FOR HIGHER EDUCATION, Kumaracoil

**Regulation: 2021
Curriculum and Syllabi
MBA Programme**

DEPARTMENT OF MANAGEMENT STUDIES

Master of Business Administration (MBA)

Vision of the University

To be recognized by the Government and society at large as an institution able to deliver excellence with relevance in the field of higher education and research focusing on the needs of the nation in tune with the technological revolution to cope with the knowledge explosion and global competence.

Mission of the University

To develop the institution as a Centre of Excellence, keeping pace with the advances in the field, so as to provide quality higher education to the students and instill in them high standards of discipline and ethics so that they become enlightened individuals in the service of humanity and to carry out focused research in the frontier areas of science and technology.

Faculty of Management Studies

Department of Management Studies

Vision of the Department

Vision Statement: To build NICHE–FMS as a preferred Institution for innovative learning, that would mould potential managers with global mindset, excellent leadership and entrepreneurial spirit

Mission of the Department

M1: NICHE-FMS aims to provide quality management education through imparting high quality teaching, research and practical based training programs.

M2: NICHE-FMS strives to promote social and business entrepreneurship with the spirit of innovation and enquiry in close interface with industry.

M3: NICHE-FMS aims to cultivate management professionals with global mind set have high professional competence and outstanding leadership qualities

DESCRIPTION OF THE PROGRAMME

The Master of Business Administration (MBA) program stands as a pinnacle of graduate-level education, meticulously crafted to equip students with a comprehensive understanding of business management principles and practices. Spanning over two academic years, this program offers a rigorous curriculum that delves into various facets of business administration, including finance, marketing, operations, human resources, entrepreneurship, shipping and logistics, healthcare, aviation management, and artificial intelligence, culminating in strategic management.

At the core of the MBA curriculum lie foundational courses meticulously designed to instill a robust understanding of business fundamentals. These courses encompass disciplines such as accounting, economics, organizational behavior, and business ethics, serving as the bedrock upon which students build their expertise. Moreover, the program facilitates specialization through a diverse array of elective courses and concentrations, enabling students to tailor their education to align with their unique career aspirations and interests.

Integral to the MBA experience are immersive experiential learning opportunities that foster the application of theoretical knowledge in real-world scenarios. From engaging in dynamic case studies and collaborative group projects to participating in interactive simulations, internships, and consulting projects, students are continually immersed in hands-on experiences that cultivate practical skills and provide invaluable insights into the complexities of contemporary business landscapes.

Moreover, the program places a profound emphasis on leadership development, communication proficiency, critical thinking, and decision-making acumen, recognizing these as quintessential attributes for aspiring business leaders. Through a meticulously curated curriculum and engaging pedagogical approaches, students are nurtured to evolve into astute leaders primed to navigate the multifaceted challenges of the corporate realm with aplomb.

One of the hallmarks of the MBA program is its extensive networking ecosystem, facilitating meaningful interactions with peers, alumni, and industry stalwarts. These networking avenues serve as catalysts for forging valuable connections and harnessing invaluable resources for career advancement, thereby enriching the overall learning journey.

Upon successful completion of the MBA program, graduates emerge poised to embark on diverse career trajectories across an array of industries and sectors. Armed with a globally recognized and esteemed degree, they are empowered to pursue coveted roles in corporate management, consulting, finance, entrepreneurship, marketing, and beyond. The MBA credential

not only confers a competitive edge in the job market but also unlocks avenues for continual professional growth and advancement, underscoring its enduring relevance and transformative potential in shaping the future leaders of tomorrow.

Programme Educational Objectives - PEO	
PEO-01	Graduates able to meet global standards and competitive environment
PEO-02	Graduates will be equipped with qualitative and quantitative skills to analyze, design, and create business opportunities in the field of entrepreneurship
PEO-03	Graduates will be excellence through the development of managerial competency
PEO-04	Graduates will be ethically sensitive leaders.

Graduate Attributes-GA	
GA-1	Strategic Leadership and Management Develop strategic thinking and leadership skills to lead organizations through complex business environments, driving innovation, growth, and sustainable competitive advantage
GA-2	Global Business Acumen Cultivate a deep understanding of global markets, international trade dynamics, and cross-cultural management to successfully navigate and lead in a globally connected economy
GA-3	Entrepreneurship and Innovation Foster an entrepreneurial mindset, identifying and leveraging business opportunities to create innovative solutions, drive venture creation, and generate economic and social value
GA-4	Ethical and Responsible Leadership Exhibit strong ethical judgment and corporate social responsibility, leading with integrity and ensuring that business decisions promote fairness, transparency, and sustainability in the broader community
GA-5	Data-Driven Decision Making Master advanced data analytics, business intelligence tools, and decision-making models to analyze complex business problems and deliver informed, evidence-based strategies that enhance business performance
GA-6	Financial Acumen and Risk Management Demonstrate expertise in financial management, risk assessment, and resource allocation, making strategic financial decisions that align with organizational goals while mitigating risk
GA-7	Innovation in Digital Transformation Lead digital transformation initiatives by harnessing emerging technologies, optimizing business processes, and developing new digital business models that improve operational efficiency and customer engagement
GA-8	Sustainable Business Practices Promote and implement sustainable business models that balance profit with environmental stewardship and social responsibility, contributing to the long-term viability of businesses and the planet

GA-9	Effective Communication and Negotiation Exhibit exceptional communication skills, both oral and written, with the ability to persuade, negotiate, and collaborate effectively across diverse teams and stakeholders
GA-10	Adaptive Leadership and Continuous Learning Demonstrate adaptability in managing change and uncertainty in a fast-evolving business landscape, while committing to continuous learning and professional development to stay ahead of emerging trends

PROGRAMME OUTCOME – POS

Programme Outcome - POs	
PO-A	An ability to identify, analyze, formulate, and use the appropriate managerial skills for obtaining solutions.
PO-B	An ability to function effectively on multi-disciplinary teams.
PO-C	Apply conceptual business foundations to solve practical decision-making problems.
PO-D	Recognize and address ethical issues and values and apply them in organizational settings.
PO-E	Integrate tools and concepts from multiple functional areas (i.e., finance, marketing, operations, logistics, etc.) to solve business problems
PO-F	Identify business opportunities, design and implement innovations in the workspace.
PO-G	An ability to communicate effectively, both in writing and orally.
PO-H	Knowledge of contemporary issues.

Mapping of Graduate Attributes and Programme Educational Objectives(PEO)

GAs PEOs	G A- 01	GA- 02	GA- 03	GA- 04	GA- 05	GA- 06	GA- 07	GA- 08	GA- 09	GA- 10
PEO-01	H	H	A	A	H	H	A	A	A	H
PEO-02	A	A	H	A	A	A	H	A	A	A
PEO-03	H	A	A	A	H	H	A	A	A	H
PEO-04	A	A	A	H	A	A	A	H	A	A

H- Highly Associated

A- Associated

Not – Not Associated

Mapping of Graduate Attributes and Programme Outcomes (PO)

GAs PEOs	G A- 01	GA- 02	GA- 03	GA- 04	GA- 05	GA- 06	GA- 07	GA- 08	GA- 09	GA- 10
PO-A	H	H	A	A	H	H	A	A	A	H
PO-B	A	A	A	A	A	A	A	A	A	A
PO-C	H	A	A	A	H	H	A	A	A	H
PO-D	A	A	A	H	A	A	A	A	A	A
PO-E	A	A	H	A	A	H	A	A	A	A
PO-F	A	A	H	A	A	A	A	A	A	A
PO-G	A	A	A	A	A	A	A	A	H	A
PO-H	A	A	A	A	A	A	A	A	A	A

H- Highly Associated

A- Associated

Not – Not Associated

Mapping of Programme Educational Objective (PEOs) and Programme Outcomes (POs)

PEO PO	PEO-01	PEO-02	PEO-03	PEO-04
PO-A	H	A	H	A
PO-B	A	H	A	A
PO-C	A	A	H	A
PO-D	A	A	A	H
PO-E	A	A	A	A
PO-F	H	H	A	A
PO-G	A	A	A	H
PO-H	H	A	H	H

H- Highly Associated

A- Associated

Not – Not Associated

Duration of the programme: 2 Years/ IV Semesters

Total credit: 94

SEMESTER – I

SL.NO	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
1.	MS3501	Management Concepts	3	0	0	3
2.	MS3502	Economics for Management	3	0	0	3
3.	MS3503	Organizational Behaviour	3	0	0	3
4.	MS3504	Accounting for Managers	3	0	0	3
5.	MS3505	Business Law	3	0	0	3
6.	MS3506	Executive Communication	3	0	0	3
7.	MS3507	Entrepreneurship, Creativity & Innovation	3	0	0	3
8.	MA3506	Quantitative Techniques	3	1	0	4
9.	MS35T1	Out Bound Training	0	0	0	0
TOTAL			24	1	0	25

SEMESTER – II

SL.NO	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
1.	MS3508	Marketing Management	3	0	0	3
2.	MS3509	Financial Management	3	0	0	3
3.	MS3510	Human Resource Management	3	0	0	3
4.	MS3511	Production and Operations Management	3	0	0	3
5.	MS3512	Research Methodology	3	0	0	3
6.	MS3513	Business Analytics	3	0	0	3
7.	MA3507	Operations Research for Management	3	1	0	4
PRACTICAL						
8.	MS3571	Business Modeling and Analytics Lab	1	0	4	3
TOTAL			22	1	4	25

SEMESTER III

Sl.No.	Code No	Course Title	L	T	P	C
1	MS3514	International Business Environment	3	0	0	3
2	MS3515	Strategic Management	3	0	0	3
3	xxxE1	Elective 1	3	0	0	3
4	xxxE2	Elective 2	3	0	0	3
5	XxxE3	Elective 3	3	0	0	3
6	XxxE4	Elective 4	3	0	0	3
7	XxxE5	Elective 5	3	0	0	3
8	XxxE6	Elective 6	3	0	0	3
9	MS35P1	Summer Placement Project Work (4 weeks)	0	0	6	3
	TOTAL		24	0	8	27

SEMESTER IV

Sl.No.	Code No	CourseTitle	L	T	P	C
1.	MS3516	Corporate Sustainability Management	3	0	0	3
2.	XxxE7	Elective – 7	3	0	0	3
3	XxxE8	Elective – 8	3	0	0	3
4.	MS35P5	Final Internship Project Work (8 Weeks)	0	0	16	8
	TOTAL		9	0	16	17

SEMESTER – I

SL.NO	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
1.	MS3501	Management Concepts	3	0	0	3
2.	MS3502	Economics for Management	3	0	0	3
3.	MS3503	Organizational Behaviour	3	0	0	3
4.	MS3504	Accounting for Managers	3	0	0	3
5.	MS3505	Business Law	3	0	0	3
6.	MS3506	Executive Communication	3	0	0	3
7.	MS3507	Entrepreneurship, Creativity & Innovation	3	0	0	3
8.	MA3506	Quantitative Techniques	3	1	0	4
9.	MS35T1	Out Bound Training	0	0	0	0
TOTAL			24	1	0	25

MS3501	MANAGEMENT CONCEPTS	L	T	P	C
		3	0	0	3

OBJECTIVES:

1. Provide a comprehensive understanding of management, its definition, nature, and evolution, including contributions from key figures.
2. Enable students to grasp planning's nature, process, types, and strategies, including MBO, for effective decision-making and objective setting.
3. Help students understand organizational structure, groups, authority, and delegation for efficient designs.
4. Equip students with skills for staffing, including selection and performance appraisal, and directing functions like communication and culture management.
5. Provide insights into controlling processes, techniques, and the management of productivity, costs, and quality, emphasizing operational planning..

Course Outcome – Cos		Cognitive Skill
CO-01	Understand key management concepts, historical perspectives, and functions of management, including contributions from Taylor, Fayol, Drucker, and Follet.	U,R
CO-02	Master planning principles, including understanding, executing, and differentiating between types of plans and strategies, and applying MBO for strategic decision-making.	A,U
CO-03	Grasp organizational design concepts, analyze structures, authority relationships, and understand the impact of centralization, decentralization, and delegation on effectiveness.	AN
CO-04	Acquire skills for effective staffing processes, including selection, orientation, and performance appraisal, while also demonstrating proficiency in directing functions like communication and culture fostering.	R,An,A
CO-05	Demonstrate competence in controlling processes, implementing control techniques, and managing productivity, costs, and quality to achieve organizational goals.	E,S

R- Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S- Synthesis

Mapping of Course Outcome with Program Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	M	S	L	S	S	S	S
CO-02	S	S	L	L	S	M	S	M
CO-03	S	S	S	S	S	S	M	S
CO-04	M	S	S	S	S	S	S	S
CO-05	M	M	M	M	M	M	M	M

S-Strong, M-Medium, L-Low, N-Not relevant

UNIT I INTRODUCTION**9**

Management: Definition – Nature and Scope – Levels of Management - Evolution of Management Thought - Contribution of F.W. Taylor – Scientific Management – Contribution by Fayol – Peter F. Drucker – Mary Follet - Managerial functions.

UNIT II PLANNING**9**

Nature and purpose of planning- Planning process- Types of plans- Objectives- Managing by Objective (MBO) strategies- Types of strategies – Policies – Decision Making- Types of decision-Decision making process- Rational decision making process- Decision making under different conditions.

UNIT III ORGANISING**9**

Nature and purpose of organizing- Organization structure- Formal and informal groups/organization- Line and staff authority- Departmentation- Span of control- Centralization and decentralization- Delegation of authority-

UNIT IV STAFFING&DIRECTING**9**

Staffing- Steps Involved in Staffing Process -Employee Selection Process - Orientation- Career development- Career stages - Training- Performance appraisal- Directing - Managing people- Communication- Hurdles to effective communication- Organization culture-Elements and types of culture- Managing cultural diversity

UNIT V CONTROLLING**9**

Process of controlling- Types of control- Budgetary and non-budgetary control techniques- Managing productivity- Cost control- Purchase control- Maintenance control- Quality control- Planning operations.

TOTAL: 45 HOURS**BOOKS FOR REFERENCE:**

1. 'Principles and practices of Management' - KiranNerkar, Chopde, Dreamtech Press.
2. 'Essentials of Management' – Koontz, Tata McGraw-Hill.
3. 'Fundamentals of Management' – Stephen P. Robbins and David A. Decenzo, Pearson Education.
4. 'Management Concepts and Strategies' – J.S. Chandan, Vikas Publishing House, New Delhi.
5. 'Principles and Practice of Management' – L.M. Prasad, Sulthan Chand, New Delhi.
6. 'Business Ethics and Corporate Governance, - Ghosh. B.N., Tata McGraw Hill.

MS3502	ECONOMICS FOR MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES:

1. Comprehend the definition, scope, and importance of managerial economics, including its fundamental principles, and the role and responsibilities of economists in managerial decision-making.
2. Analyze demand functions, elasticity, and determinants of individual and market demand, and understand utility analysis and demand forecasting techniques.
3. Explore pricing and output decisions in different market structures such as perfect competition, monopoly, monopolistic competition, and oligopoly, and understand pricing policies and strategies.
4. Analyze macroeconomic indicators including national income, inflation, and money supply, and understand their causes, effects, and determinants.
5. Understand the principles of international trade, including absolute and comparative advantage, free trade versus protectionism, and the implications of economic integration, customs unions, and monetary unions on international trade patterns.

Course Outcome – Cos		Cognitive Skill
CO-01	Develop a comprehensive understanding of managerial economics, encompassing its definition, scope, and significance, along with the fundamental principles guiding managerial decision-making, and the roles and responsibilities of economists in this context	U,R
CO-02	Acquire analytical skills to examine demand functions, elasticity, and determinants of individual and market demand, while mastering utility analysis and demand forecasting techniques to make informed business decisions.	AN

CO-03	Gain insight into pricing and output decisions across various market structures such as perfect competition, monopoly, monopolistic competition, and oligopoly, and formulate effective pricing policies and strategies tailored to each market scenario.	R,U
CO-04	Analyze macroeconomic indicators such as national income, inflation, and money supply, understanding their underlying causes, effects, and determinants, and their implications for business decision-making and economic stability.	AN
CO-05	Develop a comprehensive understanding of international trade principles, including absolute and comparative advantage, free trade versus protectionism, and the implications of economic integration, customs unions, and monetary unions on international trade patterns and global economic dynamics.	U,R

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	L	S	S	M	L	M	M	S
CO-02	S	S	S	S	S	L	M	S
CO-03	S	S	S	S	S	S	S	S
CO-04	L	S	S	S	M	S	M	L
CO-05	M	S	S	L	S	S	S	S

S-Strong, M-Medium, L-Low, N-Not relevant

UNIT I INTRODUCTION

9

Definition, Scope of Managerial Economics -Importance of Managerial Economics – Fundamental principles - Role and Responsibilities of Economist –The nature of managerial decision making-types of business decisions-Managerial decision-making process- Factors of Production – Division of Labour.

UNIT II DEMAND THEORY AND ANALYSIS

9

Demand Function – Individual and Market Demand – Elasticity of demand - Determinant of Aggregate Demand – Determinants of aggregate supply -Utility and Demand – Cardinal and Ordinal Utility Analysis– Indifference Curves and Maps –Demand Forecasting

UNIT III PRICING AND MARKET STRUCTURE

9

Price and Output Decisions in Different Market – Perfect Competition – Monopoly – Monopolistic Competition – Price Discrimination – Pricing Policy - Oligopoly – Cournots Model of Duopoly – Kinked Demand Curve.

UNIT IV MACRO ECONOMIC ANALYSIS

9

National Income – GDP – NDP – Money Supply- Money demand, - Money market equilibrium– Inflation – Nature and Causes of Inflation– Types of Inflation — Deflation – Fluctuation in Foreign Exchange rate – Determinants of Foreign exchange rates – Forex market.

UNIT V INTERNATIONAL TRADE

9

Principles of absolute and comparative advantage – Opportunity cost concept allied to trade – Argument for and against Free Trade – Motives for Protection – Types of Protection and their effects – Economic Integration – Free Trade Area – Customs Union – Economic union – Monetary union – Terms of Trade – Components of the balance of payment.

TOTAL: 45 HOURS

One case study to be discussed – per unit – in the class.

BOOKS FOR REFERENCE:

1. ‘Managerial Economics’- Dr. H. L. Ahuja, S. Chand & company limited.
2. ‘Managerial Economics’ – D.N. Dwivedi, Vikas Publishing House Private Limited, New Delhi, 2012
3. ‘Managerial Economics’ – Dean Joel, 2009
4. ‘Managerial Economics’ - Varshney R.L. & Mageswari, P.L. Mehta, Sultan Chand, 2012
5. ‘Economics’ – Paul A. Samuelson, Mc Graw Hill, 2011
6. ‘Managerial Economics’ – Peterson & Lewis, PH1.

MS3503	ORGANIZATIONAL BEHAVIOUR	L	T	P	C
		3	0	0	3

OBJECTIVES:

1. Grasp the essence of management, understanding its significance, functions, roles, and essential skills for effective organizational operation.
2. Delve into the intricacies of individual behavior, including attitudes, personality traits, perception mechanisms, learning processes, and motivation theories within organizational contexts.
3. Investigate the dynamics of formal and informal groups, decision-making mechanisms, conflict resolution strategies, and the importance of fostering employee participation and team cohesion.
4. Gain insights into various leadership theories, power dynamics, and effective communication strategies, addressing both interpersonal interactions and organizational communication challenges
5. Explore organizational dynamics, including culture, change management strategies, overcoming resistance to change, fostering creativity and innovation, and promoting organizational development to enhance overall efficiency and effectiveness.

Course Outcome – Cos		Cognitive Skill
CO-01	Achieve a deep understanding of management principles, encompassing significance, functions, roles, and essential skills vital for effective organizational management.	U,R

CO-02	Develop the capability to analyze individual behavior within organizational settings, covering attitudes, personality traits, perception, learning processes, and motivation theories, enhancing comprehension of human dynamics in workplaces.	AN,R
CO-03	Acquire skills to explore the dynamics of formal and informal groups, comprehend decision-making processes, apply conflict resolution strategies, and recognize the importance of fostering employee participation and team cohesion for organizational success	An,A,
CO-04	Demonstrate proficiency in various leadership theories, understand power dynamics, and apply effective communication strategies to navigate interpersonal interactions and address organizational communication challenges effectively	E,A
CO-05	Gain understanding into organizational culture, change management strategies, methods to overcome resistance to change, fostering creativity and innovation, and promoting organizational development, thereby improving overall efficiency and effectiveness in organizational environments	E,A,S

R- Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S- Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	M	L	M	S	S
CO-02	S	S	S	S	S	L	M	S
CO-03	S	S	S	S	S	S	S	S
CO-04	S	S	S	S	S	S	M	L
CO-05	M	S	S	L	S	S	S	S

S-Strong, M-Medium,L-Low,N-Not relevant

UNIT I INTRODUCTION

9

Definition, need and importance – Management Functions – Roles - Skills – Fundamental Concepts – Hawthorne Experiments and their Significance in Industry – Models of Organizational Behaviour – Disciplines - Organizational Behaviour Process

UNIT II INDIVIDUAL BEHAVIOUR

9

Foundations of Individual Behaviour – Attitudes – Components - Personality – Personality Determinants – Personality Theories - Perception – Learning – Learning Theories - Motivation – Motivational Theories.

UNIT III GROUP BEHAVIOUR

9

Organizational Structure and theories – Decision process – Groups in Organization – Formal Vs Informal Groups – Group Dynamics – Employee Participation – Transactional Analysis – Team

Building – Conflict - Organizational Conflict – Management of Conflict – Negotiation – Importance- Negotiation Process - Common Negotiation Mistakes - Tools of Powerful Negotiations.

UNIT IV LEADERSHIP AND COMMUNICATION

9

Power and authority Sources of Power. Leadership – Definition – Importance – Leadership Theories – Communication – Functions – Communication process - Interpersonal Communication - Organizational Communication – Barriers Effective Organizational Communication.

UNIT V ORGANIZATIONAL DYNAMICS

9

Organizational Culture and Climate – Organizational Change – Resistance to Change – Change Management - Creativity and Innovation - Organizational Development - Organizational Efficiency and Effectiveness.

TOTAL: 45 HOURS

One case study to be discussed – per unit – in the class.

BOOKS FOR REFERENCE:

1. ‘Organizational Behaviour’ – Stephen P. Robins, PHI, 9th Edition, 2011.
2. ‘Organizational Behaviour’ – Fred Luthans, Mcgraw Hill Book co, 2009.
3. ‘Organizational Behaviour’ – New Storm and Davis, Mcgraw Hill Book co., 2012
4. ‘Organizational Behaviour’ – Hellriegel, Slocum and woodman, Thompson Learning, 9th Edition, 2011
5. ‘Organizational Behaviour’ – Uma Seakaran, Tata Mcgraw Hill, 2nd Edition, 2008
6. ‘Organizational Behaviour’ – Khanga S.S, S. Chand & Co Ltd., 2011
7. ‘Management and Organizational Behaviour’ – Subba Rao. P, Himalaya Publishing House, 2006

MS3504	ACCOUNTING FOR MANAGERS	L	T	P	C
		3	0	0	3

OBJECTIVES:

1. Understand the fundamental concepts, conventions, and principles of accounting applicable to managerial decision-making.
2. Develop practical knowledge and skills in preparing, analyzing, and interpreting financial statements of organizations.
3. Apply cost accounting techniques to determine product costs, analyze cost behavior, and support managerial decision-making.
4. Utilize management accounting tools, such as ratio analysis, fund flow analysis, cash flow analysis, and budgetary control, for effective planning and control.
5. Evaluate and interpret financial and managerial accounting information to support strategic decision-making and organizational performance.

	Course Outcome/Cognitive Skill	Cognitive Skill
CO-01	Apply accounting concepts, conventions, and principles to analyze and	U,R,A
CO-02	Prepare and interpret financial statements, including income statements, balance sheets, and cash flow statements. record financial transactions accurately.	U,A
CO-03	Analyze and evaluate the costs associated with producing goods or providing services using cost accounting techniques.	U, An

CO-04	Utilize management accounting tools and techniques to analyze financial statements, evaluate performance, and make informed business decisions	A,E
CO-05	Apply budgeting techniques and use variance analysis to monitor and control organizational performance	A, E,S

R- Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S- Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	S	L	M	S	M
CO-02	S	S	S	M	S	L	M	S
CO-03	M	S	S	L	S	M	S	S
CO-04	M	S	S	S	S	S	M	L
CO-05	M	S	M	S	S	S	S	S

S-Strong, M-Medium,L-Low,N-Not relevant

UNIT I INTRODUCTION

9

Introduction toAccounting – Meaning, definition – Basis of Accounting – Classification of accounts - Double Entry System: Rules of double entry - Generally Accepted Accounting Principles—Accounting concepts- Accounting conventions- Accounting Standards

UNIT II PREPARATION OF BOOKS OF ACCOUNTS

9

Journal – Ledger- Trial Balance -Subsidiary Books: Simple Cash book– Double Column Cash Book -Three Column Cash Book - Purchase book - Sales book-

UNIT III PREPARATION OF FINANCIAL STATEMENTS

9

Nature of Final Statements – Income Statement: Trading Account – Profit & Loss Account – Balance Sheet – Adjustments.

UNIT IV COST ACCOUNTING

9

Cost Accounting - Financial Costing vs. Cost Accounting- Cost Accounts: Cost concepts- Classifications- Elements of Cost - Cost Sheet – Marginal Costing – Break Even Analysis – PV ratio – Margin of Safety

UNIT V MANAGEMENT ACCOUNTING

9

Nature and scope of Management Accounting- Analysis of Financial Statements – Ratio analysis Fund flow and Cash flow statements - Comparative Statement – Common Size Statement – Trend Analysis –Application of Marginal costing: Decision making - Budgetary Control: Types of Budget – Functional budgets- Fixed budget- Flexible budget –Zero base Budget

TOTAL: 45 HOURS

BOOKS FOR REFERENCE:

1. 'Accounting for Management' Jain S. P. Narang K. L. Simmi Agrawal Kalyani Publishers New Delhi 2009
2. 'Management Accounting' – Khan M.Y & Jain P.K, Tata McGraw Hill Publishing Company Ltd., 2004.
3. 'Management Accounting' – Pillai R.S.N & Bagavathi, S.Chand & Co Ltd., New Delhi, 2002.
4. 'Accounting for Management' – Maheswari S.N & Maheswari S.K, Vikas Publishing House, 2006.
5. 'Management Accounting' – Maheswari S.N, Sultan Chand, New Delhi, 1995.
6. 'Management Accounting' (Principles & Practice): – Sahaf M.A, Vikas Publishing House Pvt. Ltd., New Delhi, 2004.
7. Financial Accounting – A managerial perspective - Narayanaswamy R, Prentice Hall India Pvt., Ltd., New Delhi.

MS3505	BUSINESS LAW	L	T	P	C
		3	0	0	3

OBJECTIVES:

1. Understand the elements of a valid contract and differentiate between void agreements and enforceable contracts under the Indian Contract Act, 1872.
2. Analyze the rights and duties of contract parties, including performance, breach, and available remedies, along with quasi-contracts.
3. Examine agency law principles, including creation, classification, termination of agency relationships, and agent liability.
4. Explore special contracts under the Sales of Goods Act, 1930, covering formation, transfer of title, conditions, warranties, and rights of unpaid sellers.
5. Gain insight into company law, including types of companies, formation, corporate governance, and the winding-up process, focusing on director roles, powers, duties, and liabilities.

Course Outcome – Cos		Cognitive Skill
CO-01	Demonstrate a comprehensive understanding of the essential elements of a valid contract, including void agreements and quasi-contracts, as stipulated by the Indian Contract Act, 1872.	U,R,A
CO-02	Analyze the intricacies of special contracts governed by the Sales of Goods Act, 1930, focusing on the formation, performance, and rights of parties, along with the regulations outlined in the Negotiable Instrument Act, 1881.	R,A
CO-03	Gain insight into the legal framework of company law, including the formation, governance, and winding-up procedures of different types of companies, with an emphasis on the roles and responsibilities of directors.	U,A
CO-04	Explore the foundational aspects of industrial law, including key statutes such as the Factories Act, Payment of Wages Act, Payment of Bonus Act, Minimum Wages Act, and Industrial	R,A

	Dispute Act, to understand their implications on labor relations and industrial practices	
CO-05	Develop an understanding of important tax laws, particularly in corporate tax planning, Goods and Services Tax (GST) principles, registration processes, valuation methods, tax payment procedures, and compliance requirements for corporate assesses	U,A

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	L	S	S	M	L	M	S	S
CO-02	S	M	S	S	S	L	M	S
CO-03	M	S	S	M	S	S	S	S
CO-04	S	S	L	S	S	M	M	L
CO-05	M	S	S	L	S	S	S	S

S-Strong, M-Medium, L-Low, N-Not relevant

UNIT I THE INDIAN CONTRACT ACT, 1872

9

Essential of a valid Contract, void agreement, Formation of a Contract, Performance of Contracts, Breach of Contracts and its remedies – Quasi Contracts, Law of Agency – How Created – Classification of Agents: Relations of Principal and Agent: Delegation of Authority – Personal Liability of Agent - termination of agency.

UNIT II SPECIAL CONTRACTS

9

Sales of Goods Act, 1930: Formation of Sales Contract – Transfer of title- Performance of Sales Contract- Conditions and Warranties – Rights of an Unpaid Seller. The Negotiable Instrument Act, 1881:Nature and types – Negotiation and Assignment – Holder in Due Course, Special rules for Cheque and drafts, discharge of negotiable instruments.

UNIT III COMPANY LAW

9

Nature and types of Companies, Formation of Company, Memorandum and Articles of Association, Prospectus, Power, Duties and liabilities of Directors, Winding up of company, Corporate Governance.

UNIT IV INDUSTRIAL LAW

9

An overview of Factories Act, Payment of Wages Act, Payment of Bonus Act, Minimum Wages Act, Industrial Dispute Act.

UNIT V IMPORTANT TAX LAWS

9

Overview of Corporate Tax planning – computation of total income and tax planning under various heads for Corporate Assessee - Overview of Goods and Service tax (GST) – concepts

and general principles – charge of Goods and service tax – registration – valuation of taxable good and services – Payment of tax – Furnishing of Returns of tax

TOTAL: 45 HOURS

BOOKS FOR REFERENCE:

1. 'Elements of Mercantile Law' – N.D. Kapoor, Sulthan-chand and Company, New Delhi.
2. 'Commercial and Industrial Law' - Sen and Mitra, the World Press Private Ltd., Calcutta, 1996.
3. 'Legal Aspects of Business' – Pathak, Akhileshwar, Mc Graw Hill Companies,
4. 'Business Law' – P.C. Tulsian, Mc Graw Hill Companies.
5. 'Mercantile Law' – P.P.S. Gogna, Sulthanchand and Company, New Delhi.
6. Direct Taxes Planning and Management- Dr. Vinoth K. Singhanian
7. 'Corporate Tax Planning and Managrment' Dr.GirishAhuja.Dr.Ravi Gupta
8. Respective Bar Acts.

MS3506	EXECUTIVE COMMUNICATION	L	T	P	C
		3	0	0	3

OBJECTIVES:

1. To understand the role and significance of communication in business contexts, including its purpose, process, and essential elements.
2. To develop effective oral communication skills, including active listening, public speaking, and oral reporting, to enhance interpersonal interactions and organizational effectiveness.
3. To acquire proficiency in written communication, including composing various business letters, reports, and other written documents, to convey information clearly and professionally.
4. To recognize the importance of non-verbal communication cues, such as body language and visual aids, in conveying messages effectively and enhancing communication outcomes.
5. To learn the principles and procedures for conducting meetings, seminars, conferences, and group discussions, including agenda preparation, speech drafting, and evaluation techniques, to facilitate productive and efficient communication within organizations

Course Outcome – Cos		Cognitive Skill
CO-01	Demonstrate proficiency in understanding the role, purpose, and process of communication in business contexts, identifying key elements and forms of effective communication, and recognizing barriers to communication.	R,A
CO-02	Develop effective oral communication skills, including active listening techniques, principles of oral communication, public speaking, and oral reporting, to convey messages clearly and confidently in various professional settings.	U,A
CO-03	Acquire competence in written communication, mastering the norms for business letters, personalized correspondence, and report writing, to effectively communicate ideas, requests,	R,A

	complaints, and sales promotions through written channels.	
CO-04	Gain an understanding of non-verbal communication cues, including personal appearance, body language, and the use of visual aids, to enhance communication effectiveness in face-to-face interactions, telephonic conversations, and presentations.	U,A
CO-05	Learn the procedures for conducting meetings, including preparing agendas, minutes, and resolutions, organizing seminars and conferences, regulating speech, evaluating oral presentations, and facilitating group discussions, to foster productive communication and collaboration in organizational settings.	U,A

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	M	L	M	S	S
CO-02	M	S	S	M	S	L	M	L
CO-03	S	S	M	S	S	S	S	S
CO-04	M	S	S	S	L	S	M	L
CO-05	M	S	S	L	S	S	S	S

S-Strong, M-Medium,L-Low,N-Not relevant

UNIT I BUSINESS COMMUNICATION

9

Role of Communication-Purpose of Communication-Process and Elements of Communication - Forms of Business Communication- Process of effective communication - Barriers to communication,

UNIT II ORAL COMMUNICATION

9

Language as a tool of Communication- Need for oral Communication- Active and Passive listening-Types of Listening, traits of good listener, Implication of effective listening, objectives of oral Communication-principles of oral Communication-Effectiveness of oral Communication – Public Speaking and Oral Reporting.

UNIT III WRITTEN COMMUNICATION

9

Norms for Business letters - Letter for different kinds of situations - Personalized standard letters, enquiries , customers complaints , collection letters - sales promotion letters- Report writing - Structure of reports

UNIT IV NON-VERBAL COMMUNICATION

9

Non-verbal communication - personal appearance, posture - body language - use of charts , diagrams & tables - audio visual aids for communication - Dyadic Communication: face to face communication - telephonic conversation

UNIT V CONDUCTING MEETINGS

9

Procedure - preparing Agenda, minutes and resolutions - conducting seminars and conferences:-
Procedure of Regulating speech - evaluating oral presentation - Group Discussion: Drafting speech.

TOTAL: 45 HOURS

BOOKS FOR REFERENCE:

1. ‘Basic Communication’ – Raymond V.lesikar, John d.pettit and Mary E.flatleyLesikars, Tata McGraw Hill, 2011
2. ‘Effective Technical Communication’ – Rizvi, M.Ashraf, Tata McGraw Hill,2012
3. ‘Effective Letters in business’ – Robert L.Shurter, 3rd Edition,2010
4. ‘Technical Communication Principles and Practice’ – Meenakshi Raman and Sangeeta Sharma, Oxford University press.
5. ‘Effective Business communication’ – Kaul, Asha, Prentice Hall of India.
6. ‘Technical Report writing Today’ – SteveE.Pauley, Daniel E.Riordan, AITBS publishing and Distributors.

MS3507	ENTREPRENEURSHIP CREATIVITY AND INNOVATION	L	T	P	C
		3	0	0	3

OBJECTIVES

1. To understand the concept of entrepreneurship, including its evolution, characteristics, and various types, and recognize its role in economic development.
2. To explore the factors affecting entrepreneurial growth and motivation, and to develop competencies necessary for successful entrepreneurship.
3. To familiarize with the process of project identification, selection, formulation, and appraisal, along with understanding the financing options available for enterprises.
4. To comprehend the institutional support available to entrepreneurs, including financial institutions, government policies, and taxation benefits, and understand their significance in fostering small-scale enterprises.
5. To analyze the development of small enterprises, including growth strategies, challenges such as sickness, opportunities in international business, and the role of innovation in fostering business success, with a focus on types and processes of innovation.

Course Outcome – Cos		Cognitive Skill
CO-01	Understand the evolution, characteristics, and functions of entrepreneurs, along with different types such as intrapreneurs, and grasp the concept of entrepreneurship and its growth, including its role in economic development.	R,A
CO-02	Demonstrate knowledge of women entrepreneurship, including its concept, functions, growth trajectory, challenges, and strategies for development, as well as rural entrepreneurship and factors influencing entrepreneurial growth.	U,A

CO-03	Develop an understanding of entrepreneurial motivation, competency, and mobility, and comprehend the significance and objectives of entrepreneurship development programs, along with their phases and evaluation criteria.	R,A
CO-04	Acquire skills in project identification, selection, formulation, and appraisal, including the ability to prepare project reports according to planning commission guidelines, and understand various financing options available for enterprises, including venture capital, export finance, and lease financing.	U,A
CO-05	Analyze the institutional support available to entrepreneurs from financial institutions, government bodies, and industrial estates, and understand the ownership structures available to small enterprises, along with taxation benefits and government policies supporting small-scale industries, while also exploring innovation in business, its types, processes, and implications for organizational success through case studies and practical examples.	U,A

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	L	S	S	M	L	M	S	S
CO-02	S	L	S	S	S	L	M	S
CO-03	S	S	S	M	S	S	S	S
CO-04	L	S	S	S	S	S	M	L
CO-05	S	S	S	L	S	S	S	S

S-Strong, M-Medium, L-Low, N-Not relevant

UNIT - I PERSPECTIVE OF ENTREPRENEURSHIP

9

Entrepreneur – Evolution – Characteristics – Functions –Types - Intrapreneur, Entrepreneurship – Concept – Growth of Entrepreneurship – Role in Economic Development, Women Entrepreneurship – Concept – Function – Growth – Problems – Development, Rural Entrepreneurship, Factors affecting Entrepreneurial Growth, Entrepreneurial Motivation, Entrepreneurial Competency, Entrepreneurial Mobility, Entrepreneurship Development Programs – Need – Objectives – Phases – Evaluation

UNIT- II START – UP : AN INTRODUCTORY FRAMEWORK

9

Project Identification and Selection (PIS), Project Formulation – Meaning – Significance - Formulation of Project Report - Planning Commission Guidelines – Network Analysis, Project Appraisal, Financing of Enterprise – Need – Source – Capital Structure – Sources of Short Term Finance – Capitalization – Venture Capital - Export Finance, Ownership Structures – Proprietorship – Partnership – Company – Co-operative Society

UNIT- III INSTITUTIONAL SUPPORT TO ENTREPRENEURS

9

Financial Institutions – Commercial Banks, Other Financial Institutions – IDBI – IFCI – ICICI – IRBI – LIC – UTI – SFCs, Lease Financing and Hire Purchasing, Institutional Support to Entrepreneurs – Need, Institutions – NSIC – SIDO – SSIB – SSICS – SISI – DICs – TCOs – Industrial Estates – Taxation Benefits to Small Scale Industries – Need – Tax holiday – Investment Allowance – Expenditure on Scientific Research, Government Policies for Small Scale Enterprises

UNIT- IV DEVELOPMENT OF SMALL ENTERPRISE

9

Small Enterprise – Definition – Characteristics – Objectives – Scope – Opportunities – Role in Economic Development, Growth Strategies in Small Business, Sickness on Small Business, Small Enterprise in International Business, Export and Import Procedure for Small Enterprise, Electronic Commerce and Small Enterprise, Franchising.

UNIT- V INNOVATION IN BUSINESS

9

Innovation in Business: Types of Innovation – Creating and Identifying Opportunities for Innovation – The Technological Innovation Process – Creating New Technological Innovation and Intrapreneurship – Licensing – Patent Rights – Innovation in Indian Firms, Case Studies.

TOTAL: 45 HOURS

BOOKS FOR REFERENCE

1. Khanka, S.S, Entrepreneurial Development, 3rd Edition, S. Chand & Company Ltd, 2011
2. Bessant, J., and Tidd, J., Innovation and Entrepreneurship, 2nd Edition, John Wiley & Sons, 2011.
3. Reddy, N., Entrepreneurship: Text and Cases, Cengage Learning, 2010.
4. Roy, R., Entrepreneurship, 2nd Edition, Oxford University Press, 2011.
5. Martin Roger, The Design of Business, Harvard Business Publishing, 2009

MA3506	QUANTITATIVE TECHNIQUES	L	T	P	C
		3	1	0	4

OBJECTIVES:

1. Master set theory concepts and operations to solve set-related problems effectively.
2. Understand probability theory fundamentals and apply them to solve basic probability problems.
3. Learn descriptive statistics principles to analyze data and calculate measures of central tendency and dispersion.
4. Explore correlation and time series analysis techniques for data interpretation and trend identification.
5. Acquire skills in hypothesis testing to make informed statistical decisions

Course Outcome – Cos		Cognitive Skill
CO-01	Understand set theory concepts and apply them to solve problems involving sets and set identities. Similarly, comprehend basic probability theory and utilize addition, multiplication theorems, and conditional probability to solve basic probability problems.	R,A
CO-02	Acquire proficiency in descriptive statistics, including graphical representation techniques and calculating measures of central tendency and dispersion, and apply them to real-world scenarios involving binomial and normal distributions	U,A

CO-03	Explore correlation and time series analysis techniques, including correlation coefficients, regression lines, and curve fitting methods, to analyze trends and relationships in data.	R,A
CO-04	Master hypothesis testing concepts, including Type I and Type II errors, one-tailed and two-tailed tests, and perform tests for mean and equality of means using techniques such as t-tests, F-tests, and Chi-square tests	U,A
CO-05	Develop skills in statistical quality control, including identifying causes of variation and constructing and interpreting control charts for variables and attributes to ensure quality assurance in manufacturing processes	U,A

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	M	L	M	S	S
CO-02	S	S	S	S	S	L	M	S
CO-03	S	S	S	S	S	S	S	S
CO-04	S	S	S	S	S	S	M	L
CO-05	M	S	S	L	S	S	S	S

S-Strong, M-Medium, L-Low, N-Not relevant

UNIT I SET THEORY AND PROBABILITY

9

Definition : Set-Types of Sets, Power Sets-Cartesian Products of sets- Operations on Sets-Set Identities- Principle of Inclusion and Exclusion – Problems .

Definition of probability (frequency and axiomatic)-Addition and Multiplication theorem, Conditional probability - simple problems.

UNIT II DESCRIPTIVE STATISTICS AND DISTRIBUTIONS

9

Introduction to Statistics – Classification, Frequency distribution: Discrete and continuous frequency distribution. – Diagrammatic and Graphic representation: Bar diagram, Rectangle diagram and Pie diagram – Histograms-. Measures of Central Tendency - Dispersion – Standard deviation, Variance, Co-efficient of variation. - Applications of Binomial and Normal distributions. (Problems only)

UNIT III CORRELATION AND TIME SERIES ANALYSIS

9

Correlation Analysis- Karl Pearson's correlation coefficient- Rank correlation- Regression lines. Components of time series: Graphical Method, Method of Semi-Average, Method of Moving Average, Curve fitting by method of Least Square.

UNIT IV TESTING OF HYPOTHESIS**9**

Definition-Type I and Type II errors - One tailed and two tailed tests- Large sample tests. Tests for mean and equality of means. Small sample tests: t -test for mean, equality of means. F test and Chi-square test.

UNIT V STATISTICAL QUALITY CONTROL**9**

Quality Control –Chance causes and Assignable causes - Control charts for variables – Control chart for Mean ($\bar{X}$) and Range (R). Control charts for Attributes, Proportion of defective (p chart), Number of defectives per unit (c chart).

L: 45 + T: 15, TOTAL: 60 HOURS**REFERENCES:**

1. Kenneth H.Rosen, ||Discrete Mathematics and its Applications||, Tata McGraw Hill Publishing Company Limited, Fifth Edition,2003.
2. Gupta.S.P - Statistical Methods|| Sultan Chand &Sons 38th Edition 2004
3. Srivastava, S.C. -Fundamentals of Statistics||, Sangya Srivastava Anmol Publications Private Limited, New Delhi,2006.
4. Bruce L. Bowcman, Richard T.O. Connell and Michael L. Hand, -Business Statistics in Practice||, 2nd Edition, McGraw – Hill, 2001.

MS35T1	OUTBOUND TRAINING	L	T	P	C
		0	0	0	0

Objectives:

The main focus with the Outbound Training approach is to impart learning on individual, team and organizational needs such as Leadership, Strategic Thinking, Conflict Management, Team Building, Effective Communication, Quality Improvement, Mentoring and Skill Development.

An experiential learning platform

- Developed team strength and unity
- Improved inter-personal skills & rapport building

Course Outcome – Cos		Cognitive Skill
CO-01	To enhance Communication, Leadership, Teamwork, Planning & Delegation Skills	R,A
CO-02	To advocate the new perspective among teams through a carefully built activity that becomes the reinterpretation of earlier experiences.	U,A
CO-03	To encourage the teams to come up with fresher ideas to implement the new learning's and experiences in the forecasted scenarios	U,A
CO-04	To reassure the teams to implement the fresh ideas in the real-world scenario through active experimentation.	A,E
CO-05	To invite behavioral change and connect them back to the real-life work areas	E,S

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	M	L	M	S	S
CO-02	S	S	S	S	S	L	M	S
CO-03	S	S	S	S	S	S	S	S
CO-04	S	S	S	S	S	S	M	L
CO-05	M	S	S	L	S	S	S	S

S-Strong, M-Medium,L-Low,N-Not relevant

UNIT - 1

Outbound training(OBT)into:What is Outbound Training?, How is Outbound Training Conducted?, Why is outbound training required for budding professionals & corporate executives - What are some Outbound Training Activities - Adventure Activities, Team building activities, Structured Experiential Learning Cycle, Benefits of Outbound Training

UNIT - 2

Outbound Training for Behavioral Competency Areas: Leadership Skills, Change Management, Creativity & Innovation, Problem Solving, Working in Teams, Team Leadership, Confidence Building &Risk Taking, Communication Skills, Emotional Intelligence, Time Management, Goal Setting, Stress Management, Interpersonal Skills, Strategic Thinking, Collaboration, Negotiation Skills and Self Development

UNIT - 3

Planning Outbound Training: FindLearningEssentials&Results for the Outbound,Select Location for theOutdoor Training, Choosing Your Learning Partner, Choosing Your Learning Partner, Preparing the Participants, Beyond Outbound Training - the participants might need regular follow-up, additional mentoring or coaching

UNIT - 4

Organizing a successful OBT: Activities conducted during outbound training, creating out environment - OBT objectives, choosing the right Training Service Providers (TSPs), Identify Outbound Facilitators, Check the trainer to student ratio, Choose right location, preparing the participants, fixing the right training location, training cost

UNIT - 5

OBT evaluation and feedback: Need & Benefits of Evaluating OBT, OBT evaluation methods and tools - The Kirkpatrick Taxonomy Model, The Phillips ROI Model, Summative and Formative Evaluation, Kaufman's Five Levels of Evaluation, Anderson's Model of Learning Evaluation, OBT feedback mechanism, post out training feedback and evaluation.

GROUP PROJECT ASSIGNMENT on OBT

Assignment: To plan, design, deliver, and evaluate an original outbound training program/module.

Process:

1. Groups will be formed in the first week of class.
2. Each group will select their own topic for their training program/module. The topic should be one in which the group has considerable interest (or expertise).
3. Each group will conduct a needs assessment for their proposed training program. This should include both a person and a task analysis. Make clear in your write-ups what interview questions, questionnaires, etc. you used.
4. Based on your need assessment and any assumptions you may need to make, develop specific training objectives.
5. Develop a detailed Training Proposal (Project Plan). This should include:
 - a. Title and brief description of the OBT program
 - b. Outbound Training objectives Training methods to be used, and a rationale (justification) for using them, based on training theory
 - c. Proposed instructors, and the reason for using them
 - d. A tentative training outline/lesson plan
 - e. A tentative list and description of training materials needed
 - f. An evaluation plan (including both short- and long-term evaluation, where appropriate;

Each group will receive feedback from the instructor on their Project Plan. Based upon this, they should then finalize their training program, class presentation, and Final Report. Class presentations will be made. Presentations should review the group's efforts to develop and evaluate the training program, and must include some demonstration of the training program to the class (you may only have time to present a section or module of the training to the class). Presentations should be between 30-40 minutes in length. Final reports for all groups must include all information on your needs assessment (person and task analyses), design, implementation, and evaluation plans. Be sure to follow the guidelines given.

-Feedback on Training Presentation and Final Reportl.

6. Grading of this Outbound Training (OBT) Program project will be as follows:

Project Plan	40 points
Presentation/Technology	80 points
Final Report	100 points

SEMESTER – II

SL.NO	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
1.	MS3508	Marketing Management	3	0	0	3
2.	MS3509	Financial Management	3	0	0	3
3.	MS3510	Human Resource Management	3	0	0	3
4.	MS3511	Production and Operations Management	3	0	0	3
5.	MS3512	Research Methodology	3	0	0	3
6.	MS3513	Business Analytics	3	0	0	3
7.	MA3507	Operations Research for Management	3	1	0	4
PRACTICAL						
8.	MS3571	Business Modeling and Analytics Lab	1	0	4	3
TOTAL			22	1	4	25

MS3508	MARKETING MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES:

1. Understand the dynamics of marketing management, emphasizing the interaction between the marketing environment and organizational functions, specifically within India's market context.
2. Analyze consumer behavior, considering economic, socio-cultural, and psychological factors, and distinguish between industrial and consumer buying behavior, while exploring the decision-making process.
3. Gain familiarity with the elements of the marketing mix, including product planning, branding, pricing strategies, distribution channels, and promotional tactics, and understand how each contributes to an effective marketing strategy.
4. Develop skills in marketing research methodologies, including various types, processes, and tools, and understand their application in areas such as product launches, demand estimation, advertising, and assessing customer satisfaction.
5. Explore current marketing trends, including the impact of globalization, the role of social media, consumer protection measures, trends in relationship and green marketing, and the evolving landscape of customer relationship management (CRM).

Course Outcome – Cos		Cognitive Skill
CO-01	Understand marketing management concepts and their application, including the marketing environment, customer identification, segmentation, targeting, and positioning, with a focus on India's market dynamics.	R,A
CO-02	Analyze consumer behavior by examining economic, socio-cultural, and psychological factors and comparing industrial and consumer buying behavior to understand the decision-making process.	U,A
CO-03	Gain knowledge of the marketing mix components, such as product planning, branding, pricing, distribution channels, and promotional tactics, and comprehend their roles in marketing strategy development.	U,A
CO-04	Develop proficiency in marketing research methodologies, including types, processes, and tools, and apply them to product launches, demand estimation, advertising, and customer satisfaction studies.	A,E
CO-05	Explore current marketing trends, including globalization's impact, social media marketing, consumer protection, relationship marketing, green marketing, and the future landscape of customer relationship management (CRM).	E,S

Mapping of Course Outcome with Programme Outcome

PO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO								

CO-01	S	S	S	M	L	M	S	S
CO-02	S	S	S	S	S	L	M	S
CO-03	S	S	S	S	S	S	S	S
CO-04	S	S	S	S	S	S	M	L
CO-05	M	S	S	L	S	S	S	S

S-Strong, M-Medium,L-Low,N-Not relevant

UNIT I Understanding Marketing Management

9

The Concepts of Marketing – Marketing Environment – Marketing's Relationship with other Functional Areas – Identifying customer - Market Segmentation, Targeting and Positioning - Role of Marketing with Special Reference of India.

UNIT II Consumer Behaviour

9

Consumer Behaviour – factors influencing Consumer behavior - economic, socio-cultural and psychological factors- comparing industrial and Consumer buying behavior- decision making process

UNIT III Marketing Mix

9

Marketing Mix: Product-Planning-New Product Development- Branding- packaging decisions- concept of product life cycle- Pricing Decisions- Role of pricing in marketing; factors influencing pricing- Factors influencing channel decisions, Major types of Distribution channels -Supply chain- Promotion Mix - factors influencing promotion mix, an introduction to different promotion tools

UNIT IV Marketing Research

9

Types of Marketing Research – Market Research Process – Tools and Techniques – Applications of Marketing Research in Product Launching – Demand Estimation – Advertising and Brand Preference Studies – Customer Satisfaction – Customer Perception - Preparation of Market Research Reports.

UNIT V Trends in Marketing

9

Marketing in a Globalized Environment– Social media marketing - consumer protection-relationship marketing – green marketing – Retro Marketing, Virtual marketing- Future of CRM

TOTAL: 45 HOURS

BOOKS FOR REFERENCE:

1. Marketing Management' – Philip Kotler, PHI, 12th Edition.
2. _Marketing Management' – By Philip Kotler, Kevin Keller, Published by Prentice Hall, Copyright ©
3. _Marketing Management' – Ramasamy and Namakumari, Planning Implementation and Control, Macmillan, 3rd Edition, .
4. _Marketing Management' – Zikmand _d' Amico, Thompson Learning, .
5. _Marketing Management' – Douglas, J. Darymple, John Wiley & Sons, .
6. _Marketing Management' – Boyd walker, Mcgraw Hill, .
7. _Marketing Management' – Rajan Saxena, Tata Mcgraw Hill, 3rd Edition

MS3509	FINANCIAL MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES:

1. To provide students with a comprehensive understanding of financial management concepts, including the nature, scope, and objectives of financial management, as well as fundamental principles such as risk and return, time value of money, and valuation models.
2. To familiarize students with various sources of finance and their associated costs, including short-term, medium-term, and long-term sources, as well as innovative financing options like venture capital, leasing, and Euro issues.
3. To develop an understanding of working capital management principles, including concepts, determinants, estimation, and financing of working capital, along with techniques for cash, receivables, and inventory management.
4. To explore capital structure theories and dividend policy considerations, including financial structure, determinants of capital structure, leverage, dividend policy determinants, relevance and irrelevance concepts, and practical considerations in dividend decisions.
5. To equip students with the knowledge and skills required for capital budgeting decisions, including understanding the capital budgeting process, evaluation techniques such as payback, accounting rate of return, net present value, profitability index, and internal rate of return, and considerations for project selection under capital rationing and inflation.

Course Outcome – Cos		Cognitive Skill
CO-01	Develop a thorough understanding of financial management principles and their application in making financial decisions effectively.	R,A
CO-02	Analyze various sources of finance and their associated costs to make informed financing decisions.	U,A
CO-03	Apply working capital management techniques to ensure efficient utilization of resources and maintain liquidity.	U,A
CO-04	Evaluate capital structure and dividend policy decisions considering relevant theories and practical implications.	A,E
CO-05	Utilize capital budgeting techniques to assess investment opportunities and make optimal investment decisions aligned with organizational goals and objectives.	E,S

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	M	L	M	S	S

CO-02	S	S	S	S	S	L	M	S
CO-03	S	S	S	S	S	S	S	S
CO-04	S	S	S	S	S	S	M	L
CO-05	M	S	S	L	S	S	S	S

S-Strong, M-Medium,L-Low,N-Not relevant

UNIT I Financial Management Overview

9

Basic Concepts and Definitions - Nature, scope and objectives of financial management – Financial Decisions - finance functions - Risk and Return - Time Value of Money - Valuation Concepts and Models: Valuation of Securities –Bond or Debenture Valuation - Preference shares Valuation - Equity Shares Valuation - Case Studies

UNIT II Sources of Finance and Cost of Capital

9

Source and Cost of finance – Classification of Sources of Finance - short term -medium term-long term –Security financing- Ownership securities: Equity – Preference – Creditorship securities: Bonds – Debentures - Loan financing – Innovative sources of finance: Venture Capital - Leasing - Hire Purchase – Euro issues- FCCBs – GDRs - ADRs – ADSs - Cost of Capital - Measurement of cost of Capital – Weighted average cost of Capital. – Case Studies

UNIT III Working Capital Management

9

Concepts of Working capital – Kinds - Determinants – estimation - Sources of working capital – Financing of working capital - Cash management - Receivables Management and factoring - Inventory management – Case Studies

UNIT IV Capital Structure and Dividend Policy

9

Financial Structure - Capital Structure – Forms - Determinants – Theories of capital structure- Leverages: Financial Leverage- Operating leverage – Composite Leverage -. Dividend policy: determinants - Concepts of relevance – Irrelevance - Type of dividend policy - Practical consideration - Forms of dividends – Case Studies.

UNIT V Capital Budgeting

9

Meaning and Nature of Capital Budgeting – Process – Kinds of Decisions - Evaluation Techniques – Payback - Accounting Rate of Return - Net Present Value - Profitability Index - Internal Rate of Return - Project selection under capital rationing - Inflation and capital budgeting - Case Studies.

TOTAL: 45 HOURS

BOOKS FOR REFERENCE:

1. ‘Financial Management’ – Chandra Prasanna, Tata McGraw Hill, New Delhi,.
2. ‘Financial Management’ – Pandey I.M., Vikas Publishing House, New Delhi,
3. ‘Financial Management’ – Khan M.Y& Jain P.K, Tata McGraw Hill, New Delhi,.
4. ‘Corporate Finance Theory and practice’ – Aswat Damodaran, John Wiley & Sons,.

5. ‘Working capital management’ – Hrishikes Bhattacharya, strategies and techniques, Prentice Hall of India Pvt. Ltd., New Delhi.
6. ‘Financial Management and policy’ – James C. Vanhorne, Pearson Education Asia (low priced edition), (latest edition)

MS3510	HUMAN RESOURCE MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES:

1. To introduce students to the fundamental concepts and principles of Human Resource Management (HRM) and its scope in organizational settings.
2. To equip students with the knowledge and skills required for effective recruitment, selection, induction, promotion, and transfer of employees.
3. To enable students to understand and apply various training and development methodologies to enhance employee skills and performance.
4. To provide students with insights into compensation management practices and their impact on employee motivation, morale, and job satisfaction.
5. To familiarize students with industrial relations dynamics, including the role of government, trade unions, and collective bargaining, and to develop skills in resolving industrial disputes and promoting harmonious employer-employee relations

Course Outcome – Cos		Cognitive Skill
CO-01	Develop a comprehensive understanding of Human Resource Management (HRM) principles and practices, encompassing areas such as personnel management, human resources planning, job analysis, recruitment, selection, induction, promotion, and transfer.	R,A
CO-02	Acquire knowledge and skills in training and development methodologies, including assessing training needs, evaluating training schemes, managing development programs, and conducting performance appraisals.	U,A
CO-03	Gain insight into compensation management, including wage and salary administration, executive compensation packages, welfare and benefit schemes, employee job evaluation, incentive schemes and their impact on employee morale and job satisfaction.	U,A
CO-04	Understand the dynamics of industrial relations, including the role of government, employees, and trade unions, managing employer-employee relations, resolving industrial disputes, collective bargaining, and modern trends in industrial relations.	A,E
CO-05	Develop proficiency in grievance handling and redressal mechanisms, including understanding employee complaints and grievances, implementing disciplinary procedures, managing employee discipline, and fostering participative management practices through works committees and joint management councils.	E,S

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	M	L	M	S	S
CO-02	S	S	S	S	S	L	M	S
CO-03	S	S	S	S	S	S	S	S
CO-04	S	S	S	S	S	S	M	L
CO-05	M	S	S	L	S	S	S	S

S-Strong, M-Medium, L-Low, N-Not relevant

UNIT – I Introduction of HRM

Introduction to Human Resource Management – definition and scope of PM, HRM and HPM – human resources planning – concept, aims and objectives – Job Analysis- Job description and job specification – recruitment – source of manpower supply – selection – test, interview and reference – induction and placement- promotion and transfer – Case Study

UNIT – II Training and Development

Training and Development – assessment of training needs and training methodologies – evaluation of training schemes- management development programs and career planning – performance appraisal – concept and purpose – methods and techniques – employee counselling – Case Study.

UNIT – III Compensation

Compensation – wage and salary administration – executive compensation packages- welfare and benefit schemes – quality circles and quality of work life – employee job evaluation – incentive schemes and bonus – welfare administration – employee morale and job satisfaction – Case Study.

UNIT – IV Industrial Relations

Industrial relations- introduction to IR – concept and approaches – role of government, employees and trade unions in IR – employer employee relation – union management relations – industrial disputes –causes and effects – IR machinery – collective bargaining – conciliation – arbitration and adjudication – modern trends in IR – Case Study

UNIT – V Grievance Handling

Employee grievance handling and redressal – complaint and grievance – grievance handling machinery and procedure – employee discipline – standing orders - suspension – retrenchment and dismissal – participative management – works committee – joint management council – computerization – human resources information system– Case Study.

TOTAL: 45 HOURS

BOOKS FOR REFERENCE:

1. _Human Resource Management_ – Pattnayek, Prentice Hall.
2. _Personnel Management_ – Flippo E.E, Mc Graw Hill.

3. _Personnel Management‘ –Memoria C.B., Himalaya Publishers.
4. _Human Resource and Personnel Management‘ – Ashwathappa K, Tata Mc Graw Hill, New Delhi.
5. _Managing Human Resources‘ – Straus and Sales, Prentice Hall.
6. _Management of OrganisationalBehaviour‘ – Hersey and Blanchard.

MS3511	PRODUCTION AND OPERATIONS MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES:

1. To introduce students to the fundamental concepts and principles of production and operations management (POM) and their significance in modern business operations.
2. To equip students with the knowledge and skills required for forecasting, facility location, and layout planning to optimize production processes and resource utilization.
3. To enable students to understand and apply operations planning and control techniques to effectively manage production schedules, inventory levels, and project timelines.
4. To familiarize students with material and supply chain management practices, including inventory control, supply chain optimization, and purchasing strategies, to ensure efficient resource management and supply chain integration.
5. To provide students with insights into total quality management (TQM) principles and practices and their role in enhancing organizational performance, product quality, and customer satisfaction.

Course Outcome – Cos		Cognitive Skill
CO-01	Develop a comprehensive understanding of production and operations management (POM) principles, including its definition scope, objectives, and historical evolution, within the context of systems view of production.	R,A
CO-02	Acquire knowledge and skills in forecasting techniques, facility location, and layout planning, including qualitative and quantitative methods, plant location selection, layout types, and shop floor scheduling.	U,A
CO-03	Gain insight into operations planning and control strategies, including strategic, tactical, and operational planning, aggregate and capacity planning, material requirements planning (MRP), and project management techniques.	U,A
CO-04	Understand material and supply chain management concepts, including inventory management, supply chain optimization, make or buy decisions, purchasing strategies, and vendor selection, to ensure efficient resource utilization and supply chain integration.	A,E
CO-05	Develop proficiency in total quality management (TQM) principles and practices, including the Six Sigma approach, quality circles KAIZEN, ISO 9000 and ISO 14000 standards, to enhance organizational productivity, efficiency, and customer satisfaction.	E,S

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	M	L	M	S	S
CO-02	S	S	S	S	S	L	M	S
CO-03	S	S	S	S	S	S	S	S
CO-04	S	S	S	S	S	S	M	L
CO-05	M	S	S	L	S	S	S	S

S-Strong, M-Medium,L-Low,N-Not relevant

UNIT I Introduction to Operation Management

9

Production and Operations Management (POM) – Definition – Scope – Objectives – Importance – Role – Historical evolution. Systems view of production and operations management. Production systems (CAD, CIM, FMS) - Differences between manufacturing and Service Operations (Product Vs Services) – Case studies

UNIT II Forecasting, Facility Location and Layout

9

Forecasting – Need, Types, Objectives and Steps. Overview of Qualitative and Quantitative methods

Plant location - Selection of Location – Different models - Layout – Types – Advantages – Methodologies – Shop floor – Scheduling - Routing- Case studies

UNIT III Planning and Control

9

Operations Planning – Strategic, Tactical, Operational, Aggregate and Capacity Planning. Development of MPS, MRP 1, MRP II and introduction to ERP – Time Study – method Time measurement – work sampling – time standards - Project management- Planning and control techniques - Planning Product design and development – Expert systems, Standardization, Research and development - Case studies.

UNIT IV Material and Supply Chain Management

9

Material Management (MM) – Definition – Objectives – Importance – Functions – Handling Technology (Robots, Automated storage and retrieval systems (ASRS) - Inventory Management – Spare parts management - Inventory Control (JIT and ABC) - Supply Chain Management – Definition – Scope – Importance – Applications – Make or Buy Decisions – Purchasing Strategies – Vendor Selection and Sales – Case Studies

UNIT V Total Quality Management

9

TQM – Definition – Benefits – Obstacles – Frame work – Six Sigma Concepts of Process Capability – Quality Circles KAIZEN, JAPAN 5‘S. Conceptual framework of ISO 9000 standards and ISO 14000 Standards – Case studies

TOTAL: 45 HOURS

BOOKS FOR REFERENCE:

1. 'Production and Operations Management' – R. Paneer Selvam, Prentice Hall of India, 2002.
2. 'Total Quality Management' – Dale H. Besterfield et al, Third edition, Pearson Education (First Indian Reprints 2004).
3. Operations Management (Strategy and analysis) – Lec J. Krajewski and Lorry P. Ritzman, Pearson Education 5th edition.
4. 'Production and operations management' – Thomas E Morton, Vikas Publishing House, First Indian reprint 2003.
5. 'Computer Aided Production Management' – Mahapatra P B, Prentice Hall of India, 2001.
6. 'Production Management' – Martand T Telsang, S Chand and Company, First edition 2005.

MS3512	RESEARCH METHODOLOGY	L	T	P	C
		3	0	0	3

OBJECTIVES:

1. To introduce students to the fundamental concepts and principles of research methodology and its application in various fields of study.
2. To equip students with the knowledge and skills required for identifying, formulating, and selecting research problems and hypotheses, ensuring clarity and relevance in research studies.
3. To enable students to understand different sampling methods, data collection techniques, and data processing procedures, facilitating accurate data analysis and interpretation.
4. To familiarize students with the process of preparing research proposals and reports, both orally and in writing, adhering to the essential components and guidelines of effective report writing.
5. To provide students with insights into referencing practices and criteria for evaluating research reports, ensuring academic integrity and the credibility of research findings.

Course Outcome – Cos		Cognitive Skill
CO-01	Develop a comprehensive understanding of research methodology, including its meaning, nature, significance, and the business research process, to effectively conduct research in various domains.	R,A
CO-02	Acquire knowledge and skills in identifying, selecting, formulating, and reviewing research problems, hypotheses, and literature reviews, ensuring a strong foundation for conducting research studies	U,A
CO-03	Gain proficiency in sampling techniques, data collection methods, and processing data using statistical tools and software, enabling accurate analysis and interpretation of research findings.	U,A
CO-04	Develop the ability to prepare research proposals and reports, both orally and in writing, adhering to the essentials of a good report and following the appropriate steps involved in report writing.	A,E
CO-05	Understand the significance of referencing and criteria for evaluating research reports, ensuring credibility and reliability of research findings and conclusions	E,S

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	M	L	M	S	S
CO-02	S	S	S	S	S	L	M	S
CO-03	S	S	S	S	S	S	S	S
CO-04	S	S	S	S	S	S	M	L
CO-05	M	S	S	L	S	S	S	S

S-Strong, M-Medium, L-Low, N-Not relevant

UNIT I

Introduction to Research Methodology: – meaning - the nature of research - significance of research - business research process. Process of research. Criteria of Good Research.

UNIT II

Research Problem- identification- Selection– formulation Review of literature. Hypothesis-meaning- Sources- Types- Formulation- Testing- errors Survey- Census method-sampling method.

UNIT III

Selection of a Sample – Methods of sampling –Factors affecting size of the sample – Steps in Sampling Design – Types of Sample Designs – Sampling and non-sampling errors – Sources of Data – Primary – Secondary – Data collection Methods – Interview – Questionnaire – Schedules.

UNIT IV

Processing the data-editing-coding-tabulation-diagrams-statistical tools for analysis and hypothesis testing. Interpretation. Application of statistical software for data analysis

UNIT V

Research Proposal - Report - Essentials of a good report - Oral Presentation - Written Report - Types of written report - significance of report writing - Steps involved in writing reports - contents of a research report - Referencing - Criteria for evaluating research reports.

TOTAL: 45 HOURS

BOOKS FOR REFERENCE:

1. ‘Business Research Methods’ – Donald R. Cooper and Ramcis S Schindler, Tata Mc Craw Hill Publishing Company Ltd., New Delhi.
2. ‘Research Methodology’ – C. R. Kothari, WishvaPrakashan, New Delhi.
3. ‘Research Methods for Business’ – Uma Sekaran, John Wiley and Sons Inc., New York.
4. ‘Research Methods’ – Donald H. Mc. Burney, Thomson Asia Pvt. Ltd., Singapore.
5. ‘Methodology of Research in social science’ – Krishnaswamy, O.R. and M. Ranganathan, Himalaya Publishing House, Mumbai.

6. 'Methodology and Techniques of social research' – Bhandarkar Wilkinson Laldas, Himalaya Publishing House, Mumbai.
7. 'Business Statistics' – Beri G.C., Tata McGraw Hill, New Delhi.

MS3513	BUSINESS ANALYTICS	L	T	P	C
		3	0	0	3

OBJECTIVES:

1. To introduce students to the functions and processes of business enterprise organization and the role of information technology in modern business operations.
2. To equip students with the knowledge and skills required to utilize enterprise applications and bespoke applications effectively to enhance business performance and competitiveness.
3. To enable students to understand different types of data and relational database management systems, supporting structured and digital data management for business decision-making.
4. To familiarize students with OLTP and OLAP concepts, BI tools, and analytics techniques for leveraging enterprise data to gain insights and make informed decisions.
5. To provide students with insights into data warehousing concepts, including data integration, data modeling, and dimensional modeling, to support effective business reporting and analytics initiatives.

Course Outcome – Cos		Cognitive Skill
CO-01	Develop a comprehensive understanding of business enterprise organization, including its functions, core processes, and the key role of information technology (IT) in business operations.	R,A
CO-02	Acquire knowledge and skills in utilizing enterprise applications such as Enterprise Resource Planning (ERP) and Customer Relationship Management (CRM), and bespoke applications to enhance business efficiency and productivity.	U,A
CO-03	Gain proficiency in working with structured, digital data, relational database management systems (RDBMS), and understanding the characteristics of different types of data (structured, unstructured, and semi-structured) to support effective decision-making processes.	U,A
CO-04	Understand the concepts of Online Transaction Processing (OLTP) and Online Analytical Processing (OLAP), different OLAP architectures, and their roles in Business Intelligence (BI) and analytics for leveraging enterprise data.	A,E
CO-05	Develop the ability to design and implement data warehousing solutions, including data integration, data modeling techniques such as dimensional modeling, and creating dimensional models to support business reporting and analytics	E,S

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	M	L	M	S	S
CO-02	S	S	S	S	S	L	M	S
CO-03	S	S	S	S	S	S	S	S
CO-04	S	S	S	S	S	S	M	L
CO-05	M	S	S	L	S	S	S	S

S-Strong, M-Medium,L-Low,N-Not relevant

UNIT I Business Enterprise Organization

9

Business Enterprise Organization - its functions and core business processes. Key purpose of using IT in Business-Characteristics of Internet- Ready IT applications. Enterprise applications (ERP/CRM etc) and Bespoke applications. Information users and their requirements. Structured, Digital Data-Structured, Unstructured and Semi structured data, Relational Database Management Systems (RDBMS).

UNIT II OLTP and OLAP

9

OLTP and OLAP, Different OLAP Architectures, Data models for OLTP and OLAP. Role of OLAP tools in BI. Leveraging ERP Data using Analytics, Business Intelligence(BI)— Definition, Evolution of BI and Role of DSS, EIS, MIS and digital dashboards, ERP and BI .BI Past, Present and Future, BI value chain, BI Component Framework, Users of BI, BI applications, roles and responsibilities BI and Cloud Computing, Introduction to Business Analytics.

UNIT III Data Warehousing

9

Data Warehousing – Definition, Need, Data Mart, Goals of Data base, Operational Data Store (ODS), Extract, Transform and Load (ETL). Data Integration Approaches to Data Integration, Need and advantages of Data Integration, Data Quality, Data Profiling. Data modeling, Types of data Model, Data modeling Techniques. Dimensional modeling, Fact Table, Multy Dimensional modeling, ER modeling, Dimensional Table. Typical Dimensional Models, Dimensional modeling Life Cycle.

UNIT IV Measures and Performance

9

Measures and Performance-Measurement System Terminology. KPI usage in companies. Role of Metrics and Metrics Supply Chain, Fact based decision making and KPIs Measures to business decisions and beyond.

UNIT V Reporting

9

Enterprise Reporting-Reporting Perspectives, Report Standardization and Reporting Practices- Enterprise Reporting Characteristics in OLAP World. Balanced Score Board, Dash

Boards –Concepts and Types, Creating dash Boards, Score Board Vs Dash Board, Analysis – Different Types.

TOTAL: 45 HOURS

REFERENCE BOOKS

1. Fundamentals of Business Analytics By R.N. Prasad and Seema Acharya, Wiley India Pvt Ltd, New Delhi, 2011.
2. Business Intelligence by David Loshin
3. Business Intelligence for the enterprise by Mike Biere
4. Business Intelligence roadmap by Larissa Terpeluk Moss, ShakuAtre
5. Successful Business Intelligence: Secrets to making Killer BI Applications by CindiHowson

MA3507	OPERATIONS RESEARCH FOR MANAGEMENT	L	T	P	C
		3	1	0	4

OBJECTIVE:

To develop mathematical skill to analyse various complex problems in the business environment and to study applications of operations research in functional areas of management.

Course Outcomes - COs		Cognitive Skills
CO - 01	Formulate and solve mathematical model (linear programming problem) for a physical situations like production, distribution of goods and economics and solve them graphically in 2 dimensions. Solve the problem of transporting the products from origins to destinations with least transportation cost and assignment problems.	R,A
CO - 02	Understand the concept of Inventory Control and can do the problems on it	A,E
CO - 03	Ability to design new simple models, like: CPM, PERT. Learn how to define a project in terms of activities such that a network can be used to describe the project, compute the critical path and the project completion time, convert optimistic, most probable, and pessimistic time estimates into expected activity time estimates	A,An,E
CO - 04	Understand the terminology & nomenclature appropriate queueing theory, demonstrate the knowledge and understand the various queueing models and formulate concrete problems using queueing theoretical approaches.	U,An,E
CO - 05	Ability to solve the zero-sum two- person games .Assess and formulate decision making strategies to address operating issues that have short, intermediate or long lead times	A,E

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	M	L	M	S	S
CO-02	S	S	S	S	S	L	M	S
CO-03	S	S	S	S	S	S	S	S
CO-04	S	S	S	S	S	S	M	L
CO-05	M	S	S	L	S	S	S	S

UNIT I GRAPHICAL SOLUTION OF LINEAR PROGRAMMING PROBLEM AND ITS APPLICATION 9

Linear Programming – Formulation, Graphical Solution. Transportation problem- Vogel's approximation method – MODI method – Degeneracy, Unbalanced problem. Assignment problem – Hungarian method – Traveling salesman problem.

UNIT II INVENTORY CONTROL 9

Deterministic Inventory Models-EOQ Models with shortages-EOQ Models without shortages-Inventory Models with Probabilistic Model- EOQ Models with shortages-EOQ Models without shortages

UNIT III PROJECT MANAGEMENT 9

Network- Construction – Critical Path Method – Project Evaluation and Review Technique.

UNIT IV QUEUEING THEORY ANDSIMULATION 9

Introduction – characteristics- queue discipline - Kendall notation- (M /M/1:∞) Queue-simple problems. Simulation: Introduction to Simulation – Applications to Queueing problems

UNIT V GAME THEORY AND DECISION THEORY 9

Two person zero sum games – Saddle point – Dominance rule - Graphical solution. Decision Theory: Concepts of decision making; Decision environments; Decision under uncertainty and under risk .

L: 45 + T: 15, TOTAL: 60 HOURS

REFERENCES:

1. Gupta P.K., Man Mohan, -Problems in Operations Research|| (Methods and Solutions), Sultan Chand and Sons, Ninth Edition, 2003.
2. Hamdy A Taha,|| Introduction to Operations Research||, Prentice Hall India, Seventh Edition, Third Indian Reprint 2004.
3. J.K.Sharma,|| Operations Research|| (Theory and Applications),Macmillan India Ltd, Second Edition, 2003

SYLLABUS FORMAT

SEMESTER – III

Sl.No	Code No	Course Title	L	T	P	C
1	MS3514	International Business Environment	3	0	0	3
2	MS3515	Strategic Management	3	0	0	3
3	xxxE1	Elective 1	3	0	0	3
4	xxxE2	Elective 2	3	0	0	3
5	XxxE3	Elective 3	3	0	0	3
6	XxxE4	Elective 4	3	0	0	3
7	XxxE5	Elective 5	3	0	0	3
8	XxxE6	Elective 6	3	0	0	3
9	MS35P1	Summer Placement Project Work (4 weeks)	0	0	6	3
	TOTAL		24	0	8	27

MS3514	INTERNATIONAL BUSINESS ENVIRONMENT	L	T	P	C
		3	0	0	3

OBJECTIVES

- Understand the basics of international business, including entry modes and managerial implications.
- Analyze how different environments impact international business decisions.
- Examine global trade trends, barriers, and their effects on investment flows.
- Explore the roles of key international economic institutions and agreements.
- Evaluate regional economic groupings and their impact on international business

Course Outcome - COs		Cognitive Skills
CO-01	To Explain the concept in international business with respect to foreign trade/International Business.	R,A
CO-02	To apply the current phenomenon and to evaluate the global business environment in terms of economics, social and legal aspects.	U,A

CO-03	To analyze the principle of international business and strategies adopted by firms to respond globally.	U,A
CO-04	To integrate concept in international business concepts with functioning of global trade.	A,E
CO-05	To compare the contrast cultures and societies globally using socioeconomic cultural frame works.	E,S

R-Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S-Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	M	M	S	S	M	S	M	M
CO-02	S	S	M	M	M	M	S	S
CO-03	S	S	M	M	M	M	S	S
CO-04	S	M	S	S	M	S	S	S
CO-05	S	S	S	M	S	S	M	M

UNIT I: Introduction to International Business

9

Importance, nature and scope of International business- modes of entry into International Business- Internationalization process and managerial implications. Environmental Context of International Business- Framework for analyzing international business environment – Domestic, foreign and global environments and their impact on international business decisions

UNIT II : Global Trading Environment

9

World trade in goods and services – Major trends and developments; World trade and protectionism – Tariff and non-tariff barriers; Counter trade International Financial Environment: Foreign investments-Pattern, Structure and effects; Movements in foreign exchange and interest rates and then impact on trade and investment flows.

UNIT III : International Economic Institutions and Agreements

9

WTO, IMF, World Bank UNCTAD, Agreement on Textiles and Clothing (ATC), GSP, GSTP and other International agreements; International commodity trading and agreements

UNIT IV: Regional Economic Groupings in Practice

8

Regionalism vs. multilateralism, Structure and functioning of EC and NAFTA; Regional economic cooperation

UNIT V: Multinational Corporations

10

Multinational Corporations and their involvement in International Business: Issues in foreign investments, technology transfer, pricing and regulations; International collaborative arrangements and strategic alliances. Emerging Developments and Other Issues: Growing concern for ecology; Counter trade; IT and international business.

TOTAL: 45 HOURS

TEXT BOOK:

1. Bennet, Roger, International Business, Financial Times, Pitman Publishing, London, 1999.

2. Bhattacharya, B., Going International: Response Strategies of the Indian Sector, Wheeler Publishing, New Delhi, 1996.

REFERENCE:

1. Czinkota, Michael R., et. al., International Business, the Dryden Press, Fortworth, 1999.
2. Danoes, John D. and Radebaugh, Lee H., International Business: Environment and Operations, 8th ed., Addison Wesley, Readings, 1998.
3. Griffin, Ricky W. and Pustay, Michael W, International Business: A Managerial Perspective, Addison Wesley, Readings, 1999.
4. Hill, Charles W. L., International Business, McGraw Hill, New York, 2000.

MS3515	STRATEGIC MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES

- Analyze the main structural features of an industry and develop strategies that position the firm most favorably in relation to competition and influence industry structure to enhance industry attractiveness.
- Recognize the different stages of industry evolution and recommend strategies appropriate to each stage.
- Appraise the resources and capabilities of the firm in terms of their ability to confer sustainable competitive advantage and formulate strategies that leverage a firm's core competencies.

Course Outcome - COs		Cognitive Skills
CO-01	To analyze the main structural features of an industry and develop strategies that position the firm most favorably in relation to competition and influence industry structure to enhance industry attractiveness	R,U
CO-02	To recognize the different stages of industry evolution and recommend strategies appropriate to each stage	U,A
CO-03	To appraise the resources and capabilities of the firm in terms of their ability to confer sustainable competitive advantage and formulate strategies that leverage a firm's core competencies	U,A
CO-04	To evaluate the strategy and implement through human resource management and apply different models of strategy evaluation	A,E
CO-05	To identify and solve different environmental and ethical issues of non-profit organization	E,S

R-Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S-Synthesis

Mapping of Course Outcome with Programme Outcome

PO \ CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H

CO-01	M	M	L	L	L	L	M	M
CO-02	S	S	M	M	M	M	S	S
CO-03	S	S	M	M	M	M	S	S
CO-04	S	M	L	S	M	S	S	S
CO-05	S	S	L	M	S	S	L	M

UNIT I :Introduction

9

Introduction, Strategic Management, Business Policy, Corporate Strategy, Basic Concept of Strategic Management, Mission, Vision, Objectives, Impact of globalization, Basic Model of Strategic Management, Strategic Decision Making, Impact of Internet and E-Commerce, Role of Strategic Management in Marketing, Finance, HR and Global Competitiveness.

UNIT II : Approaches to Strategic Management

9

Environmental Scanning, Industry Analysis, Competitive Intelligence ETOP Study, OCP, SAP Scanning, Corporate Analysis, Resource based approach, Value-Chain Approach, Scanning Functional Resources, Strategic Budget and Audit.

UNIT III :Strategy Formulation

9

SWOT Analysis, TOWS Matrix, Various Corporate Strategies: Growth/ Expansion, Diversification, Stability, Retrenchment & Combination Strategy. Process of Strategic Planning, Stages of corporate development, Corporate Restructuring, Mergers & Acquisitions, Strategic Alliances, Portfolio Analysis, Corporate Parenting, Functional Strategy, BCG Model, GE 9 Cell, Porters Model: 5 Force and Porters Diamond Model, Strategic Choice. Core competency, Competitive Advantage.

UNIT IV:Strategy Implementation and Evaluation

9

Strategy Implementation through structure, through Human Resource Management: through values and ethics. Mc Kinsey's 7S Model, Organization Life Cycle, Management and Control, Activity based Costing, Strategic Information System.

UNIT V:Strategic Issues

9

Corporate Governance and Social Responsibility. Managing Technology and Innovation in Entrepreneurial Ventures and Small Business Enterprises – Strategic Issues for non Profit Organizations.

TOTAL: 45 HOURS

TEXT BOOK:

1. Lawrence R.Jauch., Glueck William F. - Business Policy and Strategic Management (Frank Brothers)
2. Pearce II John A. and Robinson J.R. and Richard B. - Strategic Management (AITBS)

REFERENCE:

1. Wheelen Thomas L., Hunger J. David and Rangaragjan Krish - Concepts in Strategic Management and Business Policy (Pearson Education, 1st Ed.) 2013
2. _Strategic Management Theory_ – Charles W.L. Hill & Gareth R. Jones.
3. _Business Policy_ – Azhar Kazmi, Tata Mcgraw Hill Publish Co - 2011
4. _Strategic Management_ – Thomas L. Wheelen, J. David Hunger –Addison Wesley Lonyman, Singapore - 2000.

5. ‘Business Environment and Policy’ - Frances Cherunilam, Himalaya Publishing House 2nd Edition - 2000.
6. Harvard Business Review – Business Policy – Part I & II Harvard Business School.

ELECTIVE CURRICULUM

A. MARKETING

Sl.No	Code	Name of the Subjects	L	T	P	C
1	MS35A1	Services Marketing & Customer Relationship Management	3	0	0	3
2	MS35A2	Retail Marketing	3	0	0	3
3	MS35A3	Product and Brand Management	3	0	0	3
4	MS35A4	Sales Management	3	0	0	3
5	MS35A5	Consumer Behaviour	3	0	0	3
6	MS35A6	Advertising Management	3	0	0	3
7	MS35A7	Rural Marketing	3	0	0	3
8	MS35A8	Strategic Marketing Management	3	0	0	3
9	MS35A9	E-Marketing	3	0	0	3

MS35A1	Services Marketing & Customer Relationship Management	L	T	P	C
		3	0	0	3

OBJECTIVES

1. Understanding Services: Help students grasp the concept and importance of services in the economy, distinguishing them from physical goods.
2. Exploring Service Sector Growth: Examine factors driving the growth of the service sector in India and how it influences marketing strategies.
3. Mastering Customer Relationship Management: Equip students with skills to effectively manage customer relationships through segmentation, targeting, and positioning strategies.
4. Developing Service Differentiation and Pricing: Enable students to create strategies to differentiate services, set appropriate prices, and overcome distribution challenges.
5. Ensuring Service Quality and Addressing Challenges: Educate students on the significance of service quality, provide tools like the Service Quality Gap Model, and assist in handling industry-specific challenges in service marketing.

Course Outcome - COs		Cognitive Skill
CO-01	To explain the significance of services marketing in the global economy and the deeper aspects of successful services marketing.	R,U
CO-02	To understand the core concepts of CRM paradigm and also know CRM as a business strategy. Equip the role of appropriate business process and technology management capabilities in managing customer relationships	U,A
CO-03	Understand and explain the nature and scope of services marketing and present about this in a professional and engaging manner	U,A
CO-04	Understand the expectations of customers and know how to translate this knowledge into <u>genuine value for customers</u>	A,E
CO-05	Understand current research trends in services marketing and management	E,S

R- Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S- Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	M	M	L	L	L	L	M	M
CO-02	S	S	M	M	M	M	S	S
CO-03	S	S	M	M	M	M	S	S
CO-04	S	M	L	S	M	S	S	S
CO-05	S	S	L	M	S	S	L	M

S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT I: Nature & Scope

9

Concept of services, importance, Goods & Services marketing, Emergence & Reasons for growth of service sector in India, Characteristics of services, Classifications of services, Environment of Service Marketing (Micro as well as Macro).

UNIT II: Understanding Customers

9

Concept of CRM, Relationship management in practice, Segmenting, Targeting & Positioning various services.

UNIT III: Product differentiation

9

Product differentiation, product levels, **Pricing of services**- pricing concepts, pricing strategies for services, use of differential pricing, **Place**-Service distribution, components of service delivery system, potential management, problems associated with services delivery.

UNIT IV Promotion

9

Advertising, Sales Promotion & Personal Selling in service industry, **People**- Importance of people in service marketing. role of various people involved, **Physical Evidence**-concept of

Physical Evidence, importance, types of Physical Evidence in various services, **Process**-concept, types of process, Role of process in various services

UNIT V:

9

Service quality Gap Model, Gronross Model of service quality (Internal marketing, external marketing and Interactive marketing). Challenges in Marketing of services, **Application of Service Marketing** to Hospitals, Educational Institutions, Tourism Industry.

TOTAL: 45 HOURS

Text Books:

1. G.Shainesh, Jagdish, N.Sheth, Customer Relationship Management A Strategic Prespective, Macmillan 2010
2. Alok Kumar et al, Customer Relationship Management : Concepts and applications, Biztantra, 2008

REFERENCES

1. _Service Marketing_ – Christopher Lovelock, Fifth Edition, Pearson Education, 2011.
2. _Services Marketing, Texts and Cases_ – Rajendra Nargundkar, McGraw Hill., New Delhi.
3. _Services Marketing: Valarie A Zeithaml, Mary Jo Binter_ – McGraw Hill. New Delhi.
4. _Essentials of Services Marketing_ – Hoffman and Bateason. Thomson Asia, Singapore.
5. _Marketing Management_ – Ramasawmy and Namakumari, Macmillan India 2009.

MS35A2	RETAIL MARKETING	L	T	P	C
		3	0	0	3

Objectives

- To understand what marketing means to business executives and academics in retail.
- To understand the ways that retailers use marketing tools and techniques to interact with their customer.

Course Outcome - COs		Cognitive Skill
CO-01	Examine insights into all functional areas of retailing	R,U
CO-02	Create Accounts of essential principles of retailing	U,A
CO-03	Analyze perspective of the Indian retailing scenario	U,A
CO-04	Understand the functions of retail business and various retail formats and retail channels	A,E
CO-05	Analyze Retail Market and Financial Strategy including product pricing	E,S

R- Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S- Synthesis

Mapping of Course Outcome with Programme Outcome

PO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
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CO								
CO-01	M	M	M	S	L	M	M	L
CO-02	L	M	M	S	L	L	S	L
CO-03	M	S	M	S	M	M	M	M
CO-04	M	S	M	S	S	M	S	S
CO-05	M	S	S	S	S	S	S	S

S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT I: Introduction to Retailing

9

An overview of Retailing-Types of Stores-Product Retailing vs. Service Retailing-Non store Retailing-Retail Strategy-Achieving competitive advantage and positioning Retailing Environment-Legal, Social, Economic, Technological, Issues-Trends in the Indian Retailing Industry.

UNIT II: Trade Area Analysis

9

Retail store location and Layout-Country/Region Analysis- Trade Area Analysis- Site evaluation and Selection-Store design and Layout-Comprehensive Store Planning-Exterior design and Layout -Interior store design and Layout- Interior design elements.

UNIT III: Merchandise Pricing

9

Planning merchandise needs and merchandise budgets- Methods for determining inventory Evaluation- Assortment planning, buying and vendor relations- Merchandise Pricing- Price Strategies-Psychological Pricing-Mark-up and markdown strategies.

UNIT IV: Communicating with the retail Customer

9

Communicating with the retail Customer- Retail Promotion Mix- Advertising-Sales Promotion- Publicity-Retail Selling Process- Retail database- In-store customer service.

UNIT:VGlobalization and changing retail formats

9

Globalization and changing retail formats–Online Retailing- International Retailing– Opportunities and Challenges- Market entry formulas- New customized formats (customized stores, portable stores, merchandise depots, retail theatre, service malls, customer-made stores, interactive kiosk 'shopping arcades')

TOTAL: 45 HOURS

Text Books:

1. Swapna Pradhan, retail management, text & cases, Tata McGraw-Hill Publishing company, New Delhi, 2008

REFERENCES

1. Chetan Bajaj, Tuli & Srivastava, Retail Management, Oxford University Press, New Delhi.2010
2. Giridhar Joshi, Information Technology For Retail, Oxford University Press, New Delhi.2009

MS35A3	PRODUCT AND BRAND MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES

- Develop a consumer-centric approach to building, measuring, and evaluating strategies that build brand equity for new and existing brands.
- Identify important issues related to planning and implementing brand strategies for a diverse group of marketing offerings (e.g., products, services, industrial goods, non-profits, etc.).
- Learn how to identify brand meaning and to measure brand strength for any market offering.
- Apply branding principles and marketing communication concepts and frameworks to achieve brand management goals and improve marketing performance

Course Outcome - COs		Cognitive Skill
CO-01	Explain the Role of product manager, Differentiate the Product management in consumer product industry and industrial product industry	R,U
CO-02	Define financial Analysis & Performance Appraisal for Product management, Explain market share, profitability	U,A
CO-03	Explain brand, Branding challenges and opportunities , Brand equity concept	U,A
CO-04	Elaborate Brand Performance, brand value chain, brand tracking studies, Analyze Brand architecture, Brand hierarchy, Designing brand strategy, New products, Brand extensions	A,E

R- Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S- Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	M	L	L	M	M	M	M
CO-02	S	S	M	L	M	M	M	S
CO-03	S	M	M	N	N	M	N	M
CO-04	S	S	L	N	S	M	S	L
CO-05	S	S	L	L	S	M	M	S

S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT I: Product Concepts

9

Product Concepts: Product Mix concepts, Product Classification. Product Planning: Marketing Plan, Portfolio Analysis, Market Potential and forecastingProduct Market Strategies. Product Life Cycle: Product ife Cycle Stages and corresponding Strategies, Product Evaluation

UNIT II: Product Positioning

9

Product Positioning: Concept, Product Differentiation, Positioning Strategies, Preference Analysis, Benefit SegmentationNew Products: New Product Categories, Organization for Product Management, prototyping, New Product Development Process, test marketing

UNIT III: Brands Vs Products**9**

Understanding Brands: Brands Vs Products, Benefits of branding; Brand attributes, Significance of branding to consumers & firms, selecting brand names

UNIT IV: Brand Awareness**9**

Awareness-Types of Brand Awareness, Brand Image- Types of Associations, Brand Identity, Brand Personality, Brand Positioning, Creating Core Brand Values; Bringing Brand to life: Growing, sustaining Brand equity- Customer Based Brand Equity, Sources of Brand Equity; Managing Brands: Building Branding Strategies, Brand Extensions, Brand Licensing and Franchising, Global Branding.

UNIT V: Brand Loyalty**9**

Loyalty Programs, Building Strong Brands. Measuring Brand Performance, Brand Extensions. Brand Equity Management: Brand Equity Measurement, Brand Leverage, Global Branding Strategies, Brand Audit, Role of Brand Manager, Branding Challenges & Opportunities. Brand Rejuvenation and Re-launch, Brand Development through Acquisition Takes Over and Merger, Relaunching the Brand, Need, Methods and Success Rate.

TOTAL: 45 HOURS**Text Books:**

1. Nichololas Ind, Living the Brand, Kogan Page Publishers
2. C.Merle Crawford, New Product Management, 11th Edition, Mc Graw Hill Education

REFERENCES

1. Donald Lehmann, Product Management, Tata McGraw Hill Education Private Limited
2. Keller, Kevin Lane, Strategic Brand Management: Building, Measuring and Managing BrandEquity, Pearson/Prentice Hall
3. Urban, Hauser, and Dholakia, N. Essentials of New Product Management, Prentice-Hall
4. Murphy, John, Brand Strategy, Cambridge, The Director Books, Prentice Hall

MS35A4	SALES MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES:

- Develop a plan for organizing, staffing, and training a sales force.
- Know the distinction between the skills required for selling and sales management.
- Identify the key factors in establishing and maintaining high morale in the sales force.
- Develop an effective sales compensation plan.
- Evaluate the performance of a salesperson.

Course Outcome - COs		Cognitive Skill
CO-01	To understand and evaluate the concept of Sales Management and Organization.	R,U
CO-02	To understand the roles personal selling, marketing policies, distribution policies, product policies and pricing policies	U,A
CO-03	To manage and enhance the effective sales operation, budget, organizing display, showroom and exhibitions.	U,A

CO-04	To understand Salesmanship, qualities and functions, types of salesman and psychology of customers.	A,E
CO-05	To manage the sales force recruitment & selection, training, formulation & conduction of sales training programme	E,S

R- Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S- Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	M	N	M	N	M	S	M
CO-02	S	M	M	M	N	S	N	M
CO-03	S	N	N	M	M	N	L	L
CO-04	S	L	L	M	N	M	M	S
CO-05	S	N	N	N	L	S	L	M

S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT I: Sales Management and Organisation

9

Objectives and sales management, sales executive as a coordinator, sales management and control, sales organisation - it's purpose, setting up a sales organisation, types of sales organisation.

UNIT II: Personal Selling

9

Objectives and theories of personal selling, analysing market potential, sales potential and sales forecasting method & evaluation, determining sales related marketing policies - product policies, distribution policies & pricing policies.

UNIT III: Sales Operations

9

Sales budget, sales territories, sales Quota's, control of sales, sales meeting and sales contest, organising display, showroom and exhibitions.

UNIT IV: Salesmanship

9

Sales Manager-Qualities and functions, types of salesman, prospecting, pre-approach & approach, selling sequence, psychology of customers.

UNIT V: Sales force Management

9

Recruitment & selection, training, formulation & conduction of sales training programme, motivation of sales personnel, compensation of sales personnel, evaluation and supervision of sales personnel.

TOTAL: 45 HOURS

Text Book:

1. Still, Cundiff & Govoni - Sales management & Cases, Prentice-Hall Of India Pvt

REFERENCES:

1. McMurry & Arnold - How to build a dynamic Sales Organisation - McGraw-Hill
2. Pradhan, Jakate & Mali - Elements of Salesmanship and Publicity - Kitab Mahal
3. Anderson R - Professional Sales Management - McGraw-Hill

MS35A5	CONSUMER BEHAVIOUR	L	T	P	C
		3	0	0	3

OBJECTIVES

1. To provide basic knowledge in fundamentals of marketing management
2. To understand the concepts of marketing
3. To understand the basic concepts of consumer behavior
4. To understand the consumer decision making process

Course Outcome - COs		Cognitive Skill
CO-01	To highlight the importance of understanding consumer behavior in Marketing	R,U
CO-02	To study the individual influences on consumers such as personality, perception and motivation	U,A
CO-03	To study the group influences on consumer such as family and opinion leadership	U,A
CO-04	To study the environmental factors influence the consumer behaviour	A,E
CO-05	To make decision using different models of consumer behaviour	E,S

R- Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S- Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	M	M	L	S	S	S	L
CO-02	L	S	M	S	L	M	S	L
CO-03	M	L	S	S	S	M	S	M
CO-04	L	S	S	M	M	S	M	M
CO-05	S	L	S	L	M	M	M	M

S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT I: Introduction to Consumer Behavior (CB)

9

Introduction to Consumer Behavior (CB): Nature and Importance of CB, Application of CB in Marketing, Consumer Research process.

UNIT II Individual Determinants of CB

9

Perception: process, perceived risk - Learning: principles, theories - Personality: nature, theories, self-concept, psychographic and life style - Attitude: Structural model of attitude, attitude formation & change - Motivation: needs/motives & goals, dynamic nature of motivation, Arousal of motives, theories

UNIT III: Group Determinants of CB

9

Reference group influence: types of consumer relevant groups, factors affecting group influence, application of reference group concept - Family: functions of family, family decision making,

family life cycle (FLC) - Opinion Leadership and Personal influence - Diffusion of Innovation: Adoption process. Diffusion process

UNIT IV: Environmental Influences on CB

9

Social class, Life style Profile of Social class, application to CB - Culture: characteristics, cross cultural understanding

UNIT V: Consumer Decision making Process

9

Problem recognition - Information Search Process and Evaluation - Purchasing process - Post purchase behavior - Models of CB-Nicosia, Howard & Sheth, Engel-Kollat Blackwell

TOTAL: 45 HOURS

TEXT BOOKS:

1. Loudan, David L and Bitta, A.J. Della - Consumer Behaviour- McGraw-Hill
2. Schiffman LG and Kanuk LL - Consumer Behaviour - Pearson Financial Times/Prentice Hall

REFERENCES:

1. Loudan, David L and Bitta, A.J. Della - Consumer Behaviour- McGraw-Hill
2. Schiffman LG and Kanuk LL - Consumer Behaviour - Pearson Financial Times/Prentice Hall
3. Nair, Suja R - Consumer Behaviour in Indian Perspective - Himalaya Publishing House
4. Mowen, Jon - Consumer Behaviour - Prentice Hall

MS35A6	ADVERTISING MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES

1. To understand the basic aspects of Legal, Ethical and Social aspects of Advertising.
2. To understand the role of promotional mix in targeting and segmentation.
3. To determine the intrinsic value of creativity in advertising, creative strategy and process.
4. To understand the promotional programs and their effectiveness.

Course Outcome – Cos		Cognitive Skill
CO-01	To understand the basic aspects of Legal, Ethical and Social aspects of advertising	R,U
CO-02	To identify the role of promotional mix in targeting and segmentation	U,A
CO-03	To determine the intrinsic value of creativity in advertising, creative strategy and process	U,A
CO-04	To plan and establish media objectives, Media strategies and Media mix	A,E
CO-05	To measure the effectiveness of the promotional program, Advertising Research, Market testing, testing via internet	E,S

R- Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S- Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	M	M	L	L	L	L	M	M
CO-02	S	S	M	M	M	M	S	S
CO-03	S	S	M	M	M	M	S	S

CO-04	S	M	L	S	M	S	S	S
CO-05	S	S	L	M	S	S	L	M

S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT I: Introduction to Advertising

9

Advertising, It's role in the marketing process; Legal, Ethical and Social aspects of advertising. Communication - processes of communication; integrated marketing communications, Its evolution, reasons for its growth and its role in branding.

UNIT II: Promotional mix

9

The promotional mix; segmentation, Targeting and positioning and their role in promotion. Promotional objectives, determination, types and approaches, DAGMAR approach, problems in setting objectives; Advertising budget, establishment and allocation, budgeting approaches.

UNIT III:

9

Advertisement copy, Its components and types; The importance of creativity in advertising, creative strategy and process, implementation and evaluation.

UNIT IV: Media

9

Media Planning, Establishing Media objectives, Media strategies, Media mix, Reach Vs. Frequency, Creative aspects, budget considerations, Evaluation of Broadcast media, Print media, Support media, Internet and interactive media etc.; computers in Media planning.

UNIT V: Advertising Research

9

Measuring the effectiveness of the promotional program, Advertising Research, Market testing, testing via internet, Pre testing, Post testing, Laboratory Tests, Field tests, PACT (Positioning Advertising Copy Testing).

TOTAL: 45 HOURS

Text Books:

1. Aaker, David A. etc., Advertising Management, 4th edition, PHI, 1985
2. Belch, George E. and Belch, Michael A.; Advertising and promotion, Tata McGraw Hill, New Delhi

REFERENCES:

1. Ogilvy David, Ogilvy on Advertising, London, Longman.
2. Jones, John Philip, What's in a brand, Tata McGraw Hill, New Delhi
3. Chunawalla, S.A., Advertising, Sales and Promotion Management, Himalaya Publishing House, Mumbai.
4. Mohan, Manendra; Advertising Management, Tata McGraw Hill, New Delhi

MS35A7	RURAL MARKETING	L	T	P	C
		3	0	0	3

OBJECTIVES

1. To Understand and Explore the Special Areas in Rural Marketing Environment.
2. Understand the Rural market Distribution.
3. Understand the functions performed by the Agricultural marketing system.
4. To understand the structure and Importance of rural banking in Indian Economy.

Course Outcome - COs		Cognitive Skill
CO-01	Categorize issues in rural markets and Analyze marketing environment, consumer behaviour, distribution channels, marketing strategies, etc. in the context of rural markets in India	R,U
CO-02	Explore the Special Areas in Rural Marketing Environment, Understand opportunities and emerging challenges in the upcoming rural markets	U,A
CO-03	Understand the Rural market distribution , Know about the consumer behaviour and trends in Rural marketing	U,A
CO-04	Enable to understand the structure and importance of rural banking in Indian Economy, Identify basic market problems and assess the effect of market imperfections on the performance of the marketing	A,E
CO-05	Understand the functions performed by the agricultural marketing system, Make students aware of current issues and trends in agricultural markets	E,S

R- Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S- Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	M	M	M	S	L	M	M	L
CO-02	L	M	M	S	L	L	S	L
CO-03	M	S	M	S	M	M	M	M
CO-04	M	S	M	S	S	M	S	S
CO-05	M	S	S	S	S	S	S	S

S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT I: Concept & scope of rural market

9

Concept & scope of rural market, Rural development as a core area, Efforts put for Rural development in Five years plans. Rural markets, Characteristics, Rural markets, Environmental factors.

UNIT II: Rural Consumer Behavior

9

Rural Consumer Behaviour, Rural Consumer Vs Urban Consumers – a comparison, Relevance of Marketing mix for Rural market/Consumers. Problems in rural market

UNIT III: Segmentation

9

Segmentation, Targeting & Positioning for rural market, Market forces, components of different Product Strategies, Pricing Strategies, Promotional Strategies & Distribution Strategies for Rural consumers.

UNIT IV: Agricultural Markets

9

Understanding Agricultural Markets, Nature & scope, Objectives of Agriculture Marketing, Challenges in Agriculture Marketing, Agriculture Marketing & its Economic importance, Agricultural Produces and their market.

UNIT V: Export potential for Agri-products

9

Export potential for agri-products, Major of Government and Non-Govt. Agencies in the development of Rural and Agricultural, Sector Marketing Strategies for Seed; Fertilizers; Pesticides; Farm equipment. Roles.

TOTAL: 45 HOURS

TEXT BOOKS:

1. Badi & Badi - Rural Marketing - Himalaya Publishing House

2. Mamoria, C.B. & Badri Vishal - Agriculture problems in India - Kitab Mahal

REFERENCES:

1. Arora, R.C - Integrated Rural Development - S. Chand Limite

2. Gopalswamy.T.P - Rural Marketing - Vikas Publishing House Pvt Limited

MS35A8	STRATEGIC MARKETING MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES

1. To understand the nature and importance of strategic marketing management
2. To understand the concepts and ideas of strategic marketing
3. To understand and know about the financial Strategies- Financial Policy Issues, Sources of finance control of capital issues etc.
4. To understand and know about Personnel policies and their significance recruitment, Industrial relations policy, Settlement of Disputes

Course Outcome – Cos		Cognitive Skill
CO-01	Compare and contrast the key principles of marketing strategy	R,U
CO-02	Explain marketing and strategy concepts and ideas	U,A
CO-03	Think strategically about marketing issues and provide recommendations	U,A
CO-04	Prepare a professional, logical and coherent report in the form of a marketing plan	A,E
CO-05	Deliver an oral presentation in a professional, engaging manner and Successfully work as a team	E,S

R- Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S- Synthesis

PO CO	Mapping of Course Outcome with Programme Outcome	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01		S	N	L	S	M	M	L	N
CO-02		S	S	M	S	M	L	M	S
CO-03		S	S	L	S	M	L	M	M
CO-04		S	S	M	S	S	M	M	L

CO-05	S	N	M	S	M	L	L	M
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S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT I: Introduction Strategic Management 9

Strategic Management –Its Nature and Importance, Skills, Knowledge and Attitudes, Group aspects of Strategic Management, Characteristics of Business Policy and Corporate Strategy, Norms of Strategy Making, Organizational Mission, Corporate Objectives and goods, Analysis of Internal Resources, Strength and weaknesses, Strategic advantage analysis- Factors of common concern, Marketing and distribution , financing and Accounting , Production and operations management , R&D, Human Resources and other organizational factor, sources of data for internal analysis and diagnosis.

UNIT II: Growth or expansion strategy 9

Growth or expansion strategy–Diversification strategy, Types-Horizontal, Concentric, Conglomerate, Vertical, various types of integrations, Retrenchment strategy and its variants: External Growth Strategy – Merger, Acquisition and Joint Ventures.

UNIT III: Functional Policies 9

Functional Policies –Production Policies, Involvement, Integration and choice with respect to production process action activities, Govt. Policies, backward areas and plant locations consideration in India. Maintenance and replacement facilities: Purchasing Policies-Make or buy decisions, criteria for vender selection. Co-ordination of Purchase and production with sales.

UNIT IV: Marketing Strategies and Policies Marketing Decision 9

Marketing Strategies and Policies Marketing Decision, Variable and Policy issues, product line and product mix policy, PLC, Product Positioning Strategy and Market recommendation, customer and channel Policies, Pricing Policies, Proportional Policies, Optional Marketing Mix.

UNIT V: Financial Strategies 9

Financial Strategies- Financial Policy Issues, Sources of finance control of capital issues, Types of securities. Financial leverage, Investment and capital allocation policy, capital budgeting, dividend policy, Personnel policies and their significance recruitment, Industrial relations policy, Settlement of Disputes.

TOTAL: 45 HOURS

TEXTBOOKS:

1. P.K. Ghosh: Business Policy, Strategy, Planning and Management
2. Christensen, Andrews Dower: Business Policy- Text and Cases

REFERENCES:

1. William F. Gkycj: Business Policy – Strategy Formation and Management Action
2. Bongee and Colonan: Concept of Corporate Strategy
3. Peter F. Drucker: Management Tasks, Responsibilities, Practices

MS35A9	E-MARKETING	L	T	P	C
		3	0	0	3

OBJECTIVES

1. To Understand electronic marketing and marketing analytics context
2. Evaluate various aspects of E-Marketing and analytics from the perspective of creating Customer Value
3. To Understand and learn about E-commerce platforms
4. Evaluate various aspects of E-Marketing and analytics from the perspective of creating Customer Value

Course Outcome – Cos		Cognitive Skill
CO-01	Understand electronic marketing and marketing analytics context	R,U
CO-02	Evaluate various aspects of E-Marketing and analytics from the perspective of creating Customer Value	U,A
CO-03	A Glance of the concept of digital Commerce Implementation	U,A
CO-04	Understanding the uses of International digital Media Channels, Listening Tools and Management Tools	A,E
CO-05	Understanding of How to Encourage Positive Chatter in Social Media	E,S

R- Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S- Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	N	S	M	M	M	M
CO-02	L	S	M	L	S	L	M	M
CO-03	L	M	S	M	L	M	S	L
CO-04	M	L	L	S	L	M	L	S
CO-05	S	S	M	L	M	M	M	M

S-Strong, M- Medium, L-Low, N- Not Relevant

UNIT I: Introduction to World Wide Web

9

Introduction to World Wide Web – Intelligent Web Designing – Software Tools– IP, TCP, HTTP, HTML, Cryptography – Consumer Interface Technologies – OALP and Data Mining

UNIT II :

9

Principles – Potential – Knowledge Management – Data Warehousing – Application of E-Commerce in Different Sector – Service, Industry, Domestic – Multidisciplinary Approach to E-Commerce, Customer Relation Management.

UNIT III: Business Model

9

Business Model – E-Marketing – Intelligent Agents – Economics in E-Commerce – Equilibrium Price – Supply Chain Management – ERP Tools and Modules – Opportunities and Challenges – Mobile Commerce

UNIT: IV

9

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

UNIT: V E-Commerce Industries

9

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.

TOTAL: 45 HOURS

TEXTBOOKS:

1. Bajaj, K.K. and Nag, D., E-Commerce, 2nd Edition, Tata McGraw-Hill Education, 2005
2. Chaffey, D., E-Business and E-Commerce Management, 3rd Edition, Pearson, 2009.

REFERENCES:

1. Chan, H., Lee, R., Dillon, T. and Chang, E., E-Commerce: Fundamentals and applications, 2007.
2. Diwan, P. and Sharma, S., E-Commerce: A Manager's Guide to E-Business, Vanity Books International, 2002.
3. Joseph, P.T., E-Commerce: An Indian Perspective, 4th Edition, PHI, 2012.
4. Kalakota, R. and Whinston, A., Frontiers of Electronic Commerce, Pearson, 2011.
5. Laudon, K.C., and Traver, C.G., E-Commerce: Business, Technology, Society, 4th

ELECTIVE CURRICULUM

B. FINANCE

Sl.No	Code	Name of the Subjects	L	T	P	C
1	MS35B1	Indian Capital Market	3	0	0	3
2	MS35B2	Security Analysis and Portfolio Management	3	0	0	3
3	MS35B3	International Financial Management	3	0	0	3
4	MS35B4	Management of Financial Services & Institutions	3	0	0	3
5	MS35B5	Financial Derivatives	3	0	0	3
6	MS35B6	Mergers & Acquisitions	3	0	0	3
7	MS35B7	Risk and Insurance Management	3	0	0	3
8	MS35B8	Strategic Financial Management	3	0	0	3
9	MS35B9	Corporate Taxation	3	0	0	3

MS35B1	Indian Capital Market	L	T	P	C
		3	0	0	3

OBJECTIVES:

- To discuss the evolution and establishment of SEBI
- To differentiate the different types of capital markets and the role of intermediaries in Indian Capital market.
- To explain and illustrate with examples the SEBI Regulations in stock trading.
- To describe the functions of various stock exchanges.

Course Outcome - COs		Cognitive Skill
CO-01	Upon completion of the unit on Capital market Students will be able to: Understand and describe the need for regulatory mechanism of Capital market and Role of Intermediaries in the Capital Market	R, U
CO-02	Upon completion of the unit on Primary / Secondary Markets Students will be able to: Understand the functions of stock market , Shares trading and settlement and Stock Indices	R, U, A, An, E
CO-03	Upon completion of the unit on Capital Issues Students will be able to: explain how to manage the pre Issue and Post Issue activities	R, U, A, An, E
CO-04	Upon completion of the unit on Derivatives Market Students will be able to: evaluate the derivatives market and to understand the regulations and exchange trading in derivatives	R, U, A, An, E
CO-05	Upon completion of the unit on Future, Option and Swap, Students will be able to: explain the specifications of Future and Options Describe the types of SWAPS and their valuation	R, U, A, An, E

R- Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S- Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	S	S	S	S	M
CO-02	S	M	M	S	S	S	S	S
CO-03	S	S	M	S	M	S	S	S
CO-04	S	S	S	S	S	S	M	S
CO-05	S	S	M	S	M	S	S	S

S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT I: Capital Market –Introduction

9

Capital Market – Evolution – need for regulatory mechanism – establishment of SEBI – SEBI Act / Rules and Regulations – Role of Intermediaries in the Capital Market - **Case Study**

UNIT II: Primary / Secondary markets**9**

Primary / Secondary markets: Bond Market – Money Market – Capital Market- Foreign Exchange Market – Stock Exchanges: National Stock Exchange — Bombay Stock Exchange – Stock Indices- - **Case Study**

UNIT III: Capital Issues**9**

Capital Issues – equity and debt instruments – pricing – credit rating of debt instruments – insider trading – Management of pre-issue and post issue activities including issue of prospectus / offer documents – Rights issue – bonus issue – private placements - **Case Study**

UNIT IV: Derivatives Market**9**

Derivatives – Definition – Types – Forward Contracts – Futures Contracts – Options – Swaps – Differences between Cash and Future Markets – Types of Traders – OTC and Exchange Traded Securities – Types of Settlement – Uses and Advantages of Derivatives – Risks in Derivatives. - **Case Study**

UNIT V: Future, Option and Swap**9**

Specifications of Futures Contract - Types of Futures Contracts – Securities, Stock Index Futures, Currencies and Commodities - Specifications of Options – Call and Put Options - options on Securities, Stock Indices, Currencies and Futures - Differences between future and Option contracts - Definition of SWAP – Interest Rate SWAP – Currency SWAP – Valuation of Interest rate SWAPs and Currency SWAPs - **Case Study**

TOTAL: 45 HOURS**TEXT BOOKS**

1. Bharat's Compendium on SEBI, Capital Issues and Listing.
2. Nabhi's Manual for Capital Issues, SEBI and Mutual Funds, Nabhi Publications.
3. 'Capital Market Management' – V.A. Avadhani. Himalaya Publishing House, New Delhi.
4. 'Futures and Other Derivative Securities', John Hull, Publisher: Pearson US

REFERENCES

- 1.–Capital Markets in India – Rajesh Chakrabarti, Sage Publications
2. 'Derivatives and Risk Management', SundaramJanakiramanan, Pearson Education India
3. Indian capital Market- Uma and Arumugam- Tata Mcgraw Hill- New Delhi
4. Indian capital Market Trends and Reforms –Aringdom Banerjee ICFAI University press

MS35B2	SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES

- To analyze bond prices, yields, and fixed-income portfolios
- To analyze and evaluate the securities, which are traded in financial markets.
- To explain how options and futures are valued and their uses as hedging instruments
- To explain about macroeconomic analysis, industry analysis, equity valuation, financial statement analysis and technical analysis.
- To construct optimal portfolios and illustrate the theory and empirical applications of asset-pricing models.
- To classify the implications of the market efficiency evidence on active portfolio management.

Course Outcome - COs		Cognitive Skill
CO-01	Upon completion of the unit on Investment Environment Students will be able to: Understand and describe the basic concepts of investment, the financial markets and its regulatory authorities	R, U
CO-02	Upon completion of the unit on Security Analysis Students will be able to: Understand the risk and return characteristics of securities and analyze and value the financial instruments, options and futures	R, U, A, An, E
CO-03	Upon completion of the unit on Fundamental Analysis Students will be able to: Determine intrinsic value of securities by way of doing Macroeconomic Analysis, Industry Analysis and Company Analysis	R, U, A, An, E
CO-04	Upon completion of the unit on Technical Analysis and the Efficient Market Theory Students will be able to: Differentiate the Fundamental analysis and Technical analysis, Forecast the stock market price movements and then make investments decisions	R, U, A, An, E
CO-05	Upon completion of the unit on Portfolio Management, Students will be able to: Understand the risk and return characteristics of portfolio and its construction and diversification: Illustrate the performance evaluation techniques of portfolio and make selections	R, U, A, An, E

R- Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S- Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	M	S	S	S	M	M
CO-02	S	M	S	S	S	M	S	M
CO-03	S	M	S	S	M	S	S	M
CO-04	S	S	S	M	S	S	S	M
CO-05	S	M	S	S	M	S	S	M

S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT I: Investment Environment

9

Introduction to Securities –Investment process – Investment alternatives – Sources of Investment information- Securities Markets: Participants in the Securities market - Primary market – Secondary market – Equity market - Debt market – Derivatives market – Securities Exchange Board of India

UNIT II: Security Analysis

9

Risk and Return Analysis: Risk – types - measures of risk - Time value concept - Bond return and valuation: - Stock return and valuation: Dividend Discount Model - Constant growth model – Two stages Growth model- Preferred stock valuation - Valuation of Options: Binominal Model – Black-Scholes Model –Futures: Pricing- Cost of Carry Model -Hedging

UNIT III: Fundamental Analysis::

9

Macroeconomic Analysis – Economic forecasting – Stock investment decisions – Techniques of economic forecasting -. Industry Analysis: Classification of Industries – Industry life cycle – Key issues in an Industry analysis. Company Analysis: Strategy analysis - Accounting analysis – Financial Analysis – Estimation of Intrinsic value

UNIT IV: Technical Analysis and the Efficient Market Theory

9

Technical Analysis: Assumptions – Technical analysis vs. Fundamental analysis – Charting techniques - Dow Theory – Moving averages analysis – Relative strength analysis – Rate of change –Efficient market theory – Random walk theory

UNIT V: Portfolio Management

9

Portfolio Construction and Choice: Diversification and Portfolio Risk– Portfolio return and risk – Markowitz Model – The sharp index model– Capital Asset Pricing Model- Portfolio Management Process: Specification of investment objectives and constraints- Quantification of capital market expectations - Choice of asset mix –Formulation of Portfolio strategy- Selection of securities–Portfolio execution - Portfolio revision- Performance Evaluation: Sharp's, Treynor's and Jensen's measures

TOTAL: 45 HOURS

TEXT BOOKS

1. 'Investment Analysis and Portfolio Management' – Prasanna Chandra, McGraw Hill Education (India) Private Ltd Fifth Edition. 2017.
Unit I - Chapter 1 1.3-1.28 Chapter 2 2.1-2.2.28 Chapter 3-3.1-3.48
Unit II – Chapter 4 4.3 - 4.28, Chapter 5 5.1- 5.22
Unit III – Chapter 14 14.1-14.26 Chapter 15 15.1- 15.13
Unit IV – Chapter 16 16.1 – 16.18
Unit V - Chapter 7 7.3 -7.23, Chapter 8 8.1- 8.32 Chapter 22 22.3-22- 40 Chapter23 23-1 23.26
2. 'Security Analysis and Portfolio Management' – Donald E.Fischer& Ronald J.Jordan, Prentice Hall of India Private Ltd., New Delhi, 2002
Unit I - Part I 1-1.16 2 22 -37 3 45- 59 4 65-85 5 89- 103 6 105-119
Unit II – Part II 7 124-132 8 153- 170 9 185-199 15 339-358 16 373- 385
Unit III – Part II 10 214 -227 11 235-250
Unit IV – Part II 12 275 – 297 13 305 – 315 14 325-335
Unit V - Part III 17 393 – 396 18 404 – 412 19 430 – 437 20 452 – 459 21 482-492

REFERENCES

1. 'Security Analysis and Portfolio Management' – PunithavathyPandian, Vikas Publishing House Private Ltd., Second edition 2013
2. 'Securities Analysis and Portfolio Management' – V.A. Avadhani, Himalaya Publishing House, 1997
3. 'Security Analysis and Portfolio Management' – Dr. Kevin, Publishers Prentice-Hall of IndiaInvestment Management' – V.K. Bhalla, S.Chand& Company Ltd., Seventh Edition 2002

MS35B3	INTERNATIONAL FINANCIAL MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES

- To examine the markets and draft International Trade Documents
- To demonstrate basic knowledge of the determination of exchange rates and how to assess financial markets.
- To explain the role of international bodies controlling the Global financial markets
- To illustrate an understanding of Exchange rates and International Banking Activities both in a closed and Open Economy.

Course Outcome - COs		Cognitive Skill
CO-01	Upon completion of the unit on International finance and documentation, students will be able to: Describe the emerging challenges of International financial markets, exchange rates, international trade risks and documentation	R, U
CO-02	Upon completion of the unit on Exchange rate theories students will be able to: Illustrate the determination of exchange rate	R, U, A, An, E
CO-03	Upon completion of the unit on International Monetary system students will be able to: List the features and reforms of International monetary system and European Monetary system	R, U, A
CO-04	Upon completion of the unit on Factors affecting Exchange rates students will be able to: Describe macro-economic factors affecting exchange rates and Balance of payments	R, U, A, An
CO-05	Upon completion of the unit on Currency Derivatives, Students will be able to: Describe the role of international portfolio investors and illustrate the features, options and swaps	R, U, A, An, E

R- Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S- Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	M	S	M	M	S	M
CO-02	M	S	S	S	M	S	M	S
CO-03	S	M	M	S	M	M	M	S
CO-04	S	S	S	S	M	M	S	S
CO-05	S	S	M	S	S	M	S	M

S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT I: International Finance- Introduction**9**

International Finance: Meaning, importance – emerging challenges – recent changes in global financial markets – foreign exchange markets – exchange rate definitions: spot and forward rates – alternative exchange rate regimes. International trade finance – International trade risks – documentation in international trade - Letter of Credit, Draft and Bill of Lading.-**Case Study**

UNIT II: Exchange rate Theories**9**

Exchange rate determination: theories and models of exchange rate –purchasing power parity theory – asset market model – current account monetary model –capital account monetary model, portfolio balancing model – exchange rate of rupee – recent trends – convertibility of Indian rupee.- **Case Study**

UNIT III: International monetary system**9**

International monetary system: brief history: – features – present exchange rate system – reforms of international monetary system – European monetary system – a note on international debt – ADB, IBRD and IMF: functions – special schemes of lending –conditionality's of IMF lending – IMF role in International liquidity – SDRs – International financial markets and instruments. - **Case Study**

UNIT IV: Factors Affecting Exchange Rates**9**

Balance of payments: meaning – accounting principles – valuation and timing – components – deficit and surplus – macro economic factors affecting exchange rate – some open economy identities – open economy multipliers SWIFT and Inter-bank clearing among banks in different countries -**Case Study**

UNIT V: Currency Derivatives**9**

Financing a global firm, Overview of FEMA – Global cost and availability of capital – Role of international portfolio investors – Sourcing equity globally – Foreign equity issuance and listing. Currency derivatives: – futures, options and swaps – currency futures and currency forwards – swap market – currency swap – interest swaps – swap agreement. Exchange rate risks and risk management tools: Hedging – forward deals. - **Case Study**

TOTAL: 45 HOURS**TEXT BOOKS**

1. 'International Finance' – Apte, P.G., Tata McGraw Hill, New Delhi, 2004.
2. 'International Finance' – Arthur Stonehill et al.: Pearson Education, Dehli.
3. 'International Financial Management' – Apte, P.G., Tata McGraw Hill, New Delhi, 2004.

REFERENCES

1. 'Multinational Financial Management' – Alan C. Shapiro, Prentice Hall of India, New Delhi.
2. 'Multinational Finance' – Eiterman, David K, et al: Pearson Education, New Delhi, 2004.
3. 'International Finance' – Keith Pilbeam, Palgrave, New York.
4. 'International Finance' – Maurice D Levi: Tata McGraw Hill, New Delhi.
5. 'International Economics' – Soderston B.O.: Macmillan, London.
6. 'Bare Act of FEMA' – Latest Edition.

MS35B4	MANAGEMENT OF FINANCIAL SERVICES AND INSTITUTIONS	L	T	P	C
		3	0	0	3

OBJECTIVES

- To identify the organizational framework and the functions of corporate financial services.
- To Justify the importance of financial services and institutions
- To differentiate the various retail financial services and its functions.
- To explain the role of various credit rating institutions and its functions.
- To demonstrate the knowledge of the procedures involved in merchant banking.

Course Outcome - COs		Cognitive Skill
CO-01	Upon completion of the unit on Financial Services, students will be able to: Identify the organizational framework and explain the functions of corporate financial services	R, U
CO-02	Upon completion of the unit on Retail financial services students will be able to: Justify the importance of Retail Financial Services and Institutions	R, U, A, An, E
CO-03	Upon completion of the unit on Regulatory frame work of Financial Institutions students will be able to: Explain the Regulatory frame work of Financial Institutions and the role of various credit rating institutions and its functions.	R, U, A
CO-04	Upon completion of the unit on the Role of Merchant Banking Students will be able to: Describe the functions and pricing strategies of Merchant Banking and Demonstrate the knowledge of the procedures involved in merchant banking.	R, U, A, An
CO-05	Upon completion of the unit on Consumer Credits, Students will be able to: Describe the Recent Developments in Factoring and Forfeiting	R, U, A, An, E

R- Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S- Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	M	S	S	S	M	S	S
CO-02	S	S	M	S	S	S	M	S
CO-03	S	S	M	S	M	S	M	S
CO-04	S	S	M	S	M	S	S	S
CO-05	S	S	S	S	S	S	S	S

S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT I: Financial Services – Introduction**9**

Introduction to financial Services – characteristics of services – Corporate financial services – organizational frame work – functions regulatory and supervisory guidelines and procedures – credit rating services – venture capital services – leasing – factoring and forfeiting, depository – securitization – Banking services – underwriting – corporate Insurance. - **Case Study**

UNIT II: Retail financial services**9**

Retail financial services – credit cards – Debit cards – smart cards – automated Teller Machines – Electronic fund Transfer – Electronic clearing – Portfolio management services – Broking services – Consumer credit – Hire purchase finance – housing finance – personal tax counseling – Internet Banking – Virtual Banking – Core Banking. - **Case Study**

UNIT III: Regulatory frame work of Financial Institutions**9**

Regulatory and supervisory frame work – Role of RBI, SEBI, DFHI, SHCI and Ministry of Finance, Govt. of India – finance Bill and financial services –Stock Exchanges: Role and organization of BSE and NSE – OTCEI. Credit Rating Institutions: CRISIL, ICRA, CARE – International credit rating institutions, Depository institutions: CDSL, NDSL – Role of LIC as investment institution – Merchant banks.-**Case Study**

UNIT IV: Role of Merchant Banking**9**

Role of Merchant Banking in Appraisal of projects, Designing Capital Structures and Instruments – Issue Pricing – Pricing – Preparation of prospectus selection of bankers, Advertising Consultants etc. – Role of Registrars – Underwriting Arrangements. Dealing with bankers to the Issue, Underwriters, Registrars, and Brokers. – Offer for sale – Book Building – Green Shoe Option – E- IPO Private Placement – Bought out Deals – Placement with Fls, MFs, Flls, etc. off – Shore Issues. – Issue Marketing – Advertising Strategies – NRI Marketing – Post Issue Activities. - **Case Study**

UNIT V: Consumer Credits**9**

Consumer Credit – Credit Cards – Real Estate Financing – Bills discounting – Recent Developments in Factoring and Forfeiting – Venture Capital – Denomination of commercial paper – Period – Issue and discount – Procedure – Stand-by facility - **Case Study**

TOTAL: 45 HOURS**TEXT BOOKS**

1. ‘Financial Services’ –Khan M.Y, Tata McGraw Hill, New Delhi, 2004.
2. ‘Marketing of Financial Services’ – Avadhani V.A, Himalaya Publishing House, New Delhi.
3. ‘Marketing of Financial Services’ – Pezzulion, Macmillan, India Ltd., New Delhi.

REFERENCES

1. ‘Financial Markets and Services’ – Gordon and Natarajan, Himalaya Publishing House, New Delhi.
2. ‘Manual of Merchant Banking’ – Dr. J.C. Verma.
3. Management of Financial Services – Batra A S, Deep & Deep Publications - New Delhi
4. Management of Organizing Financial Services Croft et al., AITPS New Delhi – 2002

MS35B5	FINANCIAL DERIVATIVES	L	T	P	C
		3	0	0	3

OBJECTIVES

- To possess good skills in hedging risks using derivatives.
- To secure their investment portfolio against the market risk and price movements.
- To Assuming an opposite position in the derivatives market
- To Transfer the risk of loss to those others who are ready to take it.
- To enable students Understand the nuances involved in derivatives and understand the basic operational mechanisms in derivatives.

Course Outcome - COs		Cognitive Skill
CO-01	Upon completion of this unit Students will be able to understand and describe the types, uses of derivative and the risk involved in it.	R, U
CO-02	Upon completion of this unit Students will be able to: Illustrate the specifications, types, pricing strategies of Futures Contract and Hedging using the futures	R, U, A, An, E
CO-03	Upon completion of this unit Students will be able to: List the features, explain types of options and differentiate the future and option contracts	R, U, A
CO-04	Upon completion of the unit on SWAP students will be able to: Describe the types of SWAPS and their valuation and its Risk	R, U, A, An
CO-05	Upon completion of the unit on Derivatives in India, Students will be able to Describe the Evolution of Derivatives Market in India and explain the regulations and trading of securities	R, U, A, An, E

R- Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S- Synthesis

Mapping of Course Outcome with Programme Outcome

PO \ CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	M	M	M	S	M
CO-02	S	M	S	S	S	S	M	S
CO-03	S	S	S	S	M	S	M	S
CO-04	S	S	M	S	M	S	S	S
CO-05	S	S	M	S	M	S	S	M

S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT I: INTRODUCTION

10

Derivatives – Definition – Types – Forward Contracts – Futures Contracts – Options – Swaps – Differences between Cash and Future Markets – Types of Traders – OTC and Exchange Traded Securities – Types of Settlement – Uses and Advantages of Derivatives – Risks in Derivatives.

UNIT II: FUTURES CONTRACT**10**

Specifications of Futures Contract - Margin Requirements – Marking to Market – Hedging using Futures – Types of Futures Contracts – Securities, Stock Index Futures, Currencies and Commodities – Delivery Options – Relationship between Future Prices, Forward Prices and Spot Prices.

UNIT III: OPTIONS**10**

Definition – Exchange Traded Options, OTC Options – Specifications of Options – Call and Put Options – American and European Options – Intrinsic Value and Time Value of Options – Option payoff, options on Securities, Stock Indices, Currencies and Futures – Options pricing models – Differences between future and Option contracts.

UNIT IV: SWAPS**7**

Definition of SWAP – Interest Rate SWAP – Currency SWAP – Role of Financial Intermediary – Warehousing – Valuation of Interest rate SWAPs and Currency SWAPs Bonds and FRNs – Credit Risk.

UNIT V: DERIVATIVES IN INDIA**8**

Evolution of Derivatives Market in India – Regulations - Framework – Exchange Trading in Derivatives – Commodity Futures – Contract Terminology and Specifications for Stock Options and Index Options in NSE – Contract Terminology and specifications for stock futures and Index futures in NSE – Contract Terminology and Specifications for Interest Rate Derivatives.

TOTAL: 45 PERIODS**TEXT BOOKS**

1. John.C.Hull, Options, Futures and other Derivative Securities', PHI Learning, 9th Edition, 2012
2. Keith Redhead, 'Financial Derivatives – An Introduction to Futures, Forwards, Options and SWAPs', – PHI Learning, 2011.

REFERENCES

1. Stulz, Risk Management and Derivaties, Cengage Learning, 2nd Edition, 2011.
2. Varma, Derivaties and Risk Management, 2ndt Edition, 2011.
3. David Dubofsky – 'Option and Financial Futures – Valuation and Uses, McGraw Hill International Edition.
4. S.L.Gupta, Financial Derivaties- Theory, Concepts and Practice, Prentice Hall Of India, 2011.
5. Website of NSE, BSE.

MS35B6	MERGERS AND ACQUISITIONS	L	T	P	C
		3	0	0	3

OBJECTIVES

- To equip the students with the nuances involved in mergers and acquisition process.
- To understand the student with the techniques required handling post-merger.
- To enable student to understand Regulatory framework for mergers and acquisitions
- To understand the process involved in mergers and acquisitions and the available takeover defenses.

Course Outcome - COs		Cognitive Skill
CO-01	Upon completion of this unit Students will be able to understand and describe objectives, types and forms of Corporate Restructuring, Illustrate the theories and procedure of Merger,	R, U
CO-02	Upon completion of this unit Students will be able to: Illustrate the regulatory framework for Mergers and Acquisition	R, U, A, An, E
CO-03	Upon completion of this unit Students will be able to:explain the different types of Valuation and Financing for Merger and Acquisition	R, U, A
CO-04	Upon completion of this unit Students will be able to: Describe the Critical success factors for post-merger integration and Steps for successful integration	R, U, A, An
CO-05	Upon completion of this unit Students will be able to: Describe the Internal and External control mechanism, Takeover tactics and Takeover defenses	R, U, A, An, E

R- Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S- Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	M	M	S	S	S	S	M
CO-02	M	S	M	S	M	S	S	M
CO-03	S	S	M	S	S	S	M	S
CO-04	S	M	S	S	M	M	S	S
CO-05	M	S	S	M	S	M	S	M

S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT I: INTRODUCTION

9

Corporate Restructuring – meaning, objectives, types and forms, motives for restructuring – meaning of Mergers and Acquisitions, types, causes, distinction between Mergers and Acquisitions, Merger procedure, Scheme for Merger, theories of Merger, cross border Mergers and Acquisitions.

UNIT II: REGULATORY FRAMEWORK FOR MERGERS AND ACQUISITION

9

Compliance with Indian Companies Act, Competition Act 2002, Income Tax Act 1961, Securities and Exchange Board of India (Substantial Acquisition of Shares and Takeovers) Regulations, 2011

UNIT III: MERGER AND ACQUISITION PROCESS, FINANCING AND ACCOUNTING FRAME WORK

11

Due Diligence – types, screening due diligence, challenges and checklist - Valuation for Merger and Acquisition – concepts of value, methods of Enterprise and Equity valuation, Brand, Goodwill, Human resources, Customer Relationships valuation, Firm valuation, Cost of Capital, Relative valuation, Issues in Valuation, Synergy and Value creation – Financing Mergers and

Acquisitions – equity, debt and venture capital funds – Negotiation, Deal structuring and Methods of payments in mergers and acquisitions – Accounting for Mergers and Acquisitions.

UNIT IV: POST-MERGER INTEGRATION 8

Critical success factors for post-merger integration, Ingredients of integration, Timing and Speed of integration, Approaches to integration, Challenges in integration, Steps for successful integration, Cultural integration, Redesigning post merger cultural process.

UNIT V: CORPORATE CONTROL MECHANISM AND TAKEOVER DEFENSES 8

Internal and External control mechanism, Takeover tactics, Takeover defenses, Regulatory aspects in India with respect to Takeover defenses.

TOTAL: 45 PERIODS

TEXTBOOKS

1. Rajesh Kumar B., Mergers and Acquisitions, Tata McGraw Hill Education Pvt. Ltd., New Delhi, 2012.
2. Jay M. Desai and Nisarg A. Joshi, Mergers and Acquisitions, Biztantra, New Delhi, 2012

REFERENCES

1. Enrique R. Arzac, Valuation for Mergers, Buyouts and Restructuring, Second Edition, Wiley India, 2010.
2. Kamal Ghosh Ray, PHI Learning Private Limited, New Delhi, 2010.
3. Patrick A. Gaughan, Mergers, Acquisitions and Corporate Restructurings, Fifth Edition, Wiley India, 2011.

MS35B7	RISK AND INSURANCE MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES

- To identify the various risks and their evaluation techniques
- To describe the Property and Liability Risk Management techniques
- To analyze the risk management techniques of Life, Health and Income exposures.
- To evaluate the functions of Insurance Industry in India.

Course Outcome - COs		Cognitive Skill
CO-01	Upon completion of this unit Students will be able to understand and identify and evaluate the Risk and Describe the non-insurance risk management techniques	R, U
CO-02	Upon completion of this unit Students will be able to: Illustrate the Risk Management of commercial property, Workers' compensation and alternative risk managing	R, U, A, An, E
CO-03	Upon completion of this unit Students will be able to: Describe the personal risk management of Auto owners and Home owners	R, U, A
CO-04	Upon completion of this unit Students will be able to: Describe the types of life insurance and tax incentives for life insurance and annuity taxation. List out the Employee's benefits health and	R, U, A, An

	retirement benefits	
CO-05	Upon completion of this unit Students will be able to: Describe the role of Regulatory authorities, Importance and Challenges of General insurance	R, U, A, An, E

R- Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S- Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	M	S	S	M	S	S	S
CO-02	M	M	S	S	S	S	M	S
CO-03	S	M	S	S	M	S	M	S
CO-04	S	S	M	S	M	S	S	S
CO-05	S	M	M	S	M	M	S	M

S- Strong, M- Medium, L-Low, N- Not Relevant

Unit I: Introduction to Risk

9

Risk – Risk identification evaluation, Property and liability Loss exposures, Life, Health, and Loss of Income exposures and non-insurance risk management techniques. Selecting and Implementing Risk management techniques. - **Case Study**

Unit II: Risk Management

9

Property and liability risk Management- Risk Management of commercial property, Business liability and risk management insurance - Workers' compensation and alternative risk managing. - **Case Study**

Unit III: Personal Risk Management

9

Risk Management of Auto owners - Insurance Claims – the need for insurance-personal automobile policy-personal automobile rating- premium and death rates-cost containment advances in driver and auto safety. Risk management of home owners policy coverage-perils covered by the policy-flood Insurance-personal articles floater-personal risk management - **Case Study**

Unit IV: Health Insurance

9

Loss of life –types of life insurance- tax incentives for life insurance- Life insurance contract provisions. Loss of Health- Health insurance providers- mechanics of cost sharing- health expense insurance- disability income insurance - health insurance policy provisions - health care reforms. Annuities- structures of annuities- annuity characteristics- annuity taxation.Employee's benefits- health and retirement benefits. - **Case Study**

Unit V: General Insurance

9

General insurance industry in India – IRDA Act- Investment norms – Protection of policy holders Interest- Importance of General insurance – Role of Regulatory authorities – Challenges in General Insurance.-**Case Study**

TOTAL: 45 HOURS

TEXT BOOKS

1. Jave S. Trieschimam, Sandra G. Gustarson, Robert E Houyt, Risk Management and Insurance Thomson Sowlla Western Singapore 2003.
2. Scoh E Herrington Risk Management and Insurance McGraw Hill New Delhi 2003.
3. Dorfman Mark S Introduction to Risk Management and Insurance 8th Edition. Prentice Hill India New Delhi 2007.

REFERENCES

1. Harold D Stephen and W Jean Kwon Risk Management and Insurance Blackwell Publicing co., New York 2007.
2. Misra M.N. and Misra S.R Insurance Principles and Practice S .Chand and Co. New Delhi 2007.
3. Gupta P.K. Insurance and Risk Management Himalayan. Publishing House New Delhi 2008.

MS35B8	STRATEGIC FINANCIAL MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES

- To construct financial forecasting for a simulated venture
- To asses any given organization based on various inputs received and determine the level of profitability in a business.
- To explain the various aspects of risk and the steps to ensure and follow to minimize/ avert them
- To discuss how decisions that may help the business considering both internal and external factors of the business.
- To explain the nature of borrowing in terms of lease and mortgaging, by being aware of the risks and managing business in a safer manner

Course Outcome - COs		Cognitive Skill
CO-01	Upon completion of the unit on Financial Planning, Students will be able to understand and describe the basic concepts of Financial planning and forecasting; apply the traditional and modern techniques of project investment decisions, evaluate and select the most profitable projects.	R, U A, An, E
CO-02	Upon completion of the unit on Financial decisions under conditions of uncertainty, Students will be able to understand and apply the methods of accounting for risk and uncertainty in capital budgeting	R, U, A, An, E
CO-03	Upon completion of the unit on Types of Investments and disinvestments Students will be able to understand the project abandonment decisions, and analyze the impact of inflation on capital budgeting decisions	R, U, A, An, E
CO-04	Upon completion of the unit on Critical analysis of appraisal techniques, Students will be able to understand the significance of information and data bank in project selections and apply Discounted pay back, Terminal value method and Mean variance analysis for making investments decisions	R, U, A, An, E
CO-05	Upon completion of the unit on, Strategic financing Analysis of selected investment decisions Students will be able to understand the nature and risk of borrowing in terms of lease and mortgaging the impact of	R, U, A, An, E

	Mergers and acquisitions in Capital Budgeting, International Capital Structure, and Financial Distress and its consequences	
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R- Remember, U-Understand, A-Apply, An-analyse, E-Evaluate, S- Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	M	S	S	M	M
CO-02	M	S	S	M	M	M	S	S
CO-03	S	S	M	M	S	S	M	M
CO-04	M	S	S	M	M	M	S	S
CO-05	M	S	S	S	M	S	M	S

S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT 1: Financial Planning

9

Financial planning and forecasting – Project Investment Management vs. project management – introduction to selection of profitable projects. Evaluation of investment opportunities, basic issues, replacement decisions, traditional methods of appraisal and discounted cash flow techniques, equivalence of NPV and IRR, The case of intangible benefits and costs. Profitability Index and Excess present value Index. - **Case Study**

UNIT II: Financial decisions under conditions of uncertainty

9

Discussion on risk and uncertainty; Risk Analysis in Investment Decisions; Risk adjusted rate of return, certainty equivalents; probability distribution of cash flows, decision trees, sensitivity analysis and Monte Carlo Approach to Simulation. Case study of companies under financial Uncertainty- **Case Study**

UNIT III: Types of Investments and disinvestments

9

Project abandonment decisions, Evidence of IRR. Multiple IRR, Modified IRR, Techroin, Robichek and Mordalbasso (TRM) solution in dealing with pure, simple and mixed investments. Lorie Savage Paradox. Adjusted NPV and impact of inflation on capital budgeting decisions.- **Case Study**

UNIT IV: Critical analysis of appraisal techniques

9

Discounted pay back, post pay back, surplus life and surplus pay back, Bail-out pay back, Return on Investment, Equivalent Annual Cost, Terminal Value, single period constraints, multi-period capital constraint and an unresolved problem, NPV mean variance analysis, Hertz Simulation and Hillier approaches. Significance of information and data bank in project selections.-**Case Study**

UNIT V: Strategic financing Analysis of selected investment decisions

9

Lease Financing, Leasing Vs. Operating Risk, borrowing vs. procuring. Hire purchase and Installment decisions. Mergers and acquisitions in Capital Budgeting, cash vs. equity for financial mergers. International Capital Structure. Modigliani Miller Model: Hamada Model of Market Risk: The Miller Model: The Trade-Off Models and Agency Costs: Capital Structure Theory -the Signaling Model - Financial Distress Consequences, Issues, bankruptcy,

settlements, reorganization and Liquidation in Bankruptcy. Case study on companies at the verge of Bankruptcy and the protection they get both through the govt. and other organizations.-**Case Study**

TOTAL: 45 HOURS

TEXT BOOKS

1. 'Financial Management' - Prasanna Chandra, 5/e, Tata McGraw-Hill, 2003
2. 'Projects: Planning, Analysis, Financing Implementation and Review' - Prasanna Chandra, 5/e TMH, New Delhi, 2003
3. 'Financial Management' - Brigham E.F & Houston J.F Thomson Publications, 2003.

REFERENCES

1. 'Warcus: Investments' - Bodie, Kane, Tata McGraw-Hill, New Delhi, 2002,
2. 'Financial Management and policy' - V.K. Bhalla, Anmol Publications Pvt. Ltd.,
3. 'Financial Management' - I.M. Pandey, Vikas Publishing House, 2003.
4. 'Financial Management: Text and Problems' - MY Khan and PK Jain, Tata McGraw-Hill Publishing Co, 2003.
5. 'Operations Research' - V. K. Kapoor, Sultan Chand & Sons, New Delhi, 2003.

MS35B9	CORPORATE TAXATION	L	T	P	C
		3	0	0	3

OBJECTIVES

- To introduce practical aspects of tax planning and important managerial decision-making process
- To expose the participants to real life situations involving taxation and to equip them with techniques for taking tax-sensitive decisions
- To update the participants on current topics/debatable issues involving direct and indirect taxation

Course Outcome - COs		Cognitive Skill
CO-01	Upon completion of this unit Students will be able to understand the Basic Concepts and describe the Computation of Income under Different Heads of Income	R, U
CO-02	Upon completion of this unit Students will be able to: Describe the Set off and Carry forward of Losses, Deductions and Exemptions for Corporate Assesses Illustrate the determination of Minimum Alternate Tax	R, U, A, An, E
CO-03	Upon completion of this unit on Tax Planning Students will be able to: Describe the scope of tax planning Illustrate the tax planning regarding Dividend policy, Issue of Bonus Shares, Amalgamation and Merger of Companies	R, U, A
CO-04	Upon completion of this unit on Tax Consideration Students will be able to: Describe Tax Considerations in respect of Specific Managerial Decisions and Capital Budgeting Decisions	R, U, A, An
CO-05	Upon completion of this unit on Tax planning in Managerial consideration	R, U, A, An, E

	Students will be able to: Describe the Tax Planning in respect of Managerial Remuneration, Foreign Collaborations and Joint Ventures	
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R- Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S- Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	M	S	S	M	S	S	S
CO-02	M	M	S	S	S	S	M	S
CO-03	S	M	S	S	M	S	M	S
CO-04	S	S	M	S	M	S	S	S
CO-05	S	M	M	S	M	M	S	M

S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT I: Introduction to Income Tax

9

Basic Concepts of Income Tax; Residential Status of a Company; Computation of Income under Different Heads of Income.

UNIT II: Set off and Carry forward of Losses

9

Set off and Carry forward of Losses, Deductions and Exemptions for Corporate Assesses, Minimum Alternate Tax (MAT).

UNIT III: Tax Planning

9

Meaning and Scope of Tax Planning and Location of Undertaking, Type of Activity, Ownership Pattern, Tax Planning Regarding Dividends Policy, Issue of Bonus Shares, Tax Planning Relating to Amalgamation and Merger of Companies.

UNIT IV: Tax Consideration

9

Tax Considerations in respect of Specific Managerial Decision like Make or Buy, Own or Lease, Close or Continue, Sale in Domestic Markets or Exports; Replacements and Capital Budgeting Decisions, etc.

UNIT V: Tax planning in Managerial consideration

9

Tax Planning in respect of Managerial Remuneration, Foreign Collaborations and Joint Ventures; Double Taxation Avoidance Agreements.

TEXT BOOKS

1. Ahuja, G.K. & Gupta, Ravi Systematic Approach to Income Tax. Allahabad, Bharat Law House. Ranina, H.P. Corporate Taxation : A Handbook, New Delhi, Oriental Law House.
2. Singhania, V K. Direct Tax Planning & Management, Taxman Pub.

REFERENCES

1. Srinivas E.A. Handbook of Corporate Tax Planning. New Delhi, Tata McGraw Hill.
2. Singhania, V K. and Singhania Kapil, Direct Tax Planning & Management, Taxman Pub. 29

ELECTIVE CURRICULUM

C. HUMAN RESOURCE MANAGEMENT

Sl.No	Code	Name of the Subjects	L	T	P	C
1	MS35C1	Industrial Relations & Labour Welfare	3	0	0	3
2	MS35C2	Organization Development and Change	3	0	0	3
3	MS35C3	Human Resource Accounting & Audit	3	0	0	3
4	MS35C4	Stress Management	3	0	0	3
5	MS35C5	Strategic Human Resource Management	3	0	0	3
6	MS35C6	Training & Development	3	0	0	3
7	MS35C7	Human Resource Planning & Development	3	0	0	3
8	MS35C8	Performance Management	3	0	0	3
9	MS35C9	HR Analytics	3	0	0	3
10	MS35C10	Change Management	3	0	0	3

MS35C1	INDUSTRIAL RELATIONS AND LABOUR WELFARE	L	T	P	C
		3	0	0	3

OBJECTIVES

- Critically analyze the role of IRS at National and International levels and the infrastructure to guide and direct IRS in India.
- Identify and explain the principal federal and state laws that provide the framework for labor relations
- Explain the reasons employees join unions and describe the process by which unions organize employees and gain recognition as their bargaining agent.
- Discuss how labor and management approach labor negotiations.

CourseOutcome-COs		Cognitive Skill
CO-01	To equip the students to critically analyze the role of industrial relations at national and international levels and the infrastructure to guide and direct industrial relations in India.	R,U
CO-02	Students are able to identify and explain the principal federal and state laws that provide the framework for labor relations.	R,U
CO-03	Students know about the handling and settling of disputes.	R,U
CO-04	Students are able to explain the reasons employees join unions and describe the process by which unions organize employees and gain recognition as their bargaining agent	A,S
CO-05	Discuss how labor and management approach labor negotiations.	An,E

R-Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S-Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	S	S	S	M	M
CO-02	S	S	S	M	M	M	S	S
CO-03	M	S	M	M	S	S	M	M
CO-04	M	S	S	M	M	M	S	S
CO-05	S	S	S	S	M	S	M	S

S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT I: Introduction to Industrial Relations**9**

Industrial Relations — Factors affecting Employee stability— IR at national and international levels-Approaches to IR – Infrastructure that guide and direct industrial relations – trends in India.- **Case Study**

UNIT II: Nature of Union Management Relationship**7**

Trade Unionism – Role of trade unions- Trade Union and their growth – Economic, Social , Political Conditions leading to the Development of Trade Unionism – Theories of Trade Unionism - Indian trade union movement and limitations.- **Case Study**

UNIT III: Resolving Conflict and Developing Co operation**11**

Employee discipline -Industrial dispute – impacts - causes – handling and settling disputes – employee grievances – steps in grievance handling – strikes – prevention – Industrial peace – Collective Bargaining- Conciliation – Arbitration – Adjudication.- Workers Participation in Management. -**Case Study**

UNIT IV: Welfare Measures**11**

Welfare Concepts – Objectives – Scope – Need – Voluntary Welfare measures – Statutory Welfare Measures — Education and Training Schemes. Welfare of Special Categories of labour- BPO and KPO labour – Social Assistance – Social Security – Implications- **Case Study**

UNIT V: Labour Legislations**11**

Issues over Rights and Work Conditions , Technological Change, Job Security, Training, Work Restructuring, Safety and Health, Pay and Benefits , Privacy Factories Act 1948 – Workman Compensation act, 1923 – Employees Provident Funds and Miscellaneous provisions act, 1952, the Payment of Wages Act, 1936 – the Minimum Wages Act, 1948 – Industrial Disputes Act 1947 – Maternity benefit Act, 1961 - Trade Union Act, 1926 and latest legislations. Labour Relations in the Public and Private Sectors, Labour Relations in Multi-national Enterprises - **Case Study**

TOTAL: 45 HOURS**Text Books:**

1. ‘Dynamics of Industrial Relations’ –Dr.SathishMemoriaS.V.Gankar, 17th edition,Himalaya Publishers, Mumbai.
2. ‘Industrial Relations and Labour Laws’ – S.C.Sreivastava, Vikas Publishing House, 6th edition, 2012.

BOOKS FOR REFERENCE:

1. ‘Personnel management & Industrial relation’ – P.C. Tripathi, S.Chand Publications, New Delhi, 2010.
2. ‘Mercantile Law’ – N.D. Kapoor, 33nd Edition, S.Chand Publications, New Delhi, 2013.
3. ‘Essential of Human Resource Management and Industrial relations’ – P. Subbarao,5nd edition, Himalaya Publishers,Mumbai,2012.

MS35C2	ORGANIZATIONAL DEVELOPMENT AND CHANGE	L	T	P	C
		3	0	0	3

OBJECTIVES

- Define the process of organization development as a strategic means to affect change to an organization's culture
- Describe the steps involved in planned change programs
- Distinguish the various structural, behavioral and comprehensive interventions typically used in change efforts
- Analyze the role and style of the OD consultant
- Select various diagnostic tools and the appropriate methodology for collecting organizational data to plan a major change effort.

COURSE OUTCOMES		Cognitive Skill
CO- 1	Define fundamental terminology relevant to the discipline of Organizational Development	U,R
CO- 2	Define the process of organization development as a strategic means to affect change to an organization's culture	U, R
CO- 3	Apply various interventions to construct a plan that will support a new organizational vision.	A
CO- 4	Apply organizational theories, principles, and trends to real life organizations	U,R,A
CO- 5	To Explain theories and models that form the foundation of the discipline as well as the OD diagnostic process	U,R,An

R-Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S-Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	M	S	S	S	S	M
CO-02	S	S	S	M	M	M	S	S
CO-03	S	S	S	S	S	S	M	M
CO-04	S	S	S	M	M	M	S	S
CO-05	M	S	S	S	M	S	M	M

S- Strong, M- Medium, L-Low, N- Not Relevant

Unit I: Introduction to Organization Development

9

Introduction to Organization Development, The nature of planned change, theories of change and models of planned change, evaluating and institutionalizing change -Case Study

Unit II: Process of Organization Development

9

The process of organization development: entering and contracting, diagnosing organizations, groups and jobs, collecting and analyzing diagnostic data, feeding back diagnostic data and indicators, - **Case Study**

Unit III : Interventions

9

Designing OD interventions, effectiveness of interventions, Overview of Interventions, leading and managing change, overview of change activities, creating conditions for change and motivating change, managing resistance to change, evaluating and institutionalizing OD interventions- **Case Study**

Unit IV: Approaches in OD

9

OD interventions: Human Process Interventions: Interpersonal and group process approaches, organization process approaches, Techno-structural interventions: Organization Restructuring, employee involvement, work re-design - **Case Study**

UNIT V: Trends in OD

9

Human Resource Management Interventions in OD: Performance Management, Career Planning and Development, workforce diversity and employee wellness programmes, Strategic Interventions: Organization and Environment Relationships, Organization Transformation, OD applications in non- business entities, future directions in OD - **Case Study**

TOTAL: 45 HOURS

Text Books:

1. Cummings & Worley. , (2005), Organization Development & Change (7th edition). Thomson, South Western, Singapore
2. Dianne M Waddell, Thomas G Cummings, Christopher G Worley., (2011), Organisation change development and transformation (4th edition), Cengage Learning

BOOKS FOR REFERENCE:

1. Dale E Zand ., (2009) Organizational Development and change: A reflection on where we came from.
2. Louis carter, David Ulrich, Marshall Goldsmith (2007) , Best practices in leadership development and organization change: How the best companies ensure meaningful change and sustainable leadership, Pfeiffer publications
3. Donald L Anderson , Organisational Development: The process of leading organizational change.

MS35C3	HUMAN RESOURCE ACCOUNTING AND AUDIT	L	T	P	C
		3	0	0	3

OBJECTIVES

- Define HR accounting, its methods and application.
- Analyze the human resource cost.
- Know about the HR accounting system.
- Analysis and identify how to prepare and use HR audit report .

COURSE OUTCOMES		Cognitive Skill
CO- 1	To familiarize the students with the Human Resource Accounting Practices in India	U,R
CO- 2	To familiarize the learners with the process and approaches of Human Resources Accounting and Audit.	U, A
CO- 3	To understand the significance of Human Resource Auditing as a Tool of Human Resource Valuation.	A, R
CO- 4	Students can be able to understand the human resource audit.	An, E, S
CO- 5	Analysis and identify how to prepare and use HR audit report .	An, U

R-Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S-Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	M	S	S	M	M	S	M	M
CO-02	S	M	S	S	S	M	S	S
CO-03	S	S	S	M	S	S	M	M
CO-04	S	S	S	M	M	M	S	S
CO-05	M	S	S	S	S	S	M	S

S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT I : HUMAN RESOURCE ACCOUNTING

9

Introduction to HR Accounting-Definition of human resource accounting- human resource accounting concepts, methods and applications-Human resource accounting vs other accounting.-Case Study.

UNIT II :HUMAN RESOURCE COSTS

9

Measuring human resource cost-investment in employees-replacement costs- Determination of human resource value-Monetary and non-monetary measurement methods-Return on investment approach.-Case Study.

UNIT III : HUMAN RESOURCE ACCOUNTING SYSTEM

9

Developing human resource accounting system- Implementation of human resource accounting- Integration of HR accounting with other accounting systems- Recent advancements and future directions in human resource accounting.-Case Study.

UNIT IV: HUMAN RESOURCE AUDIT

9

Role of human resource audit in business environment- HR audit objectives- concepts-components-needs-benefits-importance –methodology-instruments-HR score card-effectiveness of instruments Issues in HR audit-focus of HR audit. -Case Study.

UNIT V: HUMAN RESOURCE AUDIT REPORT

9

HR audit report- Role of HR managers and auditors-report design-preparation of report-use of Human resource audit report for business improvement- -Case Study.

TOTAL: 45 HOURS

Text Books:

1. Human Resource Accounting-Advances in concepts, methods and applications- Eric G.Flamholtz, Third edition.
2. Human Resource Accounting – Pramanik.A.K (1993) M.C.Jain,Pointer publishers, Jaipur

BOOKS FOR REFERENCE:

1. Importance of Human Resource in Organization-Nigam, M.S. Nigam S (1993) Pointer Publishers, Jaipur.
2. Human Resource Accounting – Prakash J, Khanelwal M.C, Jain S.C (1993) , Pointer Publishers , Jaipur
3. Human Resource Accounting- Prakash J, Khanelwal M.C, Jain S. C (1993), Pointer Publishers, Jaipur.

MS35C4	STRESS MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES

1. Understand the Personal and Organizational causes of stress.
2. List the symptoms and consequences of stress.
3. Develop various coping strategies to handle stress.
4. Identify types of personalities.

COURSE OUTCOMES		Cognitive Skill
CO- 1	To understand and explain the concept of stress and types of stress.	U,R
CO- 2	To evaluate the cultural differences causing stress.	U, E
CO- 3	To analyze the situation and create coping strategies to handle stress.	An, A
CO- 4	To analyze various types of personalities	An, S
CO- 5	To understand and apply concepts related to how to overcome stress	A, U

R-Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S-Synthesis

PO CO	Mapping of Course Outcome with Programme Outcome							
	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	M	S	S	M	M
CO-02	M	S	S	M	M	M	S	S
CO-03	S	S	M	M	S	S	M	M
CO-04	M	S	S	M	M	M	S	S
CO-05	M	S	S	S	M	S	M	S

S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT I: INTRODUCTION

9

Nature of Stress- Causes-Meaning-Symptoms-work related stress-individual stress-social context of stress-common myths about stress-Approach to stress management- How to deal with over stress-Anxiety- Depression- Panic disorders-Fighting with Phobia- **Case Study**

UNIT II: DYNAMICS

9

Dynamics of stress and relaxation-Zones of stress- Eight common stress difficulties-six base relating to stress-Distress symptoms- Emotional-cognitive Behavioral -physical-stress related disorder-common stress factors-importance of planning the day -time management schedule-developing concentration-organizing the work area-prioritizing beginning at the start- techniques for conquering procrastination-sensible delegation.-**Case Study**

UNIT III: DISTRESS PRONE AND DISTRESS RELATED INFLUENCES

9

Distress prone and distress resistant influences- Type A personality-perfectionism-procrastination-Type E woman-Learned pessimism- Addition-Codependency-Type B pattern-trusting heart- learned optimism-Headiness-Sense of coherence-Survivor personality-Type pattern- Self esteem – Self actualized person - Social influence.-**Case Study**

UNIT IV: Managing Stress

9

Strategies and methods –Health Buffers-EXERCISE-Nutrition- Sleep-Healthy pleasures-self talk- Spiritual dimension –Relaxation methods- Managing time- Altruistic egoism and Egoistic altruism –Stress counseling- Rational emotive behavioral therapy- Learning to keep calm- Work place Humor- developing a sense of humor –learning to laugh-role of group cohesion and team spirit-Using humor at work- Reducing conflicts with humor. **Case Study**

UNIT V: External Values to overcome Stress

9

Self development, improving personality- leading with integrity-Enhancing creativity-Effective decision making-Sensible communication-The listening game-Managing self-Meditation for peace-Yoga for life. **Case Study**

TOTAL: 45 HOURS

Text Books:

1. Stress Management for Wellness- Walt Schafer, Thomson Wadsworth , 2004
2. Stress Causes, Prevention and Cure- Dr. S.K.Subramanian, I Edition AbishekPublication 2002

BOOKS FOR REFERENCE:

1. Stress Management- A Bullet Proof Yogic approach Swami Sukhabodhananda Prasanna Trust.
2. Counselling for Managers- Nigel MacLennan, Gower Publications ,Ltd. England.
3. Human Values for Managers- CharavathyS.K.,McGrawHill/ Henely Management Series, 1996.
4. Managing Stress-Jeff Davidson, Prentice Hall of India. New Delhi 1998

MS35C5	STRATEGIC HUMAN RESOURCE MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES

- Identify Non-Strategic HR practices which are derived from institutional forces within the firm as well as outside the firm and the negative impact of such practices on organizational performance.
- Trace and establish the linkage between firm's strategy and HR practices of the firm through Resource-based view of Competitive Advantage and Sustained Competitive Advantage.
- Analyse and identify the need for different HRM practices in alignment with different business strategies.
- Analyse a main perspectives on SHRM and org. performance.
- Examine the factors that determine the fit between HRM and org.strategy

COURSE OUTCOMES		Cognitive Skill
CO- 1	Identify Non-Strategic HR practices which are derived from institutional forces within the firm as well as outside the firm and the negative impact of such practices on organizational performance	U
CO- 2	Trace and establish the linkage between firm's strategy and HR practices of the firm through Resource-based view of Competitive Advantage and Sustained Competitive Advantage.	E
CO- 3	Analyze and identify the need for different HRM practices in alignment with different business strategies. An	An
CO- 4	Analyze a main perspectives on SHRM and org. performance	An
CO- 5	Examine the factors that determine the fit between HRM and org. strategy.	E

R-Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S-Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	M	S	S	M	M
CO-02	M	S	S	M	M	M	S	S
CO-03	S	S	M	M	S	S	M	M
CO-04	M	S	S	M	M	M	S	S
CO-05	M	S	S	S	M	S	M	S

S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT I : An investment perspective of Human Resources Management

9

Human resource investment considerations - investment in training and development//HRD - Investment practices for improved retention – Investments in Job secure work forces – Ethical implications of employment practices - Non traditional investment approaches.- **Case Study**

UNIT II : Human Resource Environment**9**

Technology and organizational structure – Worker values and attitudinal trends – Management trends – Demographic trends – Trends in the utilization of human resources. - **Case Study**

UNIT III : Strategy Formulation**9**

Non- Strategic HRM, Importance of Human resources to strategy – Theoretical foundations – International strategy –Human Resource contributions to strategy – Strategy – Driven role behaviors and practices- Strategy human resource activity typology classifying human resource types Network organization and strategy organizational learning –Integration and aligning business of strategy and human resource Management. - **Case Study**

UNIT IV: Strategy Implementation and performance Impact of HR practice, Reward and Development Systems**9**

- a) Strategically oriented performance measurement systems
- b) Strategically oriented compensation systems
- c) Employee development
- d) Individual high performance practices Limitations of individual practices Evaluation of practices
- e) Systems of High – Performance Human Resource Practices
Individual best practices vs systems of Practices –Universal Practices vs contingency perspectives **Case Study**

UNIT V: Human Resource Evaluation**9**

- a) Overview of Evaluation
- b) Approaches to Evaluation
- c) Prevalence of Evaluation
- d) Evaluating strategic contributions of traditional areas.
- e) Evaluating strategic contributions in emerging areas.
Case Study

TOTAL: 45 HOURS**Text Books:**

1. Charles R Greer Strategic Human Resource Management, Second Edition, Pearson Education Company.
2. Peter J. Dowling, Denice E. Welch, Randall S. Schuler, International Human Resource Management, Thomson South-Western.

BOOKS FOR REFERENCE:

1. International Management, 3rd edition, McGraw Hill., Richard M. Hodgetts and JhonH.Bernardin&Joyse E.A. Russell.
2. Strategic Human Resource Development, Prentice Hall, Eastern Economic edition, SrinivasR.Kandula.

MS35C6	TRAINING AND DEVELOPMENT	L	T	P	C
		3	0	0	3

OBJECTIVES

- understand the concepts, principles and process of training and development
- develop an understanding of how to assess training needs and design training programmes in an Organisational setting
- familiarize with the levels, tools and techniques involved in evaluation of training effectiveness
- develop an understanding on various non-training solutions to improve employee performance

COURSE OUTCOMES		Cognitive Skill
CO- 1	To list the training and development needs and types.	U
CO- 2	Explain the organizational, societal and individual costs and benefits of training and development.	U, An
CO- 3	Develop, analyze and apply advanced training strategies & specifications for the delivery of training program	An, A
CO- 4	Demonstrate appropriate implementation monitoring & assessment procedures of training.	An, E, S
CO- 5	Evaluate training programs using appropriate design and techniques.	A, U

R-Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S-Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	M	S	S	M	M
CO-02	M	S	S	M	M	M	S	S
CO-03	S	S	M	M	S	S	M	M
CO-04	M	S	S	M	M	M	S	S
CO-05	M	S	S	S	M	S	M	S

S- Strong, M- Medium, L-Low, N- Not Relevant

Unit I: Introduction

9

Introduction To Training Concept: Definition, Meaning, Need For Training, Importance of Training, Objectives of Training, Concepts of Education, Training And Development, Overview of Training Functions, Types of Training - **Case Study**

Unit II: Planning Process

9

Process of Training: Steps In Training, Identification of Job Competencies, Criteria For Identifying Training Needs (Person Analysis, Task Analysis, Organization Analysis), Assessment of Training Needs, Methods And Process of Needs Assessment. - **Case Study**

Unit III: Design of Training**9**

Designing And Implementing a Training Program: Trainer Identification, Methods And Techniques of Training, Designing a Training Module (Cross Cultural, Leadership, Training The Trainer, Change), Management Development Program, Budgeting Of Training. -**Case Study**

Unit IV:Evaluation Process**9**

Evaluation of Training Program: Kirkpatrick Model of Evaluation, CIRO Model, Cost-Benefit Analysis, ROI of Training. - **Case Study**

Unit V: Trends in Training**9**

Learning: Principles of Learning, Theories of Learning, Reinforcement Theory, Social Learning Theory, Andragogy, Resistance to Training. Technology in Training: CBT, Multimedia Training, E-Learning/Online Learning, Distance Learning- **Case Study**

TOTAL: 45 HOURS**Text Books:**

1. Employee Training And Development - Raymond Noe
2. Every Trainers Handbook- DevendraAgochia

BOOKS FOR REFERENCES:

1. 360 Degree Feedback, Competency Mapping And Assessment Centre- Radha Sharma
2. Training And Development- S.K. Bhatia
3. HRM-BiswajeetPattanayak,

MS35C7	HUMAN RESOURCE PLANNING AND DEVELOPMENT	L	T	P	C
		3	0	0	3

OBJECTIVES

- Understand the Human resource planning at micro and macro level.
- Understanding the different methods of Human resource planning.
- Identify the different roles of HRD managers.
- Analyze the HR job satisfaction.

COURSE OUTCOMES		Cognitive Skill
CO- 1	Examine and apply human resource planning in an organization.	U
CO- 2	Understand and develop career planning& development related activities in the organization	U, An
CO- 3	Apply the basic concepts of HRD, different approaches to HRD, HRD styles, Structure, and competencies for the growth of an organization.	An, A
CO- 4	Examine the impact of HRD in an organization with the help of various data collecting techniques	An, E, S
CO- 5	Develop organization culture by implementing HRD techniques in Organizations	A, U

R-Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S-Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	M	S	S	M	M
CO-02	M	S	S	M	M	M	S	S
CO-03	S	S	M	M	S	S	M	M
CO-04	M	S	S	M	M	M	S	S
CO-05	M	S	S	S	M	S	M	S

S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT I: INTRODUCTION TO HRP

9

Introduction-Human Resource Planning- Manpower planning-Steps for HRP- objectives- Manpower demand forecasting-Macro and micro HR planning-Case Study.

UNIT II: HUMAN RESOURCE PLANNING PROCESS

9

HRP process-productivity-Job analysis-Job description-Job specification-Job evaluation-Job design- Job assessment-Model and techniques of manpower demand and supply forecasting-wastage analysis-Career management and career planning..-Case Study.

UNIT III: HUMANRESOURCE PLANNING METHODS

9

HRP Recruitment-selection-Induction-Training-Performance appraisal and training- transfer-promotion- job rotation-HRIS for HRP..-Case Study.

UNIT IV: HUMAN RESOURCE DEVELOPMENT

9

HRD concepts- objectives-structure-need-characteristic- HRD process- HRD models- role of HRD manager-work culture-QWL-HRD in strategic organization.-Case Study.

UNIT V: HUMANRESOURCE DEVELOPMENT METHODS

9

Individual behaviour-group behaviour-motivation-job satisfaction-leadership-social security-grievance and discipline-organization culture-organizational change-organizational development.-Case Study.

TOTAL: 45 HOURS

Text Books:

1. Human Resource Planning- Deepak Kumar Bhattacharyya, Excel books 2nd edition New Delhi,2006
2. Human Resource Development-P.C. Tripathi ,Sultan Chand & Son's, Educational Publishers, New Delhi.

BOOKS FOR REFERENCE:

1. Human Resource Management-Bernardin, John H : Tata McGraw Hill ,New Delhi 2004
2. Career Theory Hand Book- Arthur M, Prentice Hall Inc, Englewood Cliff, 1991

MS35C8	PERFORMANCE MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES

- Define talent and performance management and identify what drives the need for talent management in organizations today.
- Compare and contrast various organizational performance management programs and best practices and define attributes of effective performance management systems.
- Justify the importance of performance management for both organization and employee success.
- Outline the typical cycle of performance management; including roles and responsibilities, as well as planning, reviewing and appraising practices.

CO-01	Define talent and performance management and identify what drives the need for talent management in organizations today.	U,E
CO-02	Compare and contrast various organizational performance management programs and best practices and define attributes of effective performance management systems.	An
CO-03	Justify the importance of performance management for both organization and employee success.	A
CO-04	Outline the typical cycle of performance management; including roles and responsibilities, as well as planning, reviewing, and appraising practices.	R
CO-05	Analyze the ethical issues and dilemmas.	An

R-Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S-Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	M	S	S	M	M
CO-02	M	S	S	M	M	M	S	S
CO-03	S	S	M	M	S	S	M	M
CO-04	M	S	S	M	M	M	S	S
CO-05	M	S	S	S	M	S	M	S

S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT I: The Architecture of Performance Management

7

An introduction to performance management- Goal and objectives- Importance of performance management- Linkage to Organizational mission, strategy and goals- Creating a performance management culture through HR programs and practices- Role of supportive HR policies and practices- Job descriptions- Effective supervision- Comprehensive employee orientation and

training- A positive and supportive work environment- Essentials of an effective PM system- Talent management- new directions - **Case Study**

UNIT II: Performance Management Process

10

Performance Counseling – Performance Planning – Methodologies- Performance management Information System – Barriers - Performance appraisal – Methods – Common rating errors - Performance monitoring. Link between Performance Management and Performance Appraisal - **Case Study**

UNIT III: Implementation and Evaluation of Performance Management

9

Indicators of performance for different levels of management; Criteria for evaluating performance of managers; Tracking performance; Feedback management for performance improvement – Evaluation – Methods. Performance Management for Teams, Performance management in Practice – Analyzing Performance Problem- Non financial Performance indicators - **Case Study**.

UNIT IV: Role of HR Professionals in Performance Management

11

Role of HR professionals in performance management system – Competencies Strategic roles for HR professionals- Balance Score card Approach- Performance Pyramid- Work of Fitzgerald and moon in Building blocks for dimension, Standards and rewards- Activity based management– future roles in the knowledge Millennium. - **Case Study**

UNIT V: Ethics in Performance Management

8

Definition – Principles – objectives – Ethical issues and dilemmas – ethical strategies – developing code of ethics – performance management in multinational corporations – future implications. - **Case Study**

TOTAL: 45 HOURS

Text Books:

1. ‘Performance Management’ – T.V. Rao, Response Books, Sage publications, 2004.
2. ‘Performance Management’ – Prem Chadha, Macmillan, India Ltd., New Delhi.

BOOKS FOR REFERENCE:

1. ‘Performance Management: Concepts, Skills and Exercise’ – Robert L. Cardy, Prentice Hall of India, 2004.
2. ‘Performance Management: Strategies and Interventions’ – Srinivas R. Kandula, Prentice Hall of India, 2006.
3. ‘Performance Management’ – A.S. Kohli. T. Deb, Oxford University Press, New Delhi, 2008.

MS35C9	HR ANALYTICS	L	T	P	C
		3	0	0	3

OBJECTIVES

1. To use the concept of HR analytics in Organizations
2. To be able to use analytic tools for decision-making
3. To be a problem solver in all HR-related issues using analytic tools

COURSE OUTCOMES		Cognitive Skill
CO- 1	To understand the concepts of HR analytics in HR situations.	U
CO- 2	To understand the role of HR Analytics and build skills to conduct a HR Analysis.	U, An
CO- 3	To study about various HR analytics Tools for implementation	An, A
CO- 4	To learn to solve HR problems using analytic tools for making conducive decisions	An, E, S
CO- 5	To build capability to design & conduct a HR Analysis and come out with actionable recommendations	A, U

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	M	S	S	M	M
CO-02	M	S	S	M	M	M	S	S
CO-03	S	S	M	M	S	S	M	M
CO-04	M	S	S	M	M	M	S	S
CO-05	M	S	S	S	M	S	M	S

S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT I: Introduction to HR Analytics

9

Analytics-Nature-Evolution of Human Capital metrics-Steps in Analytics-Role of Descriptive analytics & Prescriptive analytics in HR analytics- HR Analytics Frameworks: LAMP framework –Logic, Measures, Analytics, Process, HCM:21 Framework, Talent ship Framework Environmental scanning-The Big Picture-The value of statistical analysis-The importance of risk assessment, Predictive management-Ready, Aim and Begin

UNIT II: Introduction to Human Resource Technology and Analytics

9

HR Technology and Analytics interaction, HR Technology Overview, What is HR Analytics?, HR Analytics popular frameworks, Skills required for HR Analytics, Making a case for HR, Analytics and winning sponsorship, Importance of data availability and governance, Do's and Don'ts of HR Analytics

UNIT III: Employee Data, Data sources and Metrics

9

Employee Data Primary Sources, Employee data secondary sources, Efficiency & Effectiveness metrics, General employee data fields, Key metrics for each vertical of HR, HR Scorecards, HR Scorecard Practice Case Study

UNIT IV: Data Visualization best practices

9

Popular tools available for visualization, Storyboarding and importance of insights, Interactive and static dashboards and reports, Sample HR Dashboard, HR Dashboard Practice Case Study

UNIT V: Advanced HR Analytics

9

Basics of statistics, Mean median & mode, Correlation, HR Case study of correlation, Linear regression, HR Case study of Linear regression, Logistic Regression, HR Case study of Logistic Regression

TOTAL: 45 HOURS

Text Books:

1. Fitz-Enz, J., The New HR Analytics: Predicting the Economic Value of Your Company's Human Capital Investments, American Management Association
2. Bassi, L., Carpenter, R., and McMurrer, D., HR Analytics Handbook, Reed Business

REFERENCES:

1. Prasad, B. V. S., and Sangeetha, K., HR Metrics: An Introduction, IUP
2. Becker, B.E., Huselid, M.A., Ulrich, D., The HR Scorecard: Linking People, Strategy and Performance, Harvard Business School Press

MS35C10	CHANGE MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES

1. Analyze change at the individual, group, and systemic levels Contrast planned and unplanned change
2. Evaluate and apply integrative models for assessing, diagnosing, and implementing the need for change
3. Identify the role of leaders and managers, change agents and change recipients in various stages of organizational change.
4. The objective of this paper is to prepare students as organizational change facilitators using the knowledge and techniques of behavioural science.

COURSE OUTCOMES		Cognitive Skill
CO- 1	Identify the reasons that organizations resist change, and explore the strengths and weaknesses of various approaches to the management of resistance.	U
CO- 2	To study how environmental events affect organizations and drive the need for Continuous change.	U, An
CO- 3	Compare and contrast the various approaches used to identify and implement change, including organizational development, the sense-making approach to change, and the processional approach to managing	An, A
CO- 4	Analyze the internal and external pressures that compel change in an organization, including an awareness of the interaction between forces for stability and forces for	An, E, S
CO- 5	Construct and critique the skills necessary to determine and communicate change; understand the role of toxic handles in the change	A, U

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	M	S	S	M	M
CO-02	M	S	S	M	M	M	S	S
CO-03	S	S	M	M	S	S	M	M
CO-04	M	S	S	M	M	M	S	S
CO-05	M	S	S	S	M	S	M	S

S- Strong, M- Medium, L-Low, N- Not Relevant

Unit I: INTRODUCTION

9

Nature and Types of Organizational Change, Causes of and rationales for change, environmental and internal organizational determinants of change. Planned and emergent change. Proactive and reactive emergent change and response to these changes. Incremental and radical change, and rates / levels of change as a function of organizational life cycle positions. The links between nature / type of change and nature / type of leadership required e.g. transactional Vs transformational. The roles of corporate vision and strategy in change.

Unit II: ORGANIZATIONAL CHANGE

9

Theoretical frameworks, multi-source feedback for organizational change, Models of diagnosing organizational groups and jobs The organizational change web Resistance to change, Barriers to organizational change, rethinking resistance to organisational change, strategies to deal with resistance.

Unit III: CULTURE AND CHANGE PROCESS

9

Culture and the change process. The personnel manager as a cultural change agent handling power and political issues arising from change. The theoretical and practical contexts of cultural maintenance and cultural change strategies, corporate reorganization and sub culture management, Strategies and methods for achieving cultural change.

Unit IV: BEHAVIORAL IMPLICATIONS OF CHANGE

9

Behavioral Implications of change, the manifest, intent and paradoxical consequences of change, the concept of resigned behavioral compliance. The positive and negative functions of resistance. Intended and unintended behavioural reaction to downsizing and layering. Understanding and managing uncertainty and ambiguity in the change process.

Unit V: STRATEGY IN CHANGE MANAGEMENT

9

Intervention Strategy, Structural, technological and process factors in intervention strategies. Advantages / limitations of change technologies and associated leadership models. Role of leadership in change process. Leadership and emotional knowledge strategies to achieve congruence of personnel, structure and culture. Challenges of leading change.

Recommended Text books

1. Change Management By V. Nilakani and S. Ramnaryan By Sage, www.sagepublications.com
2. Organizational change, Tupper cawsly and Gene Deszca by Sage
3. Management of Organizational change K. Harigopal by Sage.
4. Managing Organizational change Indian Edition By Palmer /dunfordlakin, Tata Mcgraw Hill Co.,
5. Change Management, Radha R. Sharma Tata Mcgraw Hill. Co.,
6. The Theory and practice of change Management, By John Hayes, Palgrave Macmillan Co., distributed by Ane books PVT Ltd., www.anebooks.com

ELECTIVE CURRICULUM
D. OPERATIONS MANAGEMENT

Sl.No	Code	Name of the Subjects	L	T	P	C
1	MS35D1	Supply Chain Management	3	0	0	3
2	MS35D2	Logistics Management	3	0	0	3
3	MS35D3	Project Management	3	0	0	3
4	MS35D4	Total Quality Management	3	0	0	3
5	MS35D5	Inventory Management and control	3	0	0	3
6	MS35D6	Value Engineering & Business Process Reengineering	3	0	0	3
7	MS35D7	Computer Integrated Manufacturing	3	0	0	3
8	MS35D8	World Class Manufacturing	3	0	0	3
9	MS35D9	Strategic Operations Management	3	0	0	3

MS35D1	SUPPLY CHAIN MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES

1. To develop an understanding of basic concepts and role of Logistics and supply chain management in business.
2. To understand how supply chain drivers play an important role in redefining value chain excellence of Firms.
3. To develop analytical and critical understanding & skills for planning, designing and operations of supply chain.
4. To understand, appraise and integrate various supply chain strategies

COURSE OUTCOMES		Cognitive Skill
CO-01	To develop a sound understanding of the important role of supply chain management in today's business environment.	R,U
CO-02	To explain the strategic importance of logistic elements and describe how they affect supply chain management.	R,U
CO-03	To build and manage a competitive supply chain using strategies, models, techniques and information technology	R,An
CO-04	To analyze the demand, inventory and Factors Influencing Options, Value Addition	R,U,An
CO-05	To develop an understanding of the strategic importance of Operations & SCM and how it can provide a competitive advantage in the marketplace	R,U

Mapping of Course Outcome with Programme Outcome

COs	POA	POB	POC	POD	POE	POF	POG	POH
CO1	S	L	L	S	M	S	S	S
CO2	S	M	M	L	M	S	S	S
CO3	S	M	M	M	L	M	M	S
CO4	L	S	L	M	L	M	M	M
CO5	S	L	M	M	M	S	S	S

UNIT I: INTRODUCTION

9

Supply Chain – Fundamentals – Evolution - Role in Economy - Importance - Decision Phases - Supplier-Manufacturer-Customer chain. - Enablers/Drivers of Supply Chain Performance. Supply chain strategy – Supply Chain Performance Measures.

UNIT II: STRATEGIC SOURCING

9

Outsourcing – Make Vs buy - Identifying core processes - Market Vs Hierarchy - Make Vs buy continuum - Sourcing strategy - Supplier Selection and Contract Negotiation. Creating a world-class supply base - Supplier Development – WorldWide Sourcing.

UNIT III: SUPPLY CHAIN NETWORK

9

Distribution Network Design – Role - Factors Influencing Options, Value Addition – Distribution Strategies - Models for Facility Location and Capacity allocation. Distribution Center Location Models. Supply Chain Network optimization models. Impact of uncertainty on Network Design - Network Design decisions using Decision trees.

UNIT IV: PLANNING DEMAND, INVENTORY AND SUPPLY

9

Managing supply chain cycle inventory. Uncertainty in the supply Chain – Analyzing impact of supply chain redesign on the inventory - Risk Pooling - Managing inventory for short life-cycle products – multiple-item-multiple-location inventory management. Pricing and Revenue Management.

UNIT V: CURRENT TRENDS

9

Supply Chain Integration - Building partnership and trust in SC Value of Information: Bullwhip Effect - Effective forecasting - Coordinating the supply chain. SC Restructuring - SC Mapping - SC process restructuring, Postpone the point of differentiation – IT in Supply Chain – Agile Supply Chains - Reverse Supply chain. Agro Supply Chains.

TEXTBOOK

1. Janat Shah, Supply Chain Management – Text and Cases, Pearson Education, 2009.
2. Sunil Chopra and Peter Meindl, Supply Chain Management - Strategy Planning and Operation, PHI Learning/Pearson Education, 2007

REFERENCES

1. Ballou Ronald H, Business Logistics and Supply Chain Management, Pearson Education, 5th Edition, 2007.
2. David Simchi-Levi, Philip Kaminsky, Edith Simchi-Levi, Designing and Managing the Supply Chain: Concepts, Strategies, and Cases, Tata McGraw-Hill, 2005.
3. Altekhar Rahul V, Supply Chain Management - Concept and Cases, PHI, 2005.
4. Shapiro Jeremy F, Modeling the Supply Chain, Thomson Learning, Second Reprint, 2002.
5. Joel D. Wisner, G. Keong Leong, Keah-Choon Tan, Principles of Supply Chain Management - A Balanced Approach, South-Western, Cengage Learning 2008

MS35D2	LOGISTICSMANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES

1. To focus on building skills in students for delivering customized logistic solutions.
2. To train students over the complete cycle of distribution of goods from supplier to customer.
3. To be recognized as highest standard for building managerial skills and capacity building for Logistics, Supply Chain and related industries by teaching contemporary curriculum, using best in class teaching methodology and technology.
4. To inculcate both functional / domain and personal skills to succeed as a manager in Logistics, Supply Chain and related industries

COURSE OUTCOMES		Cognitive Skill
CO-01	To understand the concept of value added logistics services and also the role of logistics in competitive strategy	R,U
CO-02	To analyse the different distribution channel structure and the outsourcing logistics	R,E
CO-03	To apply transportation system, infrastructure and networks vehicle grouping and packaging	R,A
CO-04	To analyse the internal and external performance measurement, logistics cost and logistic audit.	U, An
CO-05	To evaluate logistic information system, logistic resource management, automatic identification technologies and ocean and air transportation	R,E

Mapping of Course Outcome with Programme Outcome

COs	POA	POB	POC	POD	POE	POF	POG	POH
CO1	S	L	L	S	M	S	S	S
CO2	S	M	M	L	M	S	S	S
CO3	M	M	S	M	S	M	M	S
CO4	L	S	L	M	L	M	M	M
CO5	S	L	S	M	S	S	S	S

Unit I: Introduction

9

Definition and Scope of Logistics – Functions & Objectives – Customer Value Chain – Service Phases and attributes – Value-added logistics services – Role of logistics in Competitive strategy – Customer Service

Unit II: Distribution Channels and Outsourcing Logistics

9

Distribution channel structure – channel members, channel strategy, role of logistics and support in distribution channels. Logistics requirements of channel members. Logistics outsourcing – catalysts, benefits, value proposition. Third and fourth-party logistics. Selection of service provider.

Unit III: Transportation and Packaging

9

Transportation System – Evolution, Infrastructure and Networks. Freight Management – Vehicle Routing – Containerization. Modal Characteristics, Inter-modal Operators, and Transport Economies. Packaging - Design considerations, Material and Cost. Packaging as Unitization. Consumer and Industrial Packaging

Unit IV: Performance Measurement and Costs

9

Performance Measurement – Need, System, Levels, and Dimensions. Internal and External Performance Measurement. Logistics Audit. Total Logistics Cost – Concept, Accounting Methods. Cost – Identification, Time Frame, and Formatting.

Unit V: Current Trends

9

Logistics Information Systems – Need, Characteristics, and Design. E-Logistics – Structure and Operation. Logistics Resource Management eLRM. Automatic Identification Technologies. Reverse Logistics – Scope, design, and as a competitive tool. Global Logistics – Operational and Strategic Issues, ocean and air transportation. Strategic logistics planning. Green Logistics.

Text Books

1. Bowersox Donald J, Logistics Management – The Integrated Supply Chain Process, Tata McGraw Hill, 2010
2. Sople Vinod V, Logistics Management – The Supply Chain Imperative, Pearson Education, 3rd Edition, 2012.

REFERENCES

1. Coyle et al., The Management of Business Logistics, Thomson Learning, 7th Edition, 2004.
2. Ailawadi C Sathish & Rakesh Singh, Logistics Management, PHI, 2005.
3. Bloomberg David J et al., Logistics, Prentice Hall India, 2005
4. PierreDavid, International Logistics, Biztantra, 2003.
5. Ronald H. Ballou, Business Logistics and Supply Chain Management, Pearson Education, 5th Edition, 2007

MS35D3	PROJECT MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES:

1. To understand the Project Planning and Evaluation techniques.
2. To plan and manage projects at each stage of the project development life cycle.
3. To learn about the activity planning and risk management principles.
4. To develop skills to manage the various phases involved in project management.
5. To deliver successful projects that support organization's strategic goals

COURSE OUTCOMES		Cognitive Skill
CO-01	To Understand Life Cycle and process of Project Management	R,U
CO-02	To rightly identify and select project	U
CO-03	To Plan the project, create an appropriate organization structure , Resource consideration and manage the risk	R,U
CO-04	To adhere to quality management and measure the performance of project and evaluate the same	U
CO-05	To highlight the role of projects in modern day business organizations.	R,U

Mapping of Course Outcome with Programme Outcome

COs	POA	POB	POC	POD	POE	POF	POG	POH
CO1	S	L	L	S	M	M	S	S
CO2	S	M	M	L	M	S	S	S
CO3	S	M	S	M	L	M	M	S
CO4	L	S	L	M	L	M	M	S
CO5	S	L	M	S	M	M	S	S

Unit I: Introduction to Project Management

9

Project Management – Definition – Goal Lifecycles. Project Selection Methods. Project Portfolio Process – Project Formulation. Project Manager – Roles, Responsibilities, and Selection – Project Teams.

Unit II: Planning and Budgeting

9

The Planning Process – Work Breakdown Structure – Role of Multidisciplinary teams. Budget the Project – Methods. Cost Estimating and Improvement. Budget uncertainty and risk management.

Unit III: Scheduling & Resource Allocation

9

PERT & CPM Networks - Crashing – Project Uncertainty and Risk Management – Simulation – Gantt Charts – Expediting a project – Resource loading and leveling. Allocating scarce resources – Goldratt's Critical Chain.

Unit IV: Control and Completion

9

The Plan-Monitor-Control cycle – Data Collecting and reporting – Project Control – Designing the control system. Project Evaluation, Auditing, and Termination.

Unit V: Project Organization & Conflict Management

9

Formal Organization Structure – Organization Design – Types of project organizations. Conflict – Origin & Consequences. Managing conflict – Team methods for resolving conflict.

Text Books

1. Clifford Gray and Erik Larson, Project Management, Tata McGraw Hill Edition, 2005
2. John M. Nicholas, Project Management for Business and Technology - Principles and Practice, Second Edition, Pearson Education, 2006

References

1. Gido and Clements, Successful Project Management, Second Edition, Thomson Learning, 2003
2. Harvey Maylor, Project Management, Third Edition, Pearson Education, 2006

MS35D4	TOTAL QUALITY MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVE:

1. To facilitate the understanding of Quality Management principles and process
2. To understand the various tools available to achieve Total Quality Management
3. To understand the statistical approach for quality control.
4. To create an awareness about the ISO and QS certification process and its need for the industries

COURSE OUTCOMES		Cognitive Skill
CO-01	To illustrate the basic concept and origin of TQM, quality management philosophies and frameworks	R,U
CO-02	To categorize the TQM principles and information technology in both manufacturing and service industry	R,E
CO-03	To learn the applications of statistical tools and techniques in both manufacturing and service industry.	R,A
CO-04	To develop in-depth knowledge on various tools and techniques of quality management and to develop analytical skills for investigating and analyzing quality management issues in the industry and suggest implementable solutions to those.	U, An
CO-05	To map the Quality designs to implementation based on ISO requirement, series and standards	R,E

Mapping of Course Outcome with Programme Outcome

COs	POA	POB	POC	POD	POE	POF	POG	POH
CO1	S	L	L	S	M	S	S	S
CO2	S	M	M	L	M	S	S	S
CO3	S	S	M	M	M	M	M	S
CO4	L	S	L	S	S	M	S	M
CO5	S	L	M	M	M	M	S	S

UNIT I : INTRODUCTION

9

Definition of quality, Dimensions of quality, Quality planning, Quality council, vision, Mission and policy statements. Customer Focus – customer perception of quality, Translating needs into requirements, customer retention. Dimensions of product and service quality. Cost of quality.

UNIT II: PRINCIPLES AND PHILOSOPHIES OF QUALITY MANAGEMENT

9

Overview of the contributions of Deming, Juran Crosby, Taguchi techniques – introduction, loss function, parameter and tolerance design, signal to noise ratio. Concepts of Quality circle, Japanese 5S principles and 8D methodology, PDSA cycle.

UNIT III: Statistical Tools

9

The seven tools of quality, New seven management tools, Statistical fundamentals – Measures of central tendency, measures of dispersion, control charts – Run chart, variable control chart, process capability. Concept of Six Sigma, Taguchi quality loss function – definition, Nominal- the-best, Average loss, Signal-to-Noise (S/N) Ratio. - **Case Study**

UNIT IV: TOOLS AND TECHNIQUES FOR QUALITY MANAGEMENT

9

Quality functions development (QFD) – Benefits, Voice of customer, House of quality (HOQ), building a HOQ, QFD process. Failure mode effect analysis (FMEA) – Requirements of reliability, failure rate, FMEA stages, design, process and documentation. Seven Tools (old & new). Bench marking and POKA YOKE.

UNIT V: QUALITY SYSTEMS ORGANIZING AND IMPLEMENTATION

9

Introduction to IS/ISO 9004:2000 – quality management systems – guidelines for performance Improvements. Quality Audits. ISO 14000 series – concept of ISO 14001 – Requirements, Benefits of EMS. - **Case Study**

TEXT BOOKS

1. Dale H.Besterfield et al, Total Quality Management, Third edition, Pearson Education (First Indian Reprints 2004).
2. Shridhara Bhat K, Total Quality Management – Text and Cases, Himalaya Publishing House, First Edition 2002.

REFERENCES:

1. James R. Evans and William M. Lindsay, -The Management and Control of Quality, 8th Edition, First Indian Edition, Cengage Learning, 2012.
2. Suganthi.L and Anand Samuel, -Total Quality Management, Prentice Hall (India) Pvt. Ltd., 2006.
3. Janakiraman. B and Gopal .R.K., -Total Quality Management – Text and Cases, Prentice Hall (India) Pvt. Ltd., 2006.

MS35D5	INVENTORY MANAGEMENT AND CONTROL	L	T	P	C
		3	0	0	3

OBJECTIVES

1. To discuss all aspects of inventory management, including common terms.
2. To Understand the inventory cycle.
3. To Practice how to maintain inventory accuracy, and the latest trends involved in it

Subject Name: Inventory Management and Control		Cognitive Skill
CO-01	To compare the various inventory levels	R,U

CO-02	To describe the types of inventory control systems.	R,U
CO-03	To demonstrate the materials requirements planning.	R,An
CO-04	To recognize the purpose of inventory control systems for supply chain	R,U,An
CO-05	To demonstrate the various make or buy decisions	R,U

Mapping of Course Outcome with Programme Outcome

COs	POA	POB	POC	POD	POE	POF	POG	POH
CO1	S	L	L	S	M	S	S	S
CO2	S	M	M	L	M	S	S	S
CO3	S	M	S	M	L	S	M	S
CO4	M	S	L	M	L	M	M	M
CO5	S	L	M	M	M	S	S	S

UNIT 1: Inventory Concept

9

Importance & Scope of Inventory Control, Types of Inventory, functions, use; Dependent and Independent Demand of Inventory, Costs Associated with Inventory, Selective Inventory Control, Classification of items, and Inventory control with deterministic and Stochastic demands with and without lead time. Understanding lead time. Internal and external lead time. Cumulative lead time.

UNIT II: Strategic Inventory Management

9

Objectives and Importance of the inventory management function in reference to Profitability, Strategy, customer satisfaction and Competitive Advantage. Competitive Inventory management, Reduce Inventory Costs through Inventory Strategies: Benchmarking, Streamline process, Know your vendors, Establish a vendor scorecard, Manage your vendors, Negotiate terms, Provide limitless access to information systems, Invest in systems, Invest in inventory control staff, Consistent forecasting philosophy, Review, recite, and retain key data, Clear a day's-work-in-a-day, Liquidation, Inbound freight, Importing.

UNIT III: Inventory Classification

9

Inventory Classification-Its use in controlling inventory, Setup time and inventory control, safety stock determination considering service level. Strategies to increase Inventory Turns, Reduce throughput time, Reduce WIP, eliminate waste, and reduce inventory level in service and manufacturing organizations.

UNIT IV: Inventory models

9

Fixed Order Versus Fixed Interval systems –Developing Special Quantity Discount Models – Inventory Model for Manufactured Items –Economic Lot Size when Stock Replenishment is instantaneous., Perishable Inventories, allocation and distribution model for perishable products, Continuously deteriorating inventory models, age dependent perishability, Periodic Review

Models with Stochastic Demand, Single period (Newsboy) Models, Dynamic Inventory Models with Stochastic Demand.

UNIT V: Material Requirement Planning Systems

9

Meaning, purpose and advantage of MRP, Data Requirements and Management –Bill of Materials, Master Production Schedules, process of MRP, output of MRP. Make Or Buy Decisions: Concept of outsourcing, Factors influencing Make Or Buy Decisions, Trends in Make Or Buy Decisions in context of core competency.

Text Books:

1. E. L. Porteus : Foundations of Stochastic Inventory Theory, Stanford Univ. Press,
2. P. H. Zipkin : Foundations of Inventory Management, Irwin/McGraw-Hill,
3. I Sahin : Regenerative Inventory Systems, Springer Verlag,
4. Zipkin : Foundations of Inventory Management –McGraw Hill.
5. Seetharama L Narsimhan, Dennis W McLeavy & Peter J Billington : Production Planning and Inventory Control - Prentice Hall Of India Pvt Ltd

REFERENCES:

1. J.R.Tony Arnold & Stephen N.Chapman : Introduction To Materials Management, - Prentice Hall
2. Richard J. Tersine : Principles of Inventory and Materials Management - Prentice Hall PTR
3. Max Muller: Essentials of Inventory Management - AMACOM/American Management Association
4. J H Greene : Production and Inventory Control - Homewood III: Richard D Irwin
5. Silver, E. & Peterson.R. : Decision System for Inventory Management and Production Control, Wiley,

MS35D6	VALUE ENGINEERING & BUSINESS PROCESS REENGINEERING	L	T	P	C
		3	0	0	3

OBJECTIVES:

1. To understand and analyze the theory and methodology of Value Engineering with the Guidelines, Performa and Checklist for a systematic, step by step application of the technique to the current industrial problems.
2. To provide the knowledge about Reengineering Principles, the various models and implementation method, which are adopted in the industries

COURSE OUTCOMES		Cognitive Skill
CO-01	To understand concepts and philosophy of Business Process Reengineering	R,U
CO-02	To understand and analyse the theory and methodology of Value Engineering with the Guidelines, Performa and Checklist for a systematic, step by step application of the technique to the current industrial problems	R,E
CO-03	Discuss various phases of value engineering. Analyze the function, approach of function and evaluation of function.	R,A

CO-04	To provide the knowledge about Reengineering Principles, the various models and implementation method, which are adopted in the industries	U,An
CO-05	To learn various BPR and alternate methodologies practiced in the industry	R,E

Mapping of Course Outcome with Programme Outcome

COs	POA	POB	POC	POD	POE	POF	POG	POH
CO1	S	L	L	S	S	S	S	L
CO2	S	S	M	L	S	S	S	S
CO3	S	S	S	M	L	M	M	M
CO4	L	S	L	M	L	M	M	S
CO5	S	L	S	M	S	S	S	S

UNIT I: INTRODUCTION

9

Definition, value engineering recommendations, programs, advantages, Evaluation of function, determining function, classifying function, evaluation of costs, evaluation of worth, determining worth, evaluation of value

UNIT II: VALUE ENGINEERING JOB PLAN

9

Introduction, orientation, information phase, speculation phase analysis phase. Selection and Evaluation of value engineering Projects, Project selection, methods selection, value standards, application of value engineering methodology

UNIT III: VERSATILITY OF VALUE ENGINEERING

9

Value engineering operation in maintenance and repair activities, value engineering in non-hardware projects. Initiating a value engineering programme Introduction, training plan, career development for value engineering specialties

UNIT IV: INTRODUCTION TO BPR

9

Basics of BPR, Need for reengineering, Benefits of BPR, Breakthrough reengineering model, BPR guiding principles, Key target of BPR, BPR in manufacturing industries

UNIT V: BPR IMPLEMENTATION METHODOLOGY

9

BPR methodology, different phases of BPR, BPR methodology selection guidelines, different BPR methodologies and its comparison, BPR success factors, Barriers to BPR, BPR and relevant technologies

TEXT BOOKS

1. Henry J. Johanson, Palrik Mchine, A.John Pandilebury, William A Wheeler, Business process Reengineering: Breakpoint Strategies for Market Dominance, Chichester, John Wiley & Sons
2. Anil Kumar Mukhopadhyaya, -Value Engineering: Concepts Techniques and applications, SAGE Publications 2010.

REFERENCES

1. Alphonse Dell'Isola, -Value Engineering: Practical Applications for Design, Construction, Maintenance & Operations, R S Means Co., 1997.
2. Richard Park, -Value Engineering: A Plan for Invention, St. Lucie Press, 1999

MS35D7	COMPUTER INTEGRATED MANUFACTURING	L	T	P	C
		3	0	0	3

OBJECTIVES:

1. To understand the application of computers in various aspects of Manufacturing viz., Design, Proper planning, Manufacturing cost, Layout & Material Handling system

COURSE OUTCOMES		Cognitive Skill
CO-01	Understand 2 dimensional and 3 dimensional transformations, modeling and analysis and CAD/CAM integration	R,U
CO-02	To understand the concept of various planning methods and its application in industries	R,U
CO-03	The Student will be able to understand the Machine cell design and layout in Cellular Manufacturing	U
CO-04	Students will understand the fundamentals of control in automation as they apply to manufacturing	R,U
CO-05	The Student will be able to develop small automatic / autotronics applications with the help of Robotics	R,U,A

Mapping of Course Outcome with Programme Outcome

COs	POA	POB	POC	POD	POE	POF	POG	POH
CO1	S	S	L	S	M	S	S	S
CO2	S	M	M	L	M	S	S	S
CO3	S	S	M	S	L	M	M	S
CO4	L	S	S	M	L	M	M	L
CO5	S	L	M	S	S	S	S	S

. Unit I: Introduction

9

Introduction to CAD and CAM – Manufacturing Planning, Manufacturing control – Concurrent Engineering - CIM concepts – Computerized elements of CIM system – Types of production - Manufacturing models and Metrics – Manufacturing Control – Basic Elements of an Automated system – Levels of Automation – Lean Production and Just-In-Time Production.

Unit II: Production Planning and Control and Computerized Process Planning

9

Process planning – Computer Aided Process Planning (CAPP) – Logical steps in Computer Aided Process Planning – Aggregate Production Planning and the Master Production Schedule – Material Requirement planning – Capacity Planning-Control Systems - Shop Floor Control

Inventory Control – Manufacturing Resource Planning (MRP-II) & Enterprise Resource Planning (ERP).

Unit III: Cellular Manufacturing 9

Group Technology (GT), Part Families – Parts Classification and coding – Production flow Analysis – Cellular Manufacturing – Composite part concept – Machine cell design and layout – Quantitative analysis in Cellular Manufacturing – Arranging Machines in a GT cell – Hollier Method.

Unit V: Flexible Manufacturing System (FMS) and Automated Guided Vehicle System (AGVS) 9

Types of Flexibility - FMS – FMS Components – FMS Application & Benefits – FMS Planning and Control – Automated Guided Vehicle System (AGVS) – AGVS Application – Vehicle Guidance technology – Vehicle Management & Safety.

Unit V: Industrial Robotics 9

Robot Anatomy and Related Attributes – Classification of Robots - Robot Control systems – End Effectors – Sensors in Robotics – Robot Accuracy and Repeatability - Industrial Robot Application.

TEXTBOOK:

1. Mikell.P.Groover "Automation, Production Systems and Computer Integrated Manufacturing", Prentice Hall of India, 2008.
2. Radhakrishnan P, Subramanyan S. and Raju V., "CAD/CAM/CIM", 2nd Edition, New Age International (P) Ltd, New Delhi, 2000.
3. Automation, Production Systems and Computer-Integrated Manufacturing, by Mikell P Groover, 4th Edition, 2015, Pearson Learning.
4. CAD / CAM Principles and Applications by P N Rao, 3rd Edition, 2015, Tata McGraw-Hill.
5. CAD/CAM/CIM, Dr. P. Radhakrishnan, 3rd edition, New Age International Publishers, New Delhi

REFERENCE BOOKS:

1. "Principles of Computer Integrated Manufacturing", S.Kant Vajpayee, 1999, Prentice Hall of India, New Delhi.
2. "Work Systems And The Methods, Measurement And Management of Work", Groover M. P., Pearson/Prentice Hall, Upper Saddle River, NJ, 2007.
3. "Computer Automation in Manufacturing", Boucher, T. O., Chapman & Hall, London, UK, 1996.
4. "Introduction to Robotics: Mechanics And Control", Craig, J. J., 2nd Ed., Addison-Wesley Publishing Company, Reading, MA, 1989

MS35D8	WORLDCLASSMANUFACTURING	L	T	P	C
		3	0	0	3

OBJECTIVES

1. To understand the concept of world class manufacturing, dynamics of material flow, and Lean manufacturing.
2. To familiarize the students with the concepts of Business excellence and competitiveness.
3. To apprise the students with the need to meet the current and future business challenges.

4. To prepare the students to understand the current global manufacturing scenario

COURSE OUTCOMES		Cognitive Skill
CO-01	Illustrate relevance and basics of World Class Manufacturing	R,U
CO-02	Shall be able to practice material planning through modern materials management tools like JIT, WCM model etc.	R,U,A
CO-03	To understand the various Technological innovation in manufacturing Industry.	R,U
CO-04	To understand the various numerical methods, advanced software and engineering tools to model, analyze and solve Automation engineering problems	R,U
CO-05	Demonstrate the relevance and basics of World Class Manufacturing	R,An

COs	POA	POB	POC	POD	POE	POF	POG	POH
CO1	S	L	L	S	M	S	S	L
CO2	S	M	M	S	M	S	S	S
CO3	S	M	M	M	S	M	M	S
CO4	L	S	S	M	S	M	M	S
CO5	S	S	M	M	M	S	S	L

Unit I: Introduction to World-Class Manufacturing

9

Introduction, product development process, process mapping, Information Age and its impacts, Competition, advances in manufacturing technology.

Unit II: Just-in-Time

9

JIT – Principles advocated in Just-in-Time System, JIT Manufacturing System, JIT Pull System, WCM model, MRP and MRPII, developments, gaining competitive edge, advantages and implementation issues.

Unit III: Advances in Manufacturing

9

Technological innovation in manufacturing, computer-integrated manufacturing, flexible Manufacturing systems, group technology and cellular manufacturing.

Unit IV: Factory of the future automated systems

9

Human factors in automated systems, optimized production technology, Modeling, optimizing and simulation of manufacturing systems.

Unit V: World Class Manufacturing

9

International Scenario and Indian Scenario, Competitiveness and Performance of Indian Manufacturers, manufacturing innovations, quick response manufacturing, agile manufacturing, lean manufacturing, rapid prototyping, concurrent engineering.

Text Books:

1. World Class Manufacturing: The Next Decade: Building Power, Strength, and Value, Richard J. Schonberger, Free Press
2. World Class Manufacturing Casebook: Implementing JIT and TQC, Richard J. Schonberger, Simon & Schuster.
3. World Class Manufacturing - Strategic Perspective Sahay B.S., Saxena KBC. and Ashish Kumar Mac Milan Publications New Delhi
4. Just In Time Manufacturing Korgaonkar M.G MacMilan Publications.

Reference Books:

1. Production and Operational Management Adam and Ebert Prentice Hall learning Pvt. Ltd. 5th Edition
2. The Toyota Way – 14 Management Principles Jeffrey K. Liker Mc-Graw Hill 2003
3. Operations Management for Competitive Advantage Chase Richard B., Jacob Robert McGraw Hill Publications 11th Edition 2005
4. Making Common Sense Common Practice Moore Ron Butterworth-Heinemann 2002
5. World Class Manufacturing - The Lesson of Simplicity Schonberger R. J Free Press 1986

MS35D9	STRATEGIC OPERATIONS MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES:

1. Understand the fundamental, practical science of Operations Management.
2. Explore the interface between operations and other business functions
3. Examine how these principles operations management can be employed in both tactical and strategic decision making in firms
4. Develop ability to analyze and address problem related to the design, planning, control, and improvements of manufacturing and service operations
5. To provide a set of foundational skills useful for more advanced courses in Operations

COURSE OUTCOMES		Cognitive Skill
CO-01	The students will able to Plan and implement suitable quality control measures in Quality Circles to TQM	R,U
CO-02	The students will able to understand the Process Choice & Strategy in Manufacturing & Services	R,U
CO-03	The students will able to understand the Layout design in manufacturing firms	R,An
CO-04	Identifying the scope for integrating materials management function over the logistics and supply chain operations	R,U,An
CO-05	The students will able to solve Supply chain uncertainty and Scheduling problems	R,U

Mapping of Course Outcome with Programme Outcome

COs	POA	POB	POC	POD	POE	POF	POG	POH
CO1	S	S	S	S	M	S	S	M
CO2	S	M	M	S	M	S	S	S
CO3	S	S	M	S	S	M	M	S
CO4	L	S	S	M	S	M	M	S
CO5	S	S	M	M	M	L	S	S

Unit I: Introduction to Operation Management Strategy 9

Decision making at the strategic, tactical, and operational supply chain management. Total Quality Management and Business Process Reengineering.

Unit II: Supply Chain Planning 9

Processes - Integrated supply chain planning and optimization. Process Choice & Strategy in Manufacturing & Services.

Unit III: Layout and Service Operations 9

Services Operations – concepts and definitions. Facilities planning and Layout design. Strategic sourcing and supplier management.

Unit IV: Inventory Control 9

Advances in Supply Chain Practices - Introduction to Materials & Inventory Control; MRP; MRPII Just-in-Time, Lean supply chain practices.

Unit V: Sustainability and Competence 9

Sustainable supply chain management, and Supply chain uncertainty. Scheduling & Capacity Management. International operations, core competency.

Text Books

1. Krajewski, L. J., Malhotra, M. K., & Ritzman, L.P. (2016). Operations management. (11th ed.). Upper Saddle River, NJ: Pearson
2. Slack, N., Brandon-Jones, A. (2018) Essentials of Operations Management, 2nd Edition, London, Pearson
3. Brown, S., Lamming, R., Bessant, J. and Jones, P. (2012) Strategic Operations Management, 3rd edition, Routledge

References:

1. Simchi-Levi, D., Kaminsky, P., and Simchi-Levi E. (2008) Designing and Managing the Supply Chain, 3rd ed. McGraw Hill.
2. Chopra, S. and Meindl, P. (2012) Supply Chain Management: Strategy, Planning and Operation, 5th ed. Pearson Edn.
3. Jacobs, F.R. and Chase R. (2012) Operations and Supply Chain Management: The Core, 3rd ed, McGraw Hill.

ELECTIVE CURRICULUM
E.AVIATION

Sl.No.	Code	Name of the Subjects	L	T	P	C
1	MS35E1	International Aviation	3	0	0	3
2	MS35E2	Aviation Regulations	3	0	0	3
3	MS35E3	Air Operations	3	0	0	3
4	MS35E4	Commercial Aviation Safety and Security	3	0	0	3
5	MS35E5	Strategic Aviation Management	3	0	0	3
6	MS35E6	Aviation Management	3	0	0	3
7	MS35E7	Airline Management	3	0	0	3
8	MS35E8	Project Management in Aviation	3	0	0	3
9	MS35E9	Air Cargo Management	3	0	0	3
10	MS35E10	Corporate Aviation Management	3	0	0	3

MS35E1	INTERNATIONAL AVIATION	L	T	P	C
		3	0	0	3

OBJECTIVES

1. Identify and understand the different organizations that are responsible for oversight of international aviation regulations and how these impact national regulators.
2. Review Global Aviation Accident records and compare how different international organizations oversee aviation safety.
3. Assess, by researching a self-selected overseas national regulator, the similarities and differences between domestic and international aviation regulations.

Course Outcome-COs		Cognitive Skill
CO-01	To describe the historical foundations for the global air transport system, including the various conventions and agreements that govern international aviation.	R,U
CO-02	To explain the trend towards a more open and competitive global air transport market (project).	R,U
CO-03	To compare the air transport systems of two or more nations.	A,S
CO-04	To evaluate the evolution of the global air freight industry, including the rise of the integrated cargo carriers.	E
CO-05	To demonstrate the procedure for Air Navigation Services.	A

Mapping of Course Outcome with Programme Outcome

PO CO	PO- A	PO- B	PO- C	PO- D	PO- E	PO- F	PO- G	PO- H
CO-01	M	M	S	S	S	S	M	S
CO-02	M	L	L	S	S	S	S	S
CO-03	M	S	S	M	S	S	L	S
CO-04	S	L	M	S	M	S	S	S
CO-05	S	M	L	S	L	S	S	S

UNIT: I History of Civil Aviation

9

Birth of Aviation - Formation of earlier days airlines - Trans Pacific flights operated by Sea Planes - Major roles played by Transport and Fighter airplanes in World War 1 and World War II - Formation and Operation of Global Body of organizations, such as International Civil Aviation Organization (ICAO) and International Air Transport Association (IATA), to establish and execute rules and regulations for the safe operations of civil aircraft.

UNIT :II International Civil Aviation Organization

10

Formation of International Civil Aviation Organization: objectives of International Civil Aviation Organization: various bureaus and its civil activities. ICAO Annexes (1-18)
ICAO: Responsible for setting up safety standards for member airlines.

UNIT: III Structure and Control of International Civil Aviation Organization 8

Chain of command in International Civil Aviation Organization: Responsibilities of the General Assembly: Election process for the Council: Functioning and tasks of the council and its committees.

UNIT: IV Other Regulatory Agencies 9

IATA: Aims – Growth and development – Responsibilities - Functions. Facilitating the use of Revenue Accounting and IATA Clearing House for member airlines.
Federal Aviation Administration (FAA): Roles and Functions, Civil Aviation Authority (CAA): Role and Functions, World Tourism Organization

UNIT :V Standards and Recommended Practices Procedure for Air Navigation Services 9

Meaning of Standards and Recommended Practices: Procedure for Air Navigation Services: describe the contents of Annex: Explain the purpose of Procedure for Air Navigation Services: State how they come into effect.

TOTAL: 45 HOURS

BOOKS FOR REFERENCE:

1. 'International Civil Aviation Organization' - An Introduction by Ludwig Weber (Author) ISBN: 978-90-411-2622-1, published by Kluwer Law International, The Netherlands.
2. 'Fundamentals of Air Transport Management' - P.S. Senguttuvan, Excel Books, First edition 2006

MS35E2	AVIATION REGULATIONS	L	T	P	C
		3	0	0	3

OBJECTIVES

- Explain aviation operations in terms of aviation safety and human factors
- Demonstrate the basic knowledge of the Aircraft Act
- Elaborate the Act related to National Legislation
- Interpret the outcomes from the Chicago Convention and in particular the purpose, outcomes and requirements of Annexes 6, 16 and 17.

Course Outcome-COs		Cognitive Skill
CO-01	To describe the historical foundations for the global air transport system, including the various conventions and agreements that govern international aviation.	R,U
CO-02	To explain the trend towards a more open and competitive global air transport market (project).	R,U
CO-03	To compare the air transport systems of two or more nations.	A,S

CO-04	To evaluate the evolution of the global air freight industry, including the rise of the integrated cargo carriers.	E
CO-05	To demonstrate the procedure for Air Navigation Services.	A

Mapping of Course Outcome with Programme Outcome

PO CO	PO- A	PO- B	PO- C	PO- D	PO- E	PO- F	PO- G	PO- H
CO-01	M	M	S	S	S	S	M	S
CO-02	M	S	S	S	S	S	S	S
CO-03	M	S	S	M	S	S	S	S
CO-04	S	S	M	S	M	S	S	S
CO-05	S	M	S	S	S	S	S	S

UNIT:I INTRODUCTION OF DGCA

7

DGCA-Introduction to Directorate General of Civil Aviation-DGCA functions-DGCA Organization-DGCA as Regulatory Authority

UNIT: II AIRCRAFT REGULATIONS ACT

8

Aircraft Act 1934- The Aircraft Rules 1937

UNIT :III NATIONAL LEGISLATION

10

The Air corporations Act, 1953 (27 of 1953)
The Air Corporations (Transfer of Undertakings and Repeal) Ordinance, 1994(4 of 1994)
The Air Corporations (Transfer of Undertakings and Repeal) Act, 1994 (13 of 1994)
The International Airports Authority of India act, 1971 (43 of 1971)
The National Airports Authority of India, 1985 (64 of 1985)
The Airports Authority of India Act 1994 (55 of 1994)
The Carriage by Air Act, 1972 (69 of 1972)
The Tokyo Convention Act, 1975 (20 of 1975)
The Anti-hijacking Act, 1982 (65 of 1975)
The suppression of unlawful acts against safety of Civil Aviation Act, 1982 (66 of 1982)

UNIT: IV CIVIL AVIATION REQUIREMENTS (CAR)

10

Section 1-General
Section 2-Airworthiness
Section 3-Air Transport
Section 4-Aerodrome standards and Air Traffic Services
Section 5-Air Safety
Section 6-Design standards and type certification
Section 7-Flight crew standards, training and licensing

Section 8-Aircraft operations

UNIT: V INTERNATIONAL CONVENTIONS

10

The Chicago conventions, 1944
 The International Air Services Transit Agreement, 1944
 The International Air Transport Agreement, 1944
 The Warsaw Conventions, 1920
 The Geneva Convention, 1948
 The Rome Convention, 1952
 The Tokyo Convention, 1963

TOTAL: 45 HOURS

BOOKS FOR REFERENCE:

1. 'Civil Aviation Regulations' - DGCA: India
2. Aircraft manual (India) volume ' – Latest Edition, The English Book Store, New Delhi

MS35E3	AIR OPERATIONS	L	T	P	C
		3	0	0	3

OBJECTIVES

1. Design the operations of airports, airspace, and the air traffic control system
2. Elaborate the fundamental issues related to flight simulation, Extended Operations (ETOPS), Aviation Fuel, Aircraft Evaluation and Selection, and Security.
3. Demonstrate the knowledge of current certificate of air worthiness
4. Identify the process of the aircraft documentation and Crew standards

Course Outcome-COs		Cognitive Skill
CO-01	To Describe major legislation and changes in technology affecting the growth and development of commercial air service in the US including the relevance of current federal regulations and other guidance relating to	R,U
CO-02	To Explain roles, functional components, and competitive strategies of major US airlines, regional carriers and cargo operators.	R,U
CO-03	To Identify roles and functions of airline ground, flight, maintenance, and management departments.	A
CO-04	To Evaluate the impact of irregular operations (IrOps) on the national air transportation system.	E
CO-05	To Describe major legislation and changes in technology affecting the growth and development of commercial air service in the US including the relevance of current federal regulations and other guidance relating to airline operations.	S

Mapping of Course Outcome with Programme Outcome

PO CO	PO- A	PO- B	PO- C	PO- D	PO- E	PO- F	PO- G	PO- H
CO-01	M	M	S	S	S	S	M	S
CO-02	M	L	L	S	S	S	S	S
CO-03	M	S	S	M	S	S	L	S
CO-04	S	L	M	S	M	S	S	S
CO-05	S	M	L	S	L	S	S	S

UNIT :I Various Types of Air Operations

10

Airline Domestic – Airline International - Regional Airline – Shuttle Airline – Low Cost Airline – Commuter Airline – Corporate Flights – Freighters – Flights using Combi aircraft – Flights using narrow body aircraft – Flights using wide body aircraft – Long range flights – Ultra long range flights – Extended Operations (ETOPS).

UNIT :II Non Schedule Airline Operation

8

Crop Dusting Flights – Sea Planes – Amphibians – Ski Planes – Air Training flights – Ferry flights – Ferry flight with a dead engine – Flights operated with an extra non operational positioning engine.

UNIT :III Civil Airports

10

Functions of Airport - Rules and regulations governing civil aerodrome / airports - Airports controlled by Air Traffic Controller (Tower) - Runways certified for CAT 1, CAT 2 and CAT 3 landings.Length and width of Runway (s) – Taxiways – Lightings – Obstructions – Parking Bays – Terminal facilities – Security – Ground Power Unit / Air Start – Fire engines.

UNIT :IV Aircraft Documents and Crew Licenses

7

Flight Crew Standards – Training and Licensing – Valid documents required for operating an Aircraft - Maintaining current licenses - Renewals.

UNIT :V Flight operations

10

Current Certificate of Airworthiness - Valid and current licenses required by all flight crew – Minimum rest periods – Maximum Take off Weight – Load Sheet and Weight and Balance – Flight Despatch – Weather, minimum fuel required, crew flight/duty hour limitations – Waivers – Minimum Equipment List (MEL).

TOTAL: 45 HOURS

BOOKS FOR REFERENCES:

1. USA Federal Aviation Administration Manuel, Part 121, 141 etc.,
2. DGCA India Air Law.

MS35E4	COMMERCIAL AVIATION SAFETY AND SECURITY	L	T	P	C
		3	0	0	3

OBJECTIVES

- Identify aviation regulatory framework in terms of aviation safety and human factors
- Assess contemporary issues and problem area in rule making
- Demonstrate the air traffic navigations
- Describe the accidents and causes of accidents and the current accident statistics

Course Outcome-COs		Cognitive Skill
CO-01	To Identify issues relating to aviation safety as mandated by the Federal Aviation Administration (FAA), Environmental Protection Agency (EPA), and the Occupational Safety and Health Administration (OSHA)	U
CO-02	To Explain key elements of aeronautical decision-making and safety data analysis	U
CO-03	To Describe the accidents and causes of accidents and the current accident statistics	R
CO-04	Describe how safety management systems (SMS) work to decreaseT airport and aircraft accident	A
CO-05	Evaluate the nature of accidents and the role of the accident investigation process	A

Mapping of Course Outcome with Programme Outcome

PO CO	PO- A	PO- B	PO- C	PO- D	PO- E	PO- F	PO- G	PO- H
CO-01	M	M	S	S	S	S	M	S
CO-02	M	L	L	S	S	S	S	S
CO-03	M	S	S	M	S	S	L	S
CO-04	S	L	M	S	M	S	S	S
CO-05	S	M	L	S	L	S	S	S

UNIT: I Regulatory Framework and Safety Data Analysis

9

Early Safety Legislation- Airline Deregulation- Commercial Aviation Defined- The Commuter Safety Initiative- The National Airspace System - Safety Factors - Measurement data - Nonaccident safety data - Incidents - Accident Causes and Types: Primary safety factors - Secondary and tertiary safety factors - Manufacturers' analysis of the causes.

UNIT :II Measuring Air Transportation Safety

9

Accident Investigation – Incidents: Characteristics of incident reporting - Incident Reporting Systems - Mandatory incident reporting systems - Voluntary incident reporting systems -

Reporting Systems in the United States - Automatic Recording Systems - International Exchange of Safety Data - ICAO ADREP system - Other ICAO safety information.

UNIT :III Nature of Accidents and Human Factors in Aviation Safety 9

Historical Sketch of the 5-M Factors: Man, Machine, Medium, Mission, Management - Risk Management - Human Factors: Human Performance - Pilot selection and training - Cockpit Automation - Air traffic control automation - Air-to-ground communication - Federal Responsibilities in Human Factors : FAA, NTSB, NASA - Airline Industry Responsibilities in Human Factors

UNIT :IV Air Traffic System Technologies 9

The National Airspace System Plan - NAS Modernization: Communications, Navigation, Advantages of satellite-based navigation, Surveillance, Aviation weather, Avionics, Operational planning, Airport surface operations, Departures and arrivals, En-route/oceanic, Free Flight Phase 1, Implementation schedule - Funding the NAS modernization plan.

UNIT :V FAA, Flight Standards and Rulemaking 9

Flight Standards Service: Air Carrier Responsibilities for Safety - FAA Safety Inspection Program: Inspector workload, Air Transportation Oversight System, Centralized analysis of data, Reexamination of air carriers, Public complaints - Aging Aircraft - FAA Rulemaking: Rulemaking process, Problem areas

TOTAL: 45 HOURS

BOOKS FOR REFERENCE:

1. _Commercial Aviation Safety‘ – Alexander T.Wells, McGraw-Hill Companies.
2. _Commercial Aviation Safety‘ - Clarence Rodrigues, Stephen Cusick, McGraw Hill Professional, 5th edition.

MS35E5	STRATEGIC AVIATION MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES

- Identify and analyze the value chain problems
- Apply knowledge of business sustainability to aviation issues
- Define the concept of strategy and setting strategy

Course Outcome-COs		Cognitive Skill
CO-01	To Identify and analyse the value chain problems	R, A
CO-02	To Apply knowledge of business sustainability to aviation issues	A
CO-03	To Define the concept of strategy and setting strategy	R
CO-04	To analyze the Setting Corporate Direction	A
CO-05	To Evaluate the Aviation Strategy Implementation	E

Mapping of Course Outcome with Programme Outcome

PO CO	PO- A	PO- B	PO- C	PO- D	PO- E	PO- F	PO- G	PO- H
CO-01	M	M	S	S	S	S	M	S
CO-02	M	L	L	S	S	S	S	S
CO-03	M	S	S	M	S	S	L	S
CO-04	S	L	M	S	M	S	S	S
CO-05	S	M	L	S	L	S	S	S

UNIT I: The Essence of Strategy

9

Strategic Management - The Meaning of Competitive Strategies - The Difference between operational Effectiveness and Strategy - The Strategic Management Process - Designing a Corporate Vision - Designing a Mission Statement - Setting organizational objectives - The Generic Strategies - Low-Cost Leadership Position - Differentiation Strategies - Niche Strategy - Best-Cost Producer Strategy - The Miles and Snow Typology - A Fresh Perspective on Competitive Strategies.

UNIT II: The External Environment

10

The Macro External Environment - The Micro External Environment - Michael Porter's Five Competitive Forces - Industry Characteristics - Understanding opportunities and Threats in the Industry - Understanding the Competition - Key Success Factors - The Process of Environmental Analysis - Using Experts to Help in Environmental Assessment - Tools to Address Environmental Uncertainty.

UNIT III: The Internal Environment

10

Value Chain Analysis - How Does one use the value Chain? - What are the Problems with value Chain? - Strategic Cost Analysis - Resource-Based view - Strategy in the Twenty-first Century: Benchmarking: Learning from Others, Focusing on the Customer, Outsourcing, Strategy and the Internet, Knowledge Management

UNIT IV: Setting Corporate Direction

8

Corporate Strategies - Growth Strategies: Intensive Growth Strategies, Integrative Growth Strategies, Concentration Growth Strategies, Diversification Growth Strategies - No Growth Strategies: Retrenchment and Turnaround, Liquidation, Divestiture - International Strategies: Strategies Tailored to Specific Situations - Strategies for Fragmented Industries - Strategies for Declining Markets - Strategies for Emerging Industries: First-Mover Advantages.

UNIT V: Aviation Strategy Implementation

8

Strategic Leadership: A Key to Successful Implementation: Preparation, Leadership, Change, Partnership - Knowing When to Hold it and When to outsource - Putting Together the Right Staff - Matching the Right organizational Structure to a Strategy: The Simple Structure, The Functional Structure, Multidivisional Structure, Strategic Business Units - The Matrix organizational Structure

TOTAL: 45 HOURS

BOOKS FOR REFERENCE:

1. _Designing and Executing Strategy in Aviation Management‘ by Triant G. Flouris & Sharon L. Oswald Ashgate publishers co. ISBN: 978-0-7546-3618-2
2. _Strategic Management in the Aviation Industry‘ - by Delfmann, Werner, Baum, Herbert, Auerbach, Stefan, Albers, Sascha(EDT) Ashgate publishers co. ISBN: 0754645673

MS35E6	AVIATION MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES

- Conceptualize operations of airports, airspace, and the air traffic control system
- Apply knowledge of aircraft management and safety standards
- Elaborate the importance and structure of IATA in Aviation Management
- Explain about Aviation Policy and Global Aviation

Course Outcome-COs		Cognitive Skill
CO-01	To Conceptualize operations of airports, airspace, and the air traffic control system	R
CO-02	To Apply knowledge of aircraft management and safety standards	A
CO-03	To Elaborate the importance and structure of IATA in Aviation Management	S
CO-04	To Explain about Aviation Policy and Global Aviation	U
CO-05	To Understand the International Air Transport Association	U

Mapping of Course Outcome with Programme Outcome

PO CO	PO- A	PO- B	PO- C	PO- D	PO- E	PO- F	PO- G	PO- H
CO-01	M	M	S	S	S	S	M	S
CO-02	M	L	L	S	S	S	S	S
CO-03	M	S	S	M	S	S	L	S
CO-04	S	L	M	S	M	S	S	S
CO-05	S	M	L	S	L	S	S	S

Course Outcome-COs	Cognitive Skill
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UNIT I : Introduction

9

Introduction to Aviation Management – Aviation – Aviation Sector in India - Civil Aviation – Airport – Air Traffic Control – Flight Data Recorder – Airlines – Case Study

UNIT II : Civil Aviation

10

International Civil Aviation Organization – Aeropol Aviation Services Corporation - Aviation Management Consulting Group - AOPA – International Association of Airport Executives – Federal Aviation Interactive Reporting Systems - Case Study

UNIT III : Regulations

10

Aircraft Regulations and Guidance – Convention on International Civil Aviation – Inter Agency Committee for Aviation Policy – Active Level of Services Reviews – Aircraft Engineers International Affiliation – AVSEC Rules and Regulations – Overview of Indian Air Travel.

UNIT IV : Air Safety

9

Air Safety – FAA Aviation Safety Draft Documents – Aircraft Management Interagency Committee for Aviation Policy Safety Standards – Aircraft Management Safety Standards Guidelines for Federal Flight Programmes – National Transportation Safety Board – Airline Water Supplies – JFIM -Overview of Contemporary Global Industry – Airline Industry Profitability – Present State of the Air Transport Industry – Aviation Industry – Global Aviation Industry – Indian Aviation

UNIT V: IATA

7

International Air Transport Association (IATA) – Fact Sheet – Financial Services – IATA at the Air Transport Industry - IATA Industrial Priorities – IATA Partners – IATA Corporate and Corporate Governance Structure – IATA Human Capital – IATA Committee's – Cargo, Mandate, Environment, Financial, Legal, Operations, Industry Affairs – Rules and Regulations of the Industry Committee

TOTAL: 45 HOURS

BOOKS FOR REFERENCE:

1. 'Aviation Management' - by Ratandeep Singh, Kanishka Publishers, 2008.
2. 'Essentials of Aviation Management' - by J F Rodwel ISBN: 0787297623, 9780787297626 Kendall/Hunt publishers co.

MS35E7	AIRLINE MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES

- Apply pertinent knowledge in scheduling of resources
- Use the techniques, skills, and modern technology necessary for professional practice
- Elaborate knowledge in effective decision making
- Explain the revenue management in airline industry.

CO-01	To understand the Airline Management and Organization U	U
CO-02	To Use the techniques, skills, and modern technology necessary for professional practice	A
CO-03	To Elaborate knowledge in effective decision making	R
CO-04	To Apply applicable knowledge in scheduling of resources	A
CO-05	To analyze Revenue management & Irregular operations Management in airline industry .	E

Mapping of Course Outcome with Programme Outcome

PO	PO- A	PO- B	PO- C	PO- D	PO- E	PO- F	PO- G	PO- H
CO								
CO-01	M	M	S	S	S	S	M	S
CO-02	M	L	L	S	S	S	S	S
CO-03	M	S	S	M	S	S	L	S
CO-04	S	L	M	S	M	S	S	S
CO-05	S	M	L	S	L	S	S	S

UNIT: I Airline Management and Organization

10

Introduction – Management – The New corporate structure – Airline Organization Chart - Challenges of airline management- Staff Department – Line Department- Airline Planning and operations- Network Structure - Sales and Distribution- Irregular Operations Management

UNIT :II Demand Modeling and Forecasting

8

Modeling the choice of travel options- Passenger demand Modeling and Forecasting

UNIT :III Fleet Planning: The Aircraft Selection Process

9

Factors in Fleet Planning – Design and Development: The Manufacturers view point – The Fleet Planning Process – The decision to upgrade or replace.

UNIT :IV Scheduling of Resources

9

Fleet Assignment - Aircraft routing - Crew planning - Gate Assignment - Baggage handling - Flight planning and Fuel Management

UNIT :V Revenue management & Irregular operations Management

9

Demand Forecasting for revenue Management - No-show Rate and Overbooking - Seat inventory control for Flight-based revenue management - Seat Inventory Control for Network-based Revenue management - Ticket Distribution - sales contracts - code-share Agreements - ground delay programs and collaborative decision making - impact of disruptions on Air carrier schedule

TOTAL: 45 HOURS

BOOKS FOR REFERENCE:

1. 'Modeling Applications in the Airline Industry' – Ahmed Abdelghany & Khaled Abdelghany, Ashgate, April 2010, ISBN: 978-0-7546-7874-8
2. 'Air transportation' – a Management perspective 5th edition, John Wensveen, A.T Wells.

MS35E8	PROJECT MANAGEMENT IN AVIATION	L	T	P	C
		3	0	0	3

OBJECTIVES

- Develop a project management plan, define scope and determine project requirements
- Explain the concepts of Monitor schedule, cost and quality performance during project execution
- Review the end to end procurement management process
-

Course Outcome-COs		Cognitive Skill
CO-01	To Develop a project management plan, define scope and determine project requirements	U
CO-02	To Explain the concepts of Monitor schedule, cost and quality performance during project execution	U,R
CO-03	To Review the end to end procurement management process	S
CO-04	To analyze impact of changes in relation to the project life cycle	A
CO-05	To Evaluate the Project Closure and Post-Project Activities	E

Mapping of Course Outcome with Programme Outcome

PO CO	PO- A	PO- B	PO- C	PO- D	PO- E	PO- F	PO- G	PO- H
CO-01	M	M	S	S	S	S	M	S
CO-02	M	L	L	S	S	S	S	S
CO-03	M	S	S	M	S	S	L	S
CO-04	S	L	M	S	M	S	S	S
CO-05	S	M	L	S	L	S	S	S

UNIT :I Introduction to Aviation Project Management

8

Different types of projects- Project life cycles and life histories- Project life cycles and life histories- Factors for assessing project success or failure- Relationship between the three primary objectives- Perceptions of project success or failure beyond the three primary objectives- Benefits realization- Case example: a satellite navigation project

UNIT :II Planning the Aviation Project Timescale

10

Introduction to project planning: Bar charts: Critical path networks: Two different network notation systems: critical path networks using arrow diagrams: Precedence diagrams: Planning the L-F Controls aircraft component project by critical path network: Level of detail in network

diagrams: Milestones: Is the predicted timescale too long? : Early consideration of resource constraints. Case Example: General Aviation Hanger Renovation

UNIT :III Managing Purchasing, the Supply Chain, and Aviation Project Materials

10

An introduction to aviation project purchasing: An outline of aviation project purchasing organization and procedures: Purchase specifications: defining what has to be bought: Supplier selection: Purchase requisitions and orders: Purchase order delivery times: Expediting: Purchase order amendments: Logistics: a more detailed description of the external supply chain Goods receipt: Notes on storage: Vendors' documents. Case Example: a supply chain logistics problem solved by a freight forwarder

UNIT :IV Managing Changes

10

The impact of changes in relation to the project life cycle: Origin and classification of changes: Authorization arrangements: General administration of changes: Estimating the true cost of a change: forms and procedures: Version control for modified drawings and specifications: Emergency modifications: Version control, build schedules, and traceability in aerospace projects. Case Example: a version control problem and its novel solution

UNIT :V Project Closure and Post-Project Activities

7

Reasons for closing a project-Formal project closure announcement-Post project services to the customer-Final project cost records-Disposal of surplus material stocks-As-built condition of a project that is interrupted before completion-Managing files and archives-Recording the project management experiences.

TOTAL: 45 HOURS

BOOKS FOR REFERENCE:

1. -A Systems Approach to Planning, Scheduling and controlling -9th edition by Van Nostrand Reinhold.
2. 'Aviation Project Management' - by Triant Flouris and Dennis Lock. Ashgate Publishers company ISBN- 13: 9780754673958

MS35E9	AIR CARGO MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES

- Understand the global cargo world to avoid strategic and tactical errors
- Reduce your operating costs and maintain optimum levels of customer service
- Capitalize on the changes within the cargo industry by researching and planning effectively
- Understand shippers' changing needs and how to adjust your business for immediate results
- Improve your competitive performance by acquiring exceptional management tools

Course Outcome - COs		Cognitive Skill
CO-01	To Analyse issues in Multimodal transport in India and take a strategic view of similar transport globally, impacting Indian business	A
CO-02	To Apply analytical techniques to arrive at cost effective solutions to Indian transport needs in the existing legal framework.	A

CO-03	To Decide optimal modal options.	U
CO-04	To Manage International Logistics & Supply Chain partners and service provider	R,U
CO-05	To Deploy knowledge of local, regional and international transportation networks to identify and solve incoming and outgoing transport problems	E

Mapping of Course Outcome with Programme Outcome

PO CO	PO- A	PO- B	PO- C	PO- D	PO- E	PO- F	PO- G	PO- H
CO-01	M	M	S	S	S	S	M	S
CO-02	M	L	L	S	S	S	S	S
CO-03	M	S	S	M	S	S	L	S
CO-04	S	L	M	S	M	S	S	S
CO-05	S	M	L	S	L	S	S	S

UNIT I: AIRPORT AND AIRCRAFT

9

Airports – Role – Significance – Aircraft – Basic Cargo Terminology – International Phonetic Alphabet – Stakeholders Involved - Exporter/Importer – Custodian – Customs Brokers – Freight Forwarder – Airlines/General Sales AGENT (GSSA) – ICAO – List of Airlines Code- GH (Ghana Airways) – Customs – Government – Banks – Future of the Industry

UNIT II: AIR CARGO

9

Air Cargo - Significance – Uses – Advantages – Disadvantages – International Air Transport Association – Roles And Functions – Codes – International Civil Aviation Organization And Role – Directorate General of Civil Aviation And Role – ACCAI (The Air cargo Association Agents Association In Airlines)And Role – Airport Authority of India, Custodians And Roles – Other Allied Bodies – Cargo – Types

UNIT III: DOCUMENTATION , BILLS AND PROCEDURES

9

Documentation – Air Way Bill – Types – Manifest – Delivery Order – Proof On Delivery – Freight – Types – Calculation – Volume Based – Weight Based – Chargeable Weight – Procedure – Claims and Liability – Air Cargo Rates and Charges – Cargo Operations – Customs clearance

UNIT IV: HANDLING OF EQUIPMENTS

9

Handling – Equipment - Types – Facilities – Warehouses – AFS – Packing – Types – Marking – Labelling – Freight forwarding – Consolidation

UNIT V : AIR CARGO OPERATIONS AND DANGEROUS GOODS

9

Air freight forwarding- : Air freight Import and Export – Dangerous Goods Regulations and Cargo by Air – Special Cargoes- Classes – Packing – Marking – Labelling – Handling – Transportation – Royal Air Maroc Airline– Checklist

TOTAL: 45 HOURS

TEXT BOOKS

1. Yoon Seok Chang, -Air Cargo Management, CRC Press, 2015.
2. XIE CHUN XUN ZHU, -Air Cargo Management Introduction - Aviation Logistics Management Series (Chinese Edition), South-east University Press, 2006.

REFERENCES

1. Paul, -Air cargo distributions: A Management Analysis of Its Economic and Marketing Benefits, Jackson and William Brackenridge (Gower Press), 6th Edition, 1988.
2. Peter S. Smith, -Air Freight: Operations, Marketing and Economics, Chu (Boston: Kluwer Academic Publishers), 3th Edition, 2004.

MS35E10	CORPORATE AVIATION MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES

- List the corporate Aviation technology and its progress
- Explain the knowledge of Aircraft policy and future policy

Course Outcome - COs		Cognitive Skill
CO-01	To Demonstrate an understanding of the history and development of business and corporate aviation.	U
CO-02	To Describe the regulations that govern business and corporate aviation and the role of trade associations in the development of relevant policies	U,R
CO-03	To Analyze the use of business aircraft and the aircraft selection process used by companies and individual	A
CO-04	To Critically compare corporate flight, fractional ownership, and charter operator options in terms of mobility, cost, reliability and other decision factors. (group project	A
CO-05	To study about the Flight Department Management	R,U

Mapping of Course Outcome with Programme Outcome

PO CO	PO- A	PO- B	PO- C	PO- D	PO- E	PO- F	PO- G	PO- H
CO-01	M	M	S	S	S	S	M	S
CO-02	M	L	L	S	S	S	S	S
CO-03	M	S	S	M	S	S	L	S
CO-04	S	L	M	S	M	S	S	S
CO-05	S	M	L	S	L	S	S	S

Corporate Aviation description – Evolution of corporate Aviation Technology and Progress of corporate Aviation – Functions and Development of the corporate aviation manager - Principles to follow in Corporate Aviation Management – Aviation department structure within the corporation.

UNIT II: Determining the Need

10

Air transport needs – why individuals and companies use on-demand air transportation, determining the requirement, Air transportation analysis – travel history – the future – solutions, what users want in on-demand air transportation.

UNIT III: Getting Started

10

First things – aircraft use policy – charge books – oversights, staying informed, Owner / employee flown operations, aircraft charter, fractional ownership, in house aircraft, Management Company, joint ownership.

UNIT IV: Running the Business

7

Organizations, Scheduling – Personnel Policy – Procedure, Administration, Finance and accounting, Planning.

UNIT V: Flight Department Management

9

The flight department manager as a business executive, training the boss, preparing the next generation, corporate stages of development, operations – overview – risk v/s reward – various operations department – Professionalism.

TOTAL: 45 HOURS

BOOKS FOR REFERENCE:

1. ‘Business in Corporate Aviation Management on Demand Air Travel’ – by John Sheehan ISBN: 0-07-141227-1 (Mc Graw-Hill Company)
2. ‘Corporate Aviation Management’ (Southern Illinois University Press Series in Aviation Management) – by Raoul Castro (Author) Torch Lewis (Forward) ISBN: 080931911X.

ELECTIVE CURRICULUM

F. SHIPPING AND LOGISTICS

Sl.No	Code	Name of the Subjects	L	T	P	C
1	MS35F1	Shipping and Port Management	3	0	0	3
2	MS35F2	Role of Shipping in Logistics and Supply Chain Management	3	0	0	3
3	MS35F3	Legal Aspects of Shipping	3	0	0	3
4	MS35F4	Commercial Aspects of Shipping and Marine Insurance	3	0	0	3
5	MS35F5	Logistics Marketing and Technology	3	0	0	3
6	MS35F6	Air Cargo Logistics	3	0	0	3
7	MS35F7	Rail Road Logistics	3	0	0	3
8	MS35F8	Modern Logistics Operations	3	0	0	3
9	MS35F9	Maritime Logistics and Documentation	3	0	0	3

MS35F1	SHIPPING AND PORT MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES:

- Understand all the concepts of ship management
- Describe various types of ships in the world.
- Recognize the role of every stake holder in the ship organization.
- Demonstrate how to sale or purchase of ship in India including ship demolition
- Illustrate the major ports in India and their services

Course Outcome – Cos		Cognitive Skill
CO-01	Compare the national and international developments in shipping	R, U
CO-02	Describe various types of ships in the world.	R, U
CO-03	Recognize the role of every stakeholder in the ship organization.	R, U, A
CO-04	Demonstrate how to sale or purchase of ship in India including ship demolition	R, U, A
CO-05	Illustrate the major ports in India and their services	R, U, A

R- Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S- Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	M	S	M	M	M	M	S
CO-02	M	S	M	S	M	M	M	M
CO-03	S	M	S	M	M	M	M	M
CO-04	M	S	M	M	S	M	S	M
CO-05	S	M	S	M	M	M	M	S

S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT I: Development of Shipping

9

Overview of shipping in India – Role of shipping in India's trade and exchange - Port infrastructure for foreign trade –Port Capacity and traffic throughput – Liner Trade – Tramp Trade – Ship repairing – Coastal shipping – Current capacities of overseas shipping- **CaseStudy**

UNIT II: Type of ships and Ports

9

Types of ports – Indian ports – Major Indian ports – Average pre berthing – Types of ship - General cargo vessels- Multipurpose vessels- Bulk Carriers- Refrigerated cargo vessels- Crude

Carriers(Tankers)- product carriers- Chemical Carriers- Gas Carriers- Container ships- Car Carriers- Ro-Ro vessels-Passengerships-Dredgers-Tugs- Offshore supplyvessels etc. –

CaseStudy

UNIT III: Organizational structure of shipping company

9

Shipping company - MajorShippingCompanies–Organizationalstructure– ResponsibilitiesofTechnical&OperationDepartments - HRM in Shipping Companies – Floating staff & Shore staff. Chartering of ships – Charter party – Voyage Charter, Time Charter, Bareboat Charter,-The dry cargo chartering market- charteringnegotiations -**Case Study**

UNIT IV: ship purchase and demolition

9

New ship building Contracts - Indian Shipyards and infrastructure- Sale & Purchase of second hand tonnage - Factors governing this market - Ship demolition /Scrapping of old tonnage - Relation between Freight market and demolition – Place of India in Ship demolition market- Bill of lading – different types of B/L and its stake holders – Maritime geography- Ocean and seas- Ports Geography of trade. - **Case Study**

UNIT V: Shipping Organization

9

International Maritime Organization – History of IMO – IMO Conventions – IMO council – Maritime Safety Committee - Arbitration- The Contract- Remedies for breach of contract- TORT- Contracts relating to the carriage of goods by sea- The Haguensby Rules-Hamburgrules –**CaseStudy**

TOTAL: 45 HOURS

BOOKS FOR REFERENCE:

1. ‘Elements of Port Operation And Management’ - A. E. Branch, Chapman & Hall, ISBN: 0412252600, ISBN-13: 9780412252600, 978-0412252600, Date: 2000.
2. Shipping in logistics and port management/ Ramachandran 2012 Rest Publishers, India
3. ‘Shipping Derivatives and Risk Management’ - Amir Alizadeh, NikosNomikos, Palgrave Macmillan, ISBN: 0230215912, ISBN-13: 9780230215917, 978-0230215917, Jun 2009.
4. ‘Shipping Management: Cases and Concepts’ – Raghuram, Macmillan Publishers India, ISBN: 0333930959, ISBN-13: 9780333930953, 978-0333930953, Date: 1998.
5. ‘Economics of Shipping Practice And Management - Second Edition’ - A. E. oranch, Chapman & Hall, ISBN: 0412310309, ISBN-13: 9780412310300, 978-0412310300, Date: 1988.

MS35F2	ROLE OF SHIPPING IN LOGISTICS AND SUPPLY CHAIN MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES:

- Understand all the concepts of logistics.
- Recognize the role of every stakeholder in the ship organization.
- Compare the various global logistics methodologies
- Recognize the modes of transportation

Course Outcome – Cos		Cognitive Skill
CO-01	Illustrate the role of logistics in the economy	R, U

CO-02	Compare the various global logistics methodologies.	R, U
CO-03	Recognize the various modes of transportation and their issues	R, U, A
CO-04	Demonstrate the various financial issues in logistics	R, U, A
CO-05	Illustrate the Logistics Performance	R, U, A

R- Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S- Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	M	S	M	M	M	M	S
CO-02	M	S	M	S	M	M	M	M
CO-03	S	M	S	M	M	M	M	M
CO-04	M	S	M	M	S	M	S	M
CO-05	S	M	S	M	M	M	M	S

S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT I : Logistics

9

Origin and Definition – Types of Logistics – Logistics Role in the Economy/Organization - Definition of Logistics-Objectives of Logistics-Functions of Logistics, Logistics and Customer Service - Definition of Customer Service-Elements of Customer Service- Phases in Customer Service-Customer Retention. - **Case Study**

UNIT II: Logistics Management

9

Logistics Management – Ware House Management – Automation and Outsourcing - Customer Service and Logistics Management – A Perspective - Concepts in Logistics and Physical Distribution - Distribution and Inventory- Need for Logistics and supply chain management– Role of shipping in this - Economics of scale in supply chain - Productivity and cost control that can be achieved Packing and Materials Handling - Functions of Packaging-Communication- Packaging Cost-Types of Packaging Material-Unitization-Containerization-Designing a Package-Factors affecting choice of Packaging Materials. - **Case Study**

UNIT-III: Global Logistics

9

Global Supply Chain-Organizing for Global Logistics Strategic Issues in Global Logistics-Forces driving Globalization-Modes of Transportation in Global Logistics- Barriers to Global Logistics-Markets and Competition. Logistics Strategy - Requirements for an Effective Logistics Strategy- Strategic Logistics Planning- Implementation of Strategy. - **Case Study**

UNIT-IV: Materials Management

9

Objectives of materials management-Materials Planning- Purchasing-Basic Materials of Material Handling-Types of Material Handling Equipments-Transportation - Participants in

Transportation Decisions-Modes of Transportation-Factors Influencing Transport Economics- Documents in Transport Decision Making Warehousing/ Distribution - **Case Study**

UNIT V: Financial Issues in Logistics Performance

9

Logistics Information Systems - Functions of Logistics Information System (LIS)-LIS Flow- RFID Principles of Logistics Information Organization for Effective Logistics Performance – Centralized and Decentralized Structures-Stages of Functional Aggregation in Organization- Steps in ABC Costing-Financial Gap Analysis. Integrated Logistics - Need for Integration- Activity Centers in Integrated Logistics. Role of 3PL&4PL - Principles of LIS. - **Case Study**

TOTAL: 45 HOURS

REFERENCE BOOKS:

1. Gopal Krishnan, Material Management Review, 2002 Pearson Education, New Delhi.
2. G. Raghuram I.I.M.A., Logics and Supply Chain Management, Macmillan Publishers, 2000.
3. Shipping in logistics and port management/ Ramachandran 2012 Rest Publishers, India
4. Logistics of facility location and allocation / Dileep R. Sule (Marcel Dekker)
5. Logistics & supply chain management / Martin Christopher (Prentice Hall Financial Times)

MS35F3	LEGAL ASPECTS OF SHIPPING	L	T	P	C
		3	0	0	3

OBJECTIVES:

- Understand the merchant shipping act conventions and regulations
- Compare the various classification societies and their services.
- Compare the various global logistics methodologies
- Demonstrate the various marine insurance claims

Course Outcome – Cos		Cognitive Skill
CO-01	Illustrate the merchant shipping act conventions and regulations	R, U
CO-02	Describe the importance of regulatory bodies for ship and port management.	R, U
CO-03	Compare the various classification societies and their services.	R, U, A
CO-04	Recognize the role of ISPS code in the ship and port security systems	R, U, A
CO-05	Demonstrate the various marine insurance claims	R, U, A

R- Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S- Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	M	S	M	M	M	M	S
CO-02	M	S	M	S	M	M	M	M
CO-03	S	M	S	M	M	M	M	M
CO-04	M	S	M	M	S	M	S	M
CO-05	S	M	S	M	M	M	M	S

UNIT I: Merchant shipping act**9**

Introduction to Indian Merchant Shipping Act- Procedure for registration of ships in India- Statutory Certificates issued to ships - Role of Flag State - Port State Control- Role of Ship's Agents. agents of Charterers , Stevedores , Custom House Agents- Clearing & Forwarding Agents and Brokers - Procedure for ship's entry to a port and departure from a port. - Port Charges payable by ships - **Case Study**

UNIT II: Regulatory bodies**9**

Regulatory /Advisory Role of IMO in International Shipping – How Conventions such as SOLAS, MARPOL came into effect – Organizational Structure of International Maritime Organization- Commercial expenses during a voyage - Voyage planning - Dry Cargo Freight Market - Baltic Index, World Scale for Tankers - **Case Study**

UNIT III: Classification societies**9**

How Classification Societies were formed – Role of Classification Societies in the Safety of Shipping- Activities of IRS (Indian Registry of Shipping) - International Association of Classification Societies – Class Certificates and periodical surveys - **Case Study**

UNIT IV: ship security and assessment**9**

ISPS Code- Port facility Security Plan and Security assessment - Verification and Certification for ships – Responsibilities of Contracting Governments – Responsibilities of Shipping Companies. Ships and potential oil/air pollution from ships – International conventions/Regulations against pollution applicable to ships – Civil Liability Convention - Fines for causing pollution - Detention of ships by Port State Control - Situations for arrest of ships by Admiralty Courts. - **Case Study**

UNIT V: Marine Insurance**9**

Hull & Machinery Insurance for ships –Perils covered - Cargo Insurance Policies: ICC-A, B or C- Partial loss, Constructive Total Loss or Total Loss- Protection and Indemnity Insurance – General Average – GA Guarantee, GA adjustment - GA contribution – Liability Insurance – P & I Clubs - **Case Study**

TOTAL: 45 HOURS**BOOKS FOR REFERENCE:**

1. ‘Commercial and Legal Aspects of Shipping Documents’ - Dr. K. V Hariharan, Sterling Book House Publisher, ISBN: 8175980893, ISBN-13: 9788175980891, 978-8175980891, Date: 2008.
2. ‘Legal Aspects of Business’ - Akhileshwar Pathak, Tata Mcgraw Hill Publisher, ISBN: 0070656134, ISBN-13: 9780070656130, 978-0070656130, Date: May-07.
3. ‘Legal and Regulatory Aspects of Insurance’ - National Insurance Academy, National Insurance Academy (Author), ISBN: 8131507548, ISBN-13: 9788131507544, 978-8131507544, Date: 2009.
4. Shipping in logistics and port management/ Ramachandran 2012 Rest Publishers, India

MS35F4	COMMERCIAL ASPECTS OF SHIPPING AND MARINE INSURANCE	L	T	P	C
		3	0	0	3

OBJECTIVES:

- Understand the basic terms of commercial geography and its branches
- Compare about the Industries and its Economic Development.
- Understand the types of port and its features
- Know the agricultural resources and its trade

Course Outcome – Cos		Cognitive Skill
CO-01	Define basic terms of commercial geography and its branches	R, U
CO-02	Identify the Factors of International trade	R, U
CO-03	Know about the Industries and its Economic Development	R, U, A
CO-04	Know the agricultural resources and its trade	R, U, A
CO-05	Understand the types of port and its features	R, U, A

R- Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S- Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	M	S	M	M	M	M	S
CO-02	M	S	M	S	M	M	M	M
CO-03	S	M	S	M	M	M	M	M
CO-04	M	S	M	M	S	M	S	M
CO-05	S	M	S	M	M	M	M	S

S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT I: COMMERCIAL GEOGRAPHY

9

Definition of commercial geography and its branches - Geographical Environment and Commerce – World trade pattern in major commodities - Meaning, nature & Use of Resources - Classification of Resources.

UNIT II: GEOGRAPHICAL FACTORS

9

Geographical factors affecting International trade - India's foreign trade of commodities - Characteristics of commodities and their origin, type of transportation used for movement to ports - Port Infrastructure for commodities.

UNIT III: ROLE OF INDUSTRIES

9

Role of Industries in Economic Development - Factors of Industrial Location - Major Industries in India - Iron & Steel Industries - Cotton, Textile Industries - Automobile Industries - Petrochemical industries.

UNIT IV: VAGRICULTURAL RESOURCES

9

Agricultural resources- Role of climate in agricultural production - Seasons for export of major agricultural products in India – Important world centres for export of agricultural products.

UNIT V: PORTS AND TERMINALS

9

Types of Ports - Geographical features of ports - Ports of the world – Important bulk terminals – Important container terminals – Major oil terminals.

TEXT BOOKS:

1. H.Robinson, -Economic Geography II, TheM& E hand book series, Macdonald & Evans,1968.
2. Stamp,SirL.Dudely, - Commercial GeographyII , Prentice Hall Press, 9th Edition , 1973.
3. WilliamP.Anderson , -Economic GeographyII , Routledge, 1st Edition ,2012

REFERENCES :

1. .Shyam Prakash, -Fundamentals of Economic Geography“, Pragun Publication,1st Edition 2012.
2. Dikshit ,RD, Geographical Thought – A Contextual History of Ideas, Prentice Hall of India, New Delhi ,1997

MS35F5	LOGISTICS MARKETING AND TECHNOLOGY	L	T	P	C
		3	0	0	3

OBJECTIVES:

Upon successful completion of this course students will be able to

- Understand all the concepts of marketing
- Describe various types of user behavior and networking.
- Recognize the role of product and price mix decisions.
- Demonstrate transport technologies.

Course Outcome – Cos		Cognitive Skill
CO-01	Understand all the concepts of marketing	R, U
CO-02	Describe varioustypesof user behavior and networking	R, U
CO-03	Recognize the roleofproduct and price mix decisions	R, U, A
CO-04	Understand all the supply chain software technologies	R, U, A
CO-05	Demonstrate transport technologies	R, U, A

R- Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S- Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H	PO-I	PO-J	PO-k	PO-L
CO-01	S	M	S	M	M	M	M	S	M	S	M	S
CO-02	M	S	M	S	M	M	M	M	S	M	M	M
CO-03	S	M	S	M	M	M	M	M	M	M	S	S
CO-04	M	S	M	M	S	M	S	M	S	M	S	M
CO-05	S	M	S	M	M	M	M	S	S	M	M	M

S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT 1: MARKETING CONCEPTS

9

Marketing Environment and system – Approaches to the study of marketing – Industrial, Consumer and Service Marketing – Marketing mix – Marketing by 3 PL and 4PL Services

UNIT 2: USER BEHAVIOUR AND NETWORKING

9

User decision making process – Market Segmentation – Concentrated Marketing – Differentiated and Undifferentiated marketing – Service Positioning – Networking: Networking with Shippers, Wholesalers and Industries

UNIT 3: PROMOTION AND DISTRIBUTION MIX DECISIONS

9

Promotools – Advertisement: Types and importance – Sales Promotion: Types and relevance – Publicity: Concept and Significance – Salesmanship: Types and traits – Budgeting for promotional expenses – Distribution mix decisions – Local, National, Regional and Global Choices

UNIT 4 : SUPPLY CHAIN SOFTWARE TECHNOLOGY

9

WMS, TMS, LMS, OMS, WCS and Network Optimization – Software Evaluations and Selections – Logistics Network Optimizations – Transportation routing – mileage and mapping software – RFID Technology – Integrated GPS – Wireless data and Micro Chip Technology System

UNIT 5: TRANSPORT TECHNOLOGY: ADVANCES IN SHIPPING TECHNOLOGY

9

Flight Technology – Track Technology – Rail Technology – Billing technology – Payment technology – TQM – Bench marking

REFERENCES

1. Philip Kotler and Kevin Keller, *Marketing Management*, Prentice Hall, 2006.
2. Mullins, Walker and Boyd, *Marketing Management: A Strategic Approach*, McGraw Hill, 2009.
3. Joseph D Patton, *Logistics Technology and Management*, Soloman, 1986.
4. Philip T Frohne, *Quantitative Measurements for Logistics*, McGraw Hill, 2007.

MS35F6	AIR CARGO LOGISTICS	L	T	P	C
		3	0	0	3

OBJECTIVES:

- Understand all the concepts of air transportation in logistics.
- Recognize the role of air ways and logistics economics.
- Understand the concepts of air cargo documentation
- Recognize the air cargo freight rates.

Course Outcome – Cos		Cognitive Skill
CO-01	Understand all the concepts of air transportation in logistics.	R, U
CO-02	Recognize the role of air ways and logistics economics	R, U
CO-03	Understand the concepts of air cargo documentation	R, U, A
CO-04	Recognize the air cargo freight rates	R, U, A
CO-05	Understand regulatory B in air cargo	R, U, A

R- Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S- Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	M	S	M	M	M	M	S
CO-02	M	S	M	S	M	M	M	M
CO-03	S	M	S	M	M	M	M	M
CO-04	M	S	M	M	S	M	S	M
CO-05	S	M	S	M	M	M	M	S

S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT 1: AIR TRANSPORTATION IN LOGISTICS

9

Significance of air transportation in logistics – Features and facilities offered by air cargo – factors affecting growth in air logistics – Air suitability for different cargo – innovative schemes or facilities to popularize air cargo logistics

UNIT 2: AIRWAYS AND LOGISTICS ECONOMICS

9

Freight determination for cargo in airways – Freight levels and air cargo elasticity – air cargo consolidation – Arrangements for pooling air and distribution from airports – competition with other modes.

UNIT 3: AIR CARGO DOCUMENTATION

9

Shipper's export declaration – Certificate of origin – export license – commercial invoice – bill of lading – on board logistics – insurance certificate – export packing list – air way bills – consular invoice – format of air way bill – shipping bill – bill of entry – airline booking procedures – conditions of contract – cancellation of shipments

UNIT 4: AIR CARGO FREIGHT RATES

9

Tariff determinants – competition and value of service – chargeable weight – volume weight and dimensions – currencies and rounding of procedures – voyage and time charters – major air cargo liners of the world – major air cargo crafts and their features

UNIT 5: INTERMEDIARIES/ REGULATORY B IN AIR CARGO

9

Freight forwarders – Role and responsibility of freight forwarders – cargo warehousing – custom clearance – ICAO – formation – functions – IATA – formation – functions – other IATA bodies

References

1. Chi Chu, C. Leung, Van Hui & Cheung, *4th Party Cyber Logistics for air cargo*, Spring, 2004
2. Stephen Shaw, *Effective air freight marketing*, 1993
3. John Langford, *Logistics Principles and Applications*, McGraw Hill, 2006
4. Vasigh, Fleming and Thomas Tacker, *Introduction to air transport Economics*, Ashgate, 2007.

MS35F7	RAIL-ROAD LOGISTICS	L	T	P	C
		3	0	0	3

OBJECTIVES:

- Understand the role of transportation in logistics
- Identify the concepts of railways and logistics contours
- Recognize the role of railways and logistics economics
- Provide coordination among different segments

Course Outcome – Cos		Cognitive Skill
CO-01	Understand the role of transportation in logistics	R, U
CO-02	Identify the concepts of railways and logistics contours	R, U
CO-03	Recognize the role of railways and logistics economics	R, U, A
CO-04	Recognize the role of railways and logistics economics	R, U, A
CO-05	Provide coordination among different segments	R, U, A

R- Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S- Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	M	S	M	M	M	M	S
CO-02	M	S	M	S	M	M	M	M
CO-03	S	M	S	M	M	M	M	M
CO-04	M	S	M	M	S	M	S	M
CO-05	S	M	S	M	M	M	M	S

S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT I: TRANSPORTATION IN LOGISTICS

9

Significance of transportation in logistics – utility created by transportation in logistics – transportation as a means of conquering time and space – features of inbound, outbound, local and medium , long and continental transportation – advances in logistics transportation

UNIT II: RAILWAYS AND LOGISTICS CONTOURS

9

Features and facilities offered by railways – factors influencing growth in rail logistics – suitability for different cargo and distance range segments – innovative schemes / facilities to popularize rail logistics – in India

UNIT III: RAILWAYS AND LOGISTICS ECONOMICS

9

Freight determination for cargo in railways – freight levels and rail cargo elasticity – route scheduling – cargo consolidation –arrangements for pooling at rail head and distribution from rail head – dedicated rail sidings for bulk users

UNIT IV: ROADWAYS AND LOGISTICS ECONOMICS

9

Freight determination for cargo in roadways - freight levels and road cargo elasticity – own fleet: capacity counters, maintenance, scheduling, freight consolidation, return and reverse logistics in road logistics – Toll highways

UNIT V: COORDINATION AMONG DIFFERENT SEGMENTS

9

Concept, need and areas of coordination among different modes – coordination among supply chain partners – Energy product prices and logistics - environment and logistics – Problems and prospects in interstate logistics by road.

References:

1. James Banks, *Introduction to transportation engineering*, McGraw Hill, 2001
2. Myer Kutz, *Handbook of transportation engineering*, McGraw Hill, 2011
3. Ritter, Barrett and Wilson, *Securing Global Transportation networks*, McGraw Hill, 2006
4. Coyle, Bardi & Novack, *Transportation: A supply chain perspective*, south- western college, 2010

MS35F8	MODERN LOGISTICS OPERATIONS	L	T	P	C
		3	0	0	3

OBJECTIVES:

- Understand the concept of logistics as a support/ interface/ enabler of production function
- Understand the concept of logistics as a support/ interface/ enabler of marketing function
- Understand about EXIM Logistics and features
- Know the logistics service providers

Course Outcome – Cos		Cognitive Skill
CO-01	Understand the concept of logistics as a support/ interface/ enabler of production function	R, U
CO-02	Understand the concept of logistics as a support/ interface/ enabler of marketing function	R, U
CO-03	Understand about EXIM Logistics and features	R, U, A
CO-04	Know the logistics service providers	R, U, A
CO-05	Understand the features of special logistics	R, U, A

R- Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S- Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	M	S	M	M	M	M	S
CO-02	M	S	M	S	M	M	M	M
CO-03	S	M	S	M	M	M	M	M
CO-04	M	S	M	M	S	M	S	M
CO-05	S	M	S	M	M	M	M	S

S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT I: Logistics as a Support/Interface/ Enabler of Production Function

9

Logistics as a Support Function of Procurement, Vendor Facilitation and Production – Logistics As A Interface Function Of Demand Forecasting, Global Procurement. Tracking Inward Shipments, In-Point Distribution And Storage Planning – Logistics As An Enabler Of Just In Time (JIT), Kanban, Vendor Managed Inventory (VMI) for vendors And The Firm

UNIT II: Logistics as a Support/Interface/Enabler of Marketing Function

9

Logistics as a support function of order fulfillment, assembling & labeling from multi storage points, consignment convergence/ divergence and delivery – logistics as a interface of marketing forecast, stock level management, invoice or sales documentation, picking materials, consolidation, packing, marking, preparing outbound documentation and shipping out by loading into containers – customer facilitation tracking out – bound shipments

UNIT III: Exim Logistics**9**

Special aspects of export logistics: picking, packing, vessel booking, full load container load, customs, documentation shipment, delivery to distribution centres – Import logistics: documents collection, valuing – bonded warehousing – customs formalities – clearing – distribution to units – security & insurance

UNIT IV: Logistics Service Providers**9**

3PL/ 4PL Services – differences between 3 PL & 4 PL – Common services for 3 PL & 4PL – Invoice Management, call centres, warehouse/ distribution facilities – 4 PL Specialties: Implementation center, business process analysis/ scoping, development of all activities into an open system framework – product/ skill centres: supply chain engineering – 4 PL Value added services: knowledge transfer, business development and functional support

UNIT V: Logistics Information Systems**9**

Need – characteristics and design – E-logistics – structure and operation – logistics resource management – automatic identification technologies – IT system center – Pure IT selection for design and implementation connectivity – warehouse simulation – reverse logistics

REFERENCES:

1. Martin Christopher, *Logistics and Supply Chain Management*, Prentice Hall, 1998
2. Ronald. H, *Business Logistics and Supply Chain Management*, Prentice Hall, 2003
3. Paul R. Murphy Jr and Donald Wood, *Contemporary Logistics*, Prentice Hall, 2010
4. Harvard Business Review, Managing supply chains

MS35F9	MARITIME LOGISTICS AND DOCUMENTATION	L	T	P	C
		3	0	0	3

OBJECTIVES:

- Understand all the concepts of marine logistics.
- Describe various types of charters.
- Recognize the procedure for arranging shipments of cargo.
- Understand all the concepts of marine insurance.
- Understand all the concepts of export procedure and documentation

	Course Outcome – Cos	Cognitive Skill
CO-01	Understand all the concepts of marine logistics	R, U
CO-02	Describe various types of charters.	R, U
CO-03	Recognize the procedure for arranging shipments of cargo.	R, U, A
CO-04	Understand all the concepts of marine insurance	R, U, A
CO-05	Understand all the concepts of export procedure and documentation	R, U, A

R- Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S- Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	M	S	M	M	M	M	S
CO-02	M	S	M	S	M	M	M	M
CO-03	S	M	S	M	M	M	M	M
CO-04	M	S	M	M	S	M	S	M
CO-05	S	M	S	M	M	M	M	S

S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT I: MARITIME LOGISTICS

9

Concept, objectives, importance and relevance to global marketing and supply chain management – coastal and ocean transportation – global sea routes – trade volume – characteristics of shipping transport – types of ships – general cargo ships – IMO: Formation and functions

UNIT II: CHARTERING PRINCIPLES AND PRACTICES

9

Types of charters – freight determination and determinants – conference system Vs competitive system – freight structure and practice – rate dynamics – multi modal transport system

UNIT III: ARRANGEMENT FOR SHIPMENT OF CARGO

9

Role of intermediaries – functions and services of clearing and forwarding agents, freight brokers, stevedores, shipping agents and surveyors – house and terminal stuffing – port: types of port – structural and cargo handling facilities – demurrage

UNIT IV: MARITIME INSURANCE

9

Cargo insurance – marine insurance – institute cargo clauses – specific policy – open policy – procedure for cargo insurance – procedure for marine insurance – necessary documents for filling claim

UNIT V: EXPORT PROCEDURE AND DOCUMENTATION

9

Offer and receipt of orders – shipment procedure – banking procedure – export documentation – framework – standardized pre shipment export documents – commercial and regulatory documents – export credit instruments and procedures – letters of credit and types – documents required for export credit – export credit insurance – services of export credit and guarantees – central excise and customs clearance of export cargo – procedure and documents

REFERENCES:

1. Edmund J. Gubbins, Shipping Industry Routledge, 1986
2. Martin Stopford, Maritime Economics, Routledge, 2008
3. Alan E Branch, Elements of Shipping, Routledge, 2007
4. Thomas E Johnson, Export/ Import procedures and documentation
5. Mark Huber, Tanker Operations: Cornell Maritime Press, 2010

ELECTIVE CURRICULUM

G. HOSPITAL ADMINISTRATION

Sl.No	Code	Name of the Subjects	L	T	P	C
1	MS35G1	Health Care Management	3	0	0	3
2	MS35G2	Hospital Facilities Planning and Management	3	0	0	3
3	MS35G3	Hospital Supportive Services	3	0	0	3
4	MS35G4	Hospital Materials Management	3	0	0	3
5	MS35G5	Strategic Management in Healthcare	3	0	0	3
6	MS35G6	Quality Management in Healthcare	3	0	0	3
7.	MS35G7	Operations Management In Health Care	3	0	0	3

MS35G1	HEALTH CARE MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES:

Provide students with an overview of how health care institutions are organized and governed, the role of the managers in these organizations, and the management systems designed for their efficient and effective operation.

Course Outcomes-COs		Cognitive Skills
CO-01	Define the concepts related to the management of health services and hospital administration.	R,U,A,AN
CO-02	Describe the principles of management as applied to the organization and delivery of health services	R,U,A,AN,E
CO-03	Analyze various administrative techniques and methods applied in healthcare organizations with a view to improve health services delivery	R,U,A,AN,E,C
CO-04	Recognize different functions and management skills required to run health care organizations	R,U,A,AN,E
CO-05	Compare the structure, composition and organization of health services delivery system in India	R,U,A,AN,E,C

L1- Remember, L2-Understand, L3-Apply, L4-Analyse, L5-Evaluate, L6-Create

Mapping of COs and POs

CO/PO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	L	L	L	L	L	L	S	L
CO-02	L	L	S	S	S	S	S	L
CO-03	L	S	S	S	S	S	M	S
CO-04	S	S	S	S	S	S	S	S
CO-05	S	S	S	S	S	S	S	S

UNIT I: CONCEPTS AND PRINCIPLES OF HEALTH CARE MANAGEMENT 9

Principles and importance of management in health care organizations, dimensions of functional management in health care organizations, leadership and management: leadership styles and competencies, leaders' skills, change management in health care organizations

UNIT II: STRATEGIC PLANNING AND MANAGEMENT IN HEALTH CARE 9

Strategic planning in health care organizations; health services planning and commissioning; quality improvement and role of managers in health organizations; Managing of human resources in health organizations; Ethics and law in health care organizations, patients' rights and responsibilities, legal requirements.

UNIT III: HEALTH AND SERVICES ORGANISATION

Services and Classification of Service Organisations, Characteristics, Challenges – History of Medicine, Healthcare Revolution, Health, Dimensions of Health, Indicators of Health – Types of Healthcare Organisations, Composition of Health Sector, Types of Care, Pyramidal Structure of Health Services.

UNIT IV: HOSPITAL MANAGEMENT: LEVELS AND ROLES

9

Hospitals - Types of Hospitals and Role of Hospital in Healthcare, Complexity of Hospital Organisation, Governing Board, Executive Board and Advisory Board – CEO, Medical Administration, Nursing Administration and Hospital Administration-Middle Level Managers in Hospital and their Responsibilities-Structuring Hospital Organisation

UNIT V: CURRENT ISSUES IN HEALTHCARE AND PROGRAMME

9

Accreditation-Tele health-Health Tourism-Health Insurance and Managed Care-About Disaster Management – Hospital Wastes Management. National Health Programmes in India-International Health: WHO and Other United Nations Agencies

TOTAL: 45 HOURS

BOOKS FOR REFERENCE:

1. Sharon B. Buchbinder and Nancy H Shanks.Introduction to Health Care Management by Publisher: Jones & Bartlett Publishers;
2. B.M. Sakharkar, Principles of Hospital Administration and Planning (Jaypee Brothers Medical Publishers Pvt. Ltd., New Delhi)
3. C.M. Francis and et al., Hospital Administration (Jaypee Brothers Medical Publishers Pvt. Ltd., New Delhi)
4. S. Srinivasan (ed.), Management Process in Health Care (Voluntary Health Association of India, New Delhi)
5. J.E. Park and K. Park, Textbook of Preventive and Social Medicine (M/S BanarsidasBhanot Elaine La Monica, Management in Health Care (Macmillan Press Ltd, London)
6. William F. Ganong, Review of Medical Physiology (McGraw Hill, Boston) ISBN 007-144040-2

MS35G2	HOSPITAL FACILITIES PLANNING AND MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES:

Provide students with an understanding of different hospital facilities, and how these facilities are planned and managed in a changing socio-demographic and health environment.

Course Outcomes-COs		Cognitive Skills
CO-01	Define the basic principles, science, processes and practices of health facility planning	R,U,A,AN
CO-02	Describe the process of health facility planning as a branch of health planning discipline	R,U,A,AN ,E
CO-03	Discuss the foundation of standards and guidelines used for planning and management of hospital services	R,U,A,AN ,E,C
CO-04	Demonstrate the knowledge of principles and processes involved in	R,U,A,AN

	planning hospital services	,E
CO-05	Apply the skills learned to review a master plan of health care organization such as hospital	R,U,A,AN ,E,C

Mapping of COs and POs

CO/PO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	L	L	L	L	L	L	S	L
CO-02	L	L	S	S	M	M	M	L
CO-03	L	S	S	S	S	S	S	M
CO-04	S	S	S	S	S	S	S	M
CO-05	S	S	S	S	S	S	S	S

UNIT I: HOSPITAL PLANNING

9

Concept of Planning-Guiding Principles in Planning Hospital Facilities and Services – Regional Planning and Factors to be emphasized-Steps in Hospital Planning; Planning Team and Stages of Project-Estimation, Architect Brief and Master Plan-Selection of Site and Decision on Land, Space and Utilities.

UNIT II: OUTPATIENT SERVICES

9

Objectives-Functions-Location, Design and Layout-Policy and Procedures-Organisation-Staffing-Equipment and Facilities-Key Result Areas and Performance / Quality Indicators-Daily Planning and Scheduling of Work-Managing Time: Waiting Time and Total Time Spent by a Patient-Specialty, Sub-specialty and Super Specialty Clinics-Diagnosis, Physiotherapy and Occupational Therapy-Emerging Concepts: Day Care, Reservation, Appointment by Phone-Medico-social Works / Patient Counselling-Other Facilities:Pharmacy, Gifts Shop, Prayer / Meditation Room.

UNIT III: TRAUMA CARE: EMERGENCY AND CASUALTY SERVICES

9

Objectives-Functions-Location, Design and Layout-policy and Procedures – Organisation-Staffing – Equipment and Facilities – Key Result Areas and Performance / Quality Indicators – Disaster Management: Principles and Classification-Life Saving Drugs-Ambulance and Paramedic Services-Medico-legal Procedures-Forms and Registers to be maintained- Communication System

UNIT IV: INPATIENT SERVICES

9

Inpatient Care-Objectives-Functions-Location, Design and Layout-Policy and Procedures-Organisation-Staffing-Equipment and Facilities-Key Result Areas and Performance / Quality Indicators-Admission, Transfer, Billing and Discharge Procedures-Managing Death-Intensive Care Units-Objectives-Functions-Location, Design and Layout-Policy and Procedures- Organisation-Staffing-Equipment and Facilities-Key Result Areas and Performance / Quality Indicators-Types of ICUs.

UNIT V: OPERATION THEATRE

9

Objectives-Functions-Location, Design and Layout-Policy and Procedures-Organisation-Staffing-Equipment and Facilities-Key Result Areas and Performance / Quality Indicators – Daily Planning and Scheduling-Determinants of number of Operating Rooms-Zoning and Aseptic / Sterile Techniques – Clinical Protocols – Sub-stores, CSSD, Immediate Postoperative Recovery Rooms-Safety Issues.

TOTAL: 45 HOURS

TEXTBOOKS:

1. Principles of Hospital Administration and Planning Sakharkar BM Japee Brothers Medical Publishers (P) Ltd: 2011 ISBN: 9788184486322
2. R. Llewelyn Davies and HMC Macaulay, Hospital Planning and Administration (Jaypee Brothers Medical Publishers Pvt. Ltd., New Delhi)
3. NHS, Guide to Good Practices in Hospital Administration (Department of Health and Social Security: National Health Services, London)
4. Syed Amin Tabish, Hospital and Health Services Administration Principles and Practice (Oxford University Press, New Delhi)

MS35G3	HOSPITAL SUPPORTIVE SERVICES	L	T	P	C
		3	0	0	3

OBJECTIVES:

The course will provide students with the knowledge of planning and designing various support services for smooth functioning of the hospital

Course Outcomes-COs		Cognitive Skills
CO-01	Identify various supportive and utility services of the hospital	R,U,A,AN
CO-02	Describe the role of support and utility services in delivering quality patient care	R,U,A,AN,E
CO-03	Justify the planning and designing considerations for supportive services in hospital	R,U,A,AN,E,C
CO-04	Review the functional requirements of individual departments in hospital	R,U,A,AN,E
CO-05	Demonstrate the ability to maintain record maintenance and Statistics	R,U,A,AN,E,C

Mapping of COs and POs

CO/PO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	L	L	L	L	L	L	S	L
CO-02	L	L	L	S	M	M	M	L
CO-03	L	S	S	S	S	S	S	S
CO-04	S	S	S	S	S	S	S	S
CO-05	S	S	S	S	S	S	S	S

UNIT I: FRONT OFFICE AND MEDICAL RECORDS

9

Front Office-Objectives and Functions-Location-Staffing-Information and Communication-Medical Records-Objectives and Functions-Characteristics, Main Section, and Analysis of Medical Records-Types of Forms; Retention Policy; Records and Statistics-Hospital Beds, Bed Compliment, Bed Days, Average Length of Stay (LOS), Bed Occupancy Rate, Daily Ward Census, Bed Turnover Rate, Gross / Net / Postoperative Death Rate, Admission and Discharge-Location, Design and Layout-Staffing; Medical Records Committee-Technology Advancements: , Electronic Health Records Microfilming and Smart Cards.

UNIT II: DIAGNOSTIC SERVICES**9**

Radiology Services-Objectives and Functions-Location, Design and Layout-Staffing; Duties of Radiologist and Technicians-Laboratory Services-Objectives and Functions-Location, Design and Layout-Staffing; Duties of Pathologists and Lab Technicians-Classification of Laboratory Services.

UNIT III: OTHER SUPPORTIVE SERVICES**9**

CSSD-Objectives and Functions-Advantages of Centralized System-Distribution System-Location, Design and Layout-Duties of CSSD In-charge-Linen and Laundry-Objectives and Functions-Location and Space-Staffing-Bed Linen Ratio-Automation-Housekeeping-Objectives and Functions-Staffing-Key Tasks-Systematic and Standard Procedures of Cleaning Required Materials for Cleaning-Security Services-Objectives and Functions- Water Supply and Sanitary Services-Staffing; Responsibilities of Security Guard-Gate Pass; Physical Verification,; Control Movement.

UNIT IV: PHARMACY FACILITY**9**

Pharmacy-Objectives and Functions-Location, Design and Layout-Staffing; Duties of Chief Pharmacist; Therapeutic Committee-Hospital Formulary-Dietary Services-Objectives and Functions-Staffing-Equipment and Physical Facilities-Purchases, Stores and Issues-Pricing and Control Measures-Location, Design and Layout.

UNIT V: MAINTENANCE MANAGEMENT**9**

Objectives and Functions-Civil and Biomedical-Staffing-Location and Space-Policy and Procedures-Equipment Types and Characteristics; Purchase, Inspection and Installation-Records, Responsibilities-Levels of Maintenance; Service Contracts and Disposition

TOTAL: 45 HOURS**TEXTBOOKS**

1. Mc Laughlin, Daniel B. & Olson, John R.(2012), Healthcare Operations Management, 2nd edition, Chicago, Health Administrations Press, ISBN 978-1-56793-4441-1
2. Langabeer, James R., (2016), Health Care Operations Management 2nd Edition, Jones and barttelt Publisher, USA, ISBN-13: 978-0763750510, ISBN-10: 0763750514
3. NHS, Guide to Good Practices in Hospital Administration (Department of Health and Social Security: National Health Services, London)
4. C.M. Francis and et al., Hospital Administration (Jaypee Brothers Medical Publishers Pvt. Ltd., New Delhi)
5. G. D. Kunders, Designing for Total Quality in Health Care (Prism Books Pvt. Ltd., Bangalore)
6. Syed Amin Tabish, Hospital and Health Services Administration Principles and Practice (Oxford University Press, New Delhi)

MS35G4	HOSPITAL MATERIALS MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES:

The objective is to equip students with the knowledge and skills needed to understand the principles of health commodity supply chain management and to apply managerial approaches to strengthen supply of medical supplies.

Course Outcomes-COs		Cognitive Skills
CO-01	Identify the concepts and principles of managing the material in hospitals effectively	R,U,A,AN
CO-02	Recognize the basic concepts, principles and approaches of supply material management applied in health care organizations.	R,U,A,AN,E
CO-03	Describe the elements of a purchasing system and rules to be followed while procuring health goods and services	R,U,A,AN,E,C
CO-04	Recognize the principles of inventory management as applied to health care organization such as hospital	R,U,A,AN,E
CO-05	Demonstrate the use of scientific management principles in effectively managing uninterrupted flow of supplies material in hospitals	R,U,A,AN,E,C

Mapping of COs and Pos

CO/PO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	L	L	L	L	L	L	S	L
CO-02	L	L	S	S	S	M	M	L
CO-03	L	L	S	S	S	S	S	M
CO-04	S	S	S	S	S	S	S	M
CO-05	S	S	S	S	S	S	S	S

UNIT I: MATERIALS MANAGEMENT

9

Introduction-Definition and Function –Goals and Objectives of Materials Management-Materials Cycle-Functions of Materials Manager-Problems and issue in Hospitals-Information Systems for Materials Management-Health Supply Management Cycle

UNIT II: PURCHASING

9

Objectives and Elements of Purchasing-Purchasing System-Purchase Cycle-Purchase Procedures-Legal and Ethical Aspects-Conditions of Contract-Financial Rules-Arbitration-Procedures in Public and Private Sectors

UNIT III: EQUIPMENT PURCHASE AND MAINTENANCE

9

Planning and Selection of Equipment-Import of Equipment-Equipment Utilization and Operation-Equipment Repair and Maintenance-Equipment Audit.

UNIT IV: INSPECTION, STORAGE AND DISTRIBUTION OF MATERIALS

9

Planning Consideration of Stores-Inspection and Verification of Materials-Quality Assurance-Storage of Materials – Distribution of Materials-Condensation and Disposal.

UNIT V: SCIENTIFIC INVENTORY MANAGEMENT

9

Inventory Management Techniques in Health Care- Codification and Standardization-Value Analysis-Inventory Control – Lead Time, Safety Stock and Reorder Level-Economic Order Quantity(EOQ)-Selective Controls-Case Studies on Inventory Control.

TOTAL: 45 HOURS

TEXTBOOKS

1. John F.Kros, Evelyn C. Brown (2013), Health Care Operations and Supply Chain Management; John Wiley & Sons; ISBN: 978-1-118-10977-9
2. Gerald (Jerry) R. Ledlow, Karl Manrodt, David Schott (2016), Health Care Supply Chain Management, Jones & Bartlett Learning, ISBN: 1284123626, 9781284123623
3. Shakti Gupta and Sunil Kant, Hospital Stores Management: An Integrated Approach (Jaypee Brothers Medical Publishers Pvt. Ltd., New Delhi)
4. WHO, Maintenance and Repair of Laboratory, Diagnostic, Imaging and Hospital Equipment (WHO, Geneva)
5. Murriel Skeet and David Fear, Care and Safe Use of Hospital Equipment (VSO, UK)

MS35G5	STRATEGIC MANAGEMENT IN HEALTHCARE	L	T	P	C
		3	0	0	3

OBJECTIVES:

The course provides students with the knowledge of defining the future of health organization, setting goals that will move toward that future, and determining the major activities to be undertaken to meet those goals.

Course Outcomes-COs		Cognitive Skills
CO-01	Describe the concepts and principles of strategic management process in health care organizations	R,U,A,AN
CO-02	Recognize the role of internal and external environments that regulate the health care organizations.	R,U,A,AN,E
CO-03	Explain various steps in policy formulations in health care organizations	R,U,A,AN,E,C
CO-04	Demonstrate the application and principles of strategic management in strategy formulation and resolve strategic issues in health organizations	R,U,A,AN,E
CO-05	Describe the strategies and processes involved in developing health programmes	R,U,A,AN,E,C

Mapping of COs and POs

CO/PO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	L	L	S	L	L	L	S	L
CO-02	L	L	L	S	S	S	M	L
CO-03	L	S	S	S	S	S	S	S
CO-04	S	S	S	S	S	S	S	S
CO-05	S	S	S	S	S	S	S	S

UNIT I: INTRODUCTION**9**

Strategic Management – Concept, Meaning of Critical Areas- different Dimensions-Levels of Strategy-Characteristics of Strategic Decision making- Importance –Advantages and Disadvantage of Strategic Decision Making In Health Organizations.

UNIT II: STRATEGIC MANAGEMENT PROCESS: COMPONENTS**9**

Mission for a Health Organisation- Health Organisational Profile-External Environment-Strategic Analysis and Choice-Long term Objectives-Grand Strategy-Annual Objectives-Functional Strategies-Policies-Institutionalizing the Strategy-Evaluation and Control

UNIT III: SITUATIONAL ANALYSIS**9**

SWOT analysis- Environmental Issues, Vision, Mission, Objectives, Values, Directional Strategies, Adaptive Strategies, Market Entry Strategies, Positioning Strategies and Operational Strategies-External Environment Analysis-Need-Goals-Limitations-Description-General Environment, Healthcare Environment and Information-Process: Scan, Monitor, Forecast and Assess-Tools and Techniques-Responsibility: Three Administrative Models-Internal Environment Analysis-Objectives-Culture, Management Subsystem and Information Subsystem-Audit Checklist of Strengths and Weaknesses.

UNIT IV: STRATEGY FORMULATION**9**

Strategy Formulation in Health Organizations: Definition of strategy Formulation - Developing Strategic Alternatives in Healthcare Sector-Evaluation of Alternatives and Strategic Choice made by the Health Industries.

UNIT V: APPLICATION IN NATIONAL AND INTERNATIONAL LEVEL**9**

Strategic Management Practices in National Health Care Programs- Strategies Adopted in Long Term Health Policy with special reference to Various Health Care Programs at National Level; Strategic Management Practices in International Healthcare- Strategies adopted by International Agencies: WHO, World Bank- Strategic Approach in Health Programmes of few Developed Countries and or Neighboring Countries.

TOTAL: 45 HOURS**TEXTBOOKS**

1. Linda E.Swayane, W.Jack Duncan, Peter M. Ginter.Strategic Management of Health Care Organizations Wiley-Blackwell; 6 edition.
2. W. Jack Duncan, Peter M Ginter and Linda E Swayne, Strategic Management of Health Care Organizations(Blackwell Publishers, Massachusetts, USA)ISBN 1-55786-534-5
3. K Park, Text Book of Preventive and Social Medicine (M/s BanarsidasBhanot, Jabalpur)
4. John a Pearce II and Richard B Robison Jr., Strategic Management: Strategy Formulation and Implementation (AITBS Publishers and Distributors, Delhi)
5. Roger Kropf and et al Strategic Analysis for Hospital Management (Aspen Publication, USA)

MS35G6	QUALITY MANAGEMENT IN HEALTHCARE	L	T	P	C
		3	0	0	3

OBJECTIVES:

This course provides students with an introduction of quality management principles and practices in health care settings and learn how to use various quality tools for effective problem identification and solving.

Course Outcomes-COs		Cognitive Skills
CO-01	Define various health care quality management concepts, principles and components	R,U,A,AN
CO-02	Describe various health care quality management approaches, and methodologies.	R,U,A,AN,E
CO-03	Discuss the role and functions of health care organizations in quality improvement process	R,U,A,AN,E,C
CO-04	Recognize the importance of the patient safety in health organizations.	R,U,A,AN,E
CO-05	Review the health organization's accreditation process.	R,U,A,AN,E,C

Mapping of COs and POs

CO/PO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	L	L	L	L	L	L	S	L
CO-02	L	S	S	L	S	M	L	L
CO-03	S	S	S	S	S	S	S	M
CO-04	S	S	S	S	S	S	S	M
CO-05	S	S	S	S	S	S	S	S

UNIT I: FUNDAMENTALS

9

History, Need and Importance of Quality Management in health care–Core Values, Concepts and Model–Quality Gurus and their views–Dimensions of Quality–Principles of Quality Management: Structure, Process and Outcome–Quality Vs Productivity Vs Profitability–Cost of conformance and non-conformance to Quality

UNIT II: QUALITY MANAGEMENT APPROACHES AND PROCESS

9

Quality management approaches and methodologies- Components –Quality control, quality assurance, continuous quality improvement, total quality management, Quality Management Process--Benchmarking–Quality Measurement and Statistical Report at all Levels–Recognition and Reward–Management Integration

UNIT III: HEALTHCARE QUALITY

9

Quality / Customer Service–Define Customer and Identify Customers–Customer Experience: - Individual Behavior: Stress, Communication and Interpersonal Relationship –Patient Satisfaction–Rights and Responsibilities -Quality Indicators of Patient Satisfaction–Clinical Quality–Complication and Infection Rate–Follow Up and Continuity of Care –Measuring Quality- Performance Indicators–Quality Audit and Review Techniques.

UNIT IV: ORGANISATION AND ROLES IN QUALITY

9

Quality Policy: Commitment to Patients and Staff – Code of Conduct for Health Professionals- Job Description of Quality Manager-Quality Steering Committee-Quality Council-Quality Teams: Task Force, Quality Circle-Obstacles to Practice Quality

UNIT V: RECENT TRENDS

9

ISO Certification – Accreditation – Importance of Accreditation in Health Sector: Accreditation of Health Institutions in India- Process of Accreditation - NABH and JCI-Quality Awards Scheme in Health – Quality Circle- International Accreditations.

TOTAL: 45 HOURS

TEXTBOOKS

1. Donald E Lighter, Douglas C Fair . Quality Management in Health Care- Principles & Methods Johnes&Bartlet Learning: An ASPEN Publication ISBN 0763732184, 9780763732189
2. Patrice Spath. Introduction to Healthcare Quality Management, Publisher: Health Administration Press; 1th edition.
3. Hugh C H. Kogh, Total Quality Management in Health Care (Longman Publication) ISBN 0582 04696
4. Roger Ellis and Dorothy Whittington, Quality Assurance in Health Care – A Hand Book (Edward Ainoi, London) ISBN 0-340-55273-5
5. Nankemp and Eilleen Richardson, Quality Assurance in Nursing Practice (Butterworth Heinemann Ltd., Second Edition) ISBN 0-7506-2326-8
6. Helga Drummond, The TQM Movement-What Total Quality Management is Really All About (UBSPD, New Delhi)

MS35G7	OPERATIONS MANAGEMENT IN HEALTH CARE	L	T	P	C
		3	0	0	3

OBJECTIVES

To make the students familiar with process analysis, capacity analysis, types of processes, productivity analysis, development and use of quality standards, and the role of operating strategy in health organizations.

Course Outcomes-COs		Cognitive Skills
CO-01	Identify operations management concept and methodologies which are employed in health care and other sectors.	R,U,A,AN
CO-02	Demonstrate knowledge of the theory pertaining to operations management in the healthcare industry and management of healthcare facilities/	R,U,A,AN,E
CO-03	Discuss important health care operations issues, particularly quality control and service design	R,U,A,AN,E,C
CO-04	Explore the challenges and opportunities for improving healthcare operations	R,U,A,AN,E
CO-05	Recognize and apply operations management principles to problems encountered in health care planning and management in the private and public sectors	R,U,A,AN,E,C

Mapping of COs and POs

CO/PO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	L	L	L	L	L	L	S	L
CO-02	S	S	S	S	M	M	M	L
CO-03	S	S	S	S	S	S	S	M
CO-04	S	S	S	S	M	S	S	M
CO-05	S	S	S	S	S	S	S	S

UNIT I: FUNDAMENTALS

9

Role of health care operations management, key functions, need, goals of operations managers, principles of management, power and decision making, trends in operations management-Health care as a business, hospital business operations, health finance for operations managers, implications for operations and logistics management

UNIT II: PROJECT MANAGEMENT PROCESS

9

Project and change management, key stages of project management, planning for operational excellence, planning process-Return on investment models, different models and approaches, calculating rate of returns, value of money-risk management.

UNIT III: SUPPLY CHAIN & OPERATION MANAGEMENT

9

Supply chain management strategy, purchasing and material management, supply chain systems- Purchasing and material management, inventory management and accounting, costs of supplies and inventory, supply chain collaboration, future of operations management

UNIT IV: PERFORMANCE IMPROVEMENT TOOLS & TECHNIQUES

9

Problem solving and decision making – decision making framework, mapping- problem identification tools, analytical tools – Using data and statistical tools for operational improvement – qualitative and quantitative tools and techniques- Quality management with focus on six sigma -the lean enterprise.

UNIT V: CONTEMPORARY HEALTHCARE OPERATIONS ISSUES

9

Process improvement approaches –scheduling and capacity management – staff scheduling- operations scheduling and sequencing rules- patient appointment scheduling – demand forecasting – human resource planning – operational excellence - healthcare organizations of the future

TOTAL: 45 HOURS

TEXT BOOKS

1. James R Langabeer& Jaffrey Helten (2016) Healthcare operations management, a systems perspective, Jones & Bartlett learning, ISBN:978-1-284-05006-6.
2. Daniel B, McLaughlin & John R.Olson (2012), Healthcare Operations Management, Health Administration Press, ISBN: 978-1-56793-444-1
3. James R Langabeer& Jaffrey Helten (2014), Healthcare operations management, a quantitative approach to business and logistics, Jones & Bartlett learning, ISBN: 1284071316, 9781284071313

ELECTIVE CURRICULUM

H. ARTIFICIAL INTELLIGENCE

Sl.No	Code	Name of the Subjects	L	T	P	C
1	MS35H1	Artificial Intelligence	3	0	0	3
2	MS35H2	Machine Learning	3	0	0	3
3	MS35H3	Deep Learning	3	0	0	3
4	MS35H4	Business Intelligence	3	0	0	3
5	MS35H5	Data Visualization – R Programming	3	0	0	3
6	MS35H6	Ethics in Artificial Intelligence	3	0	0	3

MS35H1	ARTIFICIAL INTELLIGENCE	L	T	P	C
		3	0	0	3

OBJECTIVES:

Objective of AI (also called heuristic programming, machine intelligence, or the simulation of cognitive behavior) is to enable computers to perform such intellectual tasks as decision making, problem solving, perception, understanding human communication (in any language, and translate among them)

Course Outcome		Cognitive Skill
CO-01	Understand basic concepts of artificial intelligence and various search techniques	U,A
CO-02	Know and understand the need of different algorithms and it purposes	R,U
CO-03	Analyze various applications related to the algorithms and their implementation in the case of programming	U,A,An
CO-04	Analyze the techniques related to planning and reasoning	U,A,An
CO-05	Evaluate and perform the types of learning over the neural network and the statistical methods	U, A, An,E

R-Remember,U-Understand,A-Apply,An-Analyze,E-Evaluate, S-Synthesis

Mapping of Course Outcome with Programme Outcome

PO \ CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	S	S	S	M	S
CO-02	S	M	S	M	S	S	M	S
CO-03	S	S	S	S	S	S	M	S
CO-04	S	S	S	S	S	S	S	S
CO-05	S	S	S	S	S	S	S	S

S-Strong, M-Medium,L-Low,N-Not relevant

Unit I: Introduction 9

Artificial Intelligence Introduction - Brief history - Problem solving by search - State space – Search and Knowledge representation - Uninformed search - Breadth First Search - Depth First Search – Depth First with Iterative Deepening and Uniform Cost Search – Case Study.

Unit II: Heuristic Search 9

Heuristic Search – Hill climbing – Simulated Annealing - A* - problem reduction – Algorithm – Mini max search Binary and higher-order CSP – Constraint Satisfaction Graph - MRV - Degree – Least Constraining – Forward Checking and Arc Consistency General Purpose heuristics for CSP – Case Study.

Unit III: Genetic Algorithm 9

Introduction to genetic algorithm – operations – selection – crossover - mutation examples – Logic-based representations (PL, FoL) and inference – Logic Programming: Prolog – Rule-based representations – forward and backward chaining - matching algorithms – Case Study.

Unit IV: Planning Techniques 9

Planning Techniques – Goal Stack Planning – Constraint posting – Probabilistic Reasoning – Bayesian Network and reasoning – Case Study.

Unit V: Learning 9

Learning – Neural Network models – Statistical methods – Naive-Bayes – Nearest Neighbor – Decision trees – Inductive Learning– Case Study.

TOTAL: 45 HOURS

TEXT BOOKS

1. Artificial Intelligence Modern Approach Third Edition by S. Russell, P. Norvig, PHI
Artificial Intelligence Third Edition by Kevin Knight, Elaine Rich.

REFERENCES:

1. Artificial Intelligence, Structures and Strategies for Complex Problem Solving
George Fluger, Sixth Edition, Pearson.

MS35H2	MACHINE LEARNING	L	T	P	C
		3	0	0	3

OBJECTIVES:

Objective of Machine Learning **is** to discover patterns in the user data and then make predictions based on these and intricate patterns for answering business questions and solving business problems. Machine learning helps in Analyzing the data as well as identifying trends.

Course Outcome		Cognitive Skill
CO-01	Recognize the characteristic of machine learning that make it useful to real-world problems.	U,A
CO-02	Understand and apply the need of different algorithms and models to real time applications	R,U
CO-03	Understand the inference and learning algorithms for the hidden Markov model.	U,A,An
CO-04	Understand the inference and learning algorithms for the models.	U,A,An
CO-05	Understand and evaluate the data in different ways for learning and implementation	U, A, An,E

R-Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S-Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	S	S	S	M	S
CO-02	S	S	S	M	S	S	M	S
CO-03	S	S	S	S	S	S	S	S
CO-04	S	S	S	S	S	S	S	S
CO-05	S	S	S	S	S	S	S	S

S-Strong, M-Medium, L-Low, N-Not relevant

Unit I: Introduction

9

Introduction: Machine Learning – Types – Supervised Learning –

Unsupervised Learning Probability: Introduction

– Probability theory – Discrete Distributions –

Continuous Distributions

– Joint Probability Distributions – Transformations of Random Variables –

Monte Carlo Approximation – Information Theory Generative Models for discrete data

– Introduction – Bayesian Concept Learning – Beta-binomial model – Dirichlet

– multinomial model – Naïve Bayes Classifiers

– Bayesian Statistics: Introduction – Summarizing posterior distributions –

Bayesian Model Selection – Priors – Hierarchical Bayes – Empirical Bayes – Bayesian Decision

Theory – Case Study.

Unit II: Linear Models

9

Generalized Linear Models and the Exponential Family: Introduction – The Exponential family –

Generalized Linear Models (GLMs) – Probit Regression – Multi-task Learning –

Generalized Linear Mixed Models –

Learning to Rank Directed Graphical Models (Bayesian networks): Introduction – Naïve Bayes Classifiers –

Markov and hidden Markov Models – Directed Gaussian Graphical Models – Conditional Independence properties of DGMs – Mixture Models and the EM Algorithm: Latent variable models – Mixture Models – Parameter Estimation for Mixture Models – The EM Algorithm – Case Study.

Unit III: Adaptive Basis Function Models

9

Adaptive basis function models: Introduction – Classification and Regression Trees (CART) – Generalized Additive Models – Boosting – Feed forward neural networks – Ensemble Learning – Experimentation Comparison Markov and Hidden Markov Models: Markov models – Hidden Markov models – Inference in HMMs – Learning for HMMs – Generalizations of HMMs – Case Study.

Unit IV: State Space Models

9

State Space Models: Introduction – Applications of SSMs – Inference in LG-SSM – Learning for LG – SSM – Approximate online inference for non-linear – Non-Gaussian SSMs – Hybrid discrete/continuous SSMs – Undirected Graphical Models – Conditional Independence properties of UGMs – Parameterization of MRFs – Learning – Conditional Random Fields (CRFs) – Structural SVMs – Exact Inference for Graphical Models: Belief Propagation for Trees – The variable elimination algorithm – The Junction Tree Algorithm – Local variational bounds Monte Carlo Inference: Introduction – Sampling from Standard Distributions – Rejection Sampling – Importance Sampling – Particle Filtering – Rao-Blackwellised particle filtering (RBPF) – Case Study.

Unit V: Latent Variable Model for Discrete Data

9

Latent Variable Models for Discrete Data – Distributed state LVMs for discrete data – Latent Dirichlet Allocation (LDA) – Extensions of LDA – LVMs for graph-structured data – LVMs for relational data – Restricted Boltzmann machines (RBMs) – Case Study.

TOTAL: 45 HOURS

TEXT BOOKS

1. -Hands-On Machine Learning with Scikit-Learn and TensorFlow, Aurélien Géron,
2. O'Reilly
3. -Introduction to Machine Learning with Python, Andreas Müller, O'Reilly
4. -Learning from Data, Yaser S. Abu-Mostafa
5. -Learning from Data: Artificial Intelligence and Statistics, Doug Fisher

MS35H3	DEEP LEARNING	L	T	P	C
		3	0	0	3

OBJECTIVES:

The primary purpose of machine learning is to discover patterns in the user data and then make predictions based on these and intricate patterns for answering business questions and solving business problems. Machine learning helps in Analyzing the data as well as identifying trends.

Course Outcome	Cognitive Skill

CO-01	Understand the basic concepts in machine learning, deep learning its foundation and their applications.	R,U, A
CO-02	Understand and develop deep learning concepts with convolutional Neural Network	R,U,A, An
CO-03	Discuss these sequence modeling and their practical issues of performance	U,A,An
CO-04	Develop and implement the models based on the learning from deep learning	U, A, An,E
CO-05	Understand and evaluate different learning algorithms based on partition function and inference	U, A, An,E

R-Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S-Synthesis

Mapping of Course Outcome with Programme Outcome

PO \ CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	S	S	S	M	S
CO-02	S	S	S	M	S	S	S	S
CO-03	S	S	S	S	S	S	M	S
CO-04	S	S	S	S	S	S	S	S
CO-05	S	S	S	S	S	S	S	S

S-Strong, M-Medium, L-Low, N-Not relevant

Unit I: Introduction

9

Machine Learning Basics: Learning Algorithms – Capacity, Over fitting and Under fitting – Hyper parameters and Validation Sets – Estimators, Bias and Variance – Maximum Likelihood Estimation – Bayesian Statistics – Supervised Learning Algorithms – Unsupervised Learning Algorithms – Stochastic Gradient Descent – Building a Machine Learning Algorithm Challenges Motivating Deep Learning – Deep Feedforward Networks: Learning XOR – Gradient-Based Learning – Hidden Units – Architecture Design – Back Propagation Regularization for Deep Learning – Case Study.

Unit II: Deep Models

9

Optimization for Training Deep Models: Challenges in Neural Network Optimization – Basic Algorithms – Parameter Initialization Strategies – Algorithms with Adaptive Learning Rates – Approximate Second-Order Methods – Optimization Strategies and Meta-Algorithms – Convolutional Networks: The Convolution Operation – Pooling – Convolution and Pooling as an Infinitely Strong Prior – Variants of the Basic Convolution Function – Structured Outputs – Data Types – Efficient Convolution Algorithms – Random or Unsupervised Features – The Neuroscientific Basic for Convolutional Networks – Convolution Networks and the History of Deep Learning – Case Study.

Unit III: Sequence Modelling**9**

Sequence Modelling-Recurrent and Recursive Nets: Unfolding Computational Graphs-Recurrent Neural Networks – Bidirectional RNNs – Encoder-Decoder Sequence-to-Sequence Architectures-Deep Recurrent Networks-Recursive Neural Networks-
The Challenge of Long-Term Dependencies – Echo State Networks – Optimization for Long-Term Dependencies – Explicit Memory – Practical Methodology: Performance Metrics – Default Baseline Models – Selecting Hyperparameters-Debugging Strategies-Multi-Digit Number Recognition Applications: Large-Scale Deep Learning – Computer Vision – Speech Recognition – Natural Language Processing – Case Study

Unit IV: Linear Factor Models**9**

Linear Factor Models: Probabilistic PCA and Factor Analysis-Independent Component Analysis (ICA) – Slow Feature Analysis – Sparse Coding – Manifold Interpretation of PCA – Auto encoders – Under complete Auto encoders – Regularized Auto encoders – Representational Power, Layer Size and Depth – Stochastic Encoders and Decoders – Denoising Auto encoders – Learning Manifolds with Auto encoders-Contractive Auto encoders-Predictive Sparse Decomposition – Applications of Auto encoders – Structured Probabilistic Models for Deep Learning: The Challenge of Unstructured Modelling-Using Graphs to Describe Model Structure – Sampling from Graphical Models – Advantages of Structured Modeling – Learning about Dependencies-Inference and Approximate Inference-The Deep Learning Approach to Structured Probabilistic Models- Case Study.

Unit V: Approximate Inference**9**

Confronting the Partition Function: The Log-Likelihood Gradient – Stochastic Maximum Likelihood and Contrastive divergence-Pseudo likelihood-Score Matching and Ratio Matching – Denoising Score Matching-Noise-Contrastive Estimation-Estimating the Partition Function – Approximate Inference: Inference as Optimization-Expectation Maximization-MAP Inference and Sparse Coding- Variation Inference and Learning – Learned Approximate Inference-Case Study.

TOTAL: 45 HOURS**TEXT BOOKS**

1. Ian Goodfellow, Yoshua Bengio, Aaron Courville, || Deep Learning (Adaptive Computation and Machine Learning series), MIT Press, 2017.
2. Josh Patterson and Adam Gibson, – Deep Learning: A practitioner's Approach ||

REFERENCES:

1. Nikhil Buduma, Nicholas Locascio, – Fundamentals of Deep Learning: Designing Next-Generation Machine Intelligence Algorithms ||, O'Reilly Media, 2017.
2. Reza Zadeh and Bharath Ramsundar, – TensorFlow for Deep Learning ||, O'Reilly
3. Nikhil Buduma and Nicholas Locascio, – Fundamentals of Deep Learning: Designing
4. Next-Generation Machine Learning Algorithms ||, O'Reilly

MS35H4	BUSINESS INTELLIGENCE	L	T	P	C
		3	0	0	3

OBJECTIVES:

The entire purpose of Business Intelligence is to support and facilitate better business decisions. Business Intelligence allows organizations access to information that is critical to the success of multiple areas including sales, finance, marketing, and a multitude of other areas and departments

Course Outcome		Cognitive Skill
CO-01	Understand and also introduce the basic concepts and components of BI	U,R
CO-02	Apply and evaluate the different technologies that make up BI its data warehousing and OLAP	U,A,An
CO-03	Discuss the technologies, methodologies and applications of BI in management	U,A,An ,E
CO-04	Apply and implement the process and perform implementation of the tools in BI	U, A, An,E
CO-05	Understand and evaluate applications, tools of text mining and web mining	U, A, An,E

R-Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S-Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	S	S	S	M	S
CO-02	S	M	S	S	S	S	M	S
CO-03	S	S	S	S	S	S	M	S
CO-04	S	S	S	S	S	S	S	S
CO-05	S	S	S	S	S	S	S	S

S-Strong, M-Medium, L-Low, N-Not relevant

Unit I: Introduction**9**

Business Intelligence – Introduction – Framework of Business Intelligence- Definition – History –Architecture of BI – Benefits of BI – Intelligence creation and use of BI governance – Transaction processing versus analytic processing – BI implementation – Developing or acquiring BI – Justification and Cost-benefit analysis – Security and protection of privacy – Integration of systems and applications – BI tools and techniques – Major vendors.

Unit II: Data Warehousing Introduction**9**

Data Warehousing – Definition and concepts – Characteristics – Data marts – Operational data stores – Enterprise data warehouse – Metadata – Architectures – Data warehouse process overview – Data integration – ELT – Data warehouse development – Vendors – Development approaches – Representation of data in data warehouse – OLAP Vs OLTP – OLAP operations

Implementation issues of data warehouse – Administration – Security and future trends of data warehouse.

Unit III: Business Performance Management

9

Business performance management (BPM) – Overview – Definition – BPM Vs BI – Strategize – Plan – Monitor – Act and Adjust of BPM – Performance management – BPM methodologies – Technologies and Applications – Performance dashboards and scoreboards.

Unit IV: Data Mining for Intelligence

9

Data mining for business intelligence – Concepts – Definitions – Applications – Process – Methods – Clustering methods – Meta Heuristics – Artificial Neural Networks for data mining – Data mining software tools – Case Study.

Unit V: Web Mining

9

Text mining – concepts and definitions – Natural language processing – Applications – Process – Tools – Web mining – overview – web content mining – Web structure mining – Web usage mining – BI Implementation – Overview (BI implementation factors, managerial issues) – BI and integration implementation – Connecting BI systems to databases and other systems – On demand BI – Issues of legality – privacy and ethics – Social networks and BI for collaborative decision making, RFID and new BI application opportunities – Case Study.

TOTAL: 45 HOURS

TEXT BOOKS

Turban, E., Sharda, R., Delen, D. and King, D., Business Intelligence - A Managerial Approach, Pearson Education, New Delhi, 2012. **REFERENCES:**

Sonar, R. M., Next generation Business Intelligence – Acknowledge Based Approach, VIKAS Publications, New Delhi, 2011.

MS35H5	DATA VISUALIZATION R PROGRAMMING	L	T	P	C
		3	0	0	3

OBJECTIVES:

The main goal of data visualization is to make it easier to identify patterns, trends and outliers in large data sets. The term is often used interchangeably with others, including information graphics, information visualization and statistical graphics.

Course Outcome		Cognitive Skill
CO-01	Understand the basics of R programming.	U, R
CO-02	Able to apply and analyzing and handling the data	A, An
CO-03	Understand and evaluate simple problems related to business using looping.	U, A, E
CO-04	Apply data visualization concepts using chart.	U, A
CO-05	Able to analyze statistical functions	A, An

R-Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S-Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	S	S	S	M	S
CO-02	S	M	S	S	S	S	M	S
CO-03	S	S	S	S	S	S	M	S
CO-04	S	S	S	S	S	S	S	S
CO-05	S	S	S	S	S	S	S	S

S-Strong, M-Medium, L-Low, N-Not relevant

Unit I: Introduction to Basics

9

Understanding the interface – Basic R Operations (Math and Text) – Attribute and Data Types – Numeric – Character – and Logical Data Types – Vectors – Arrays and Matrices – Data Frames – Lists – Factors – Contingency Tables.

Unit II: Handling Data

9

Data Import and Export from R – Sorting Data – Selecting Cases – Recoding Existing Variable – Computing New Variables.

Unit III: Control Structures and loops in R

9

Control Structure and Loops in R – If Statement, For Loop, While Loop.

Unit IV: Data Visualization

9

Dotchart and Bar plot – Single Variable, Histogram and Density Plot, Dotchart and Barplot – Multiple Variables, Box-and-Whisker Plot, Hexbinplot for Large Datasets, Scatterplot Matrix, Analyzing a Variable over Time.

Unit V: Basic Statistical Analysis

9

Basic Statistical Analysis – Basic Statistical Functions, Descriptive Statistics, Statistical Tests.

TOTAL: 45 HOURS

TEXT BOOKS

Turban, E., Sharda, R., Delen, D. and King, D., Business Intelligence- A Managerial Approach, Pearson Education, New Delhi, 2012.

REFERENCES: Sonar, R. M., Next generation Business Intelligence – Acknowledge Based Approach, VIKAS Publications, New Delhi, 2011.

MS35H6	ETHICS IN ARTIFICIAL INTELLIGENCE	L	T	P	C
		3	0	0	3

OBJECTIVES:

An ethical AI system must be inclusive, explainable, have a positive purpose and use data responsibly. An inclusive AI system is unbiased and works equally well across all spectra of society. An explainable AI system supports the governance required of companies to ensure the ethical use of AI.

Course Outcome		Cognitive Skill
CO-01	To Understand the ethical issues in the development of AI agents.	U
CO-02	Learn the ethical considerations of AI with perspectives on ethical values.	R,U
CO-03	Apply the ethical policies in AI based applications and Robot development.	U,A,An
CO-04	To implement the AI concepts to societal problems by adapting the legal concepts by securing fundamental rights.	U,E
CO-05	Evaluate and perform the types of learning over the neural network and the statistical methods.	A, An,E

R-Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S-Synthesis

Mapping of Course Outcome with Programme Outcome

PO \ CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	S	S	S	M	S
CO-02	S	M	S	M	S	S	M	S
CO-03	S	S	S	S	S	S	M	S
CO-04	S	S	S	S	S	S	M	S
CO-05	S	S	S	S	S	S	M	S

S-Strong, M-Medium, L-Low, N-Not relevant

Unit I: Introduction to Ethics of AI

9

Role of Artificial Intelligence in Human Life – Understanding Ethics – Why Ethics in AI? - Ethical Considerations of AI – Current Initiatives in AI and Ethics – Ethical Issues with our relationship with artificial Entities.

Unit II: Framework and Model

9

AI Governance by Human-right centered design – Normative models – Role of professional norms – Teaching Machines to be Moral.

Unit III: Concepts and Issues

9

Accountability in Computer Systems – Transparency – Responsibility and AI. – Race and Gender – AI as a moral right-holder.

Unit IV: Perspectives and Approaches**9**

Perspectives on Ethics of AI – Integrating ethical values and economic value – Automating origination – AI a Binary approach – Machine learning values – Artificial Moral Agents.

Unit V: Cases and Applications**9**

Ethics of Artificial Intelligence in Transport – Ethical AI in Military – Biomedical Research – Patient Care – Public Health – Robot Teaching – Pedagogy – Policy – Smart city Ethics.

TOTAL: 45 HOURS**TEXT BOOKS**

1. Paula Boddington, –Towards a Code of Ethics for Artificial Intelligence, Springer, 2017.
2. Markus D. Dubber, Frank Pasquale, Sunit Das, –The Oxford Handbook of Ethics of AI, Oxford University Press Edited book, 2020

REFERENCES:

1. S. Matthew Liao, –Ethics of Artificial Intelligence, Oxford University Press Edited Book 2020.
2. N. Bostrom and E. Yudkowsky. –The ethics of artificial intelligence. In W. M.

ELECTIVE CURRICULUM

I.SYSTEM

Sl.No	Code	Name of the Subjects	L	T	P	C
1	MS35I1	Data Warehousing and Data Mining	3	0	0	3
2	MS35I2	Enterprise Resource Planning	3	0	0	3
3	MS35I3	Software Project and Quality Management	3	0	0	3
4	MS35I4	Artificial Intelligence &Deep Learning	3	0	0	3
5	MS35I5	Decision Support System	3	0	0	3
6	MS35I6	System Analysis and Design	3	0	0	3
7	MS35I7	Database Management System	3	0	0	3
8	MS35I8	E-Commerce Management	3	0	0	3
9	MS35I9	Data Visualization and R programming	3	0	0	3

MS35I1	DATA WAREHOUSING AND DATA MINING	L	T	P	C
		3	0	0	3

OBJECTIVES:

Data mining has opened a world of possibilities for business. This field of computational statistics compares millions of isolated pieces of data and is used by companies to detect and predict consumer behavior. Its objective is to generate new market opportunities. Data mining converts information into knowledge. Data warehousing is intended to provide the organization with a reliable source of data for many types of business analysis. Data mining is intended to provide the organization with hidden insights that cannot otherwise be gleaned from large-scale data.

Course Outcome		Cognitive Skill
CO-01	List different issues related to data warehousing and data mining.	R
CO-02	Classify the main characteristics of different data warehousing and data mining techniques through observation of their operations.	A, An
CO-03	Evaluate perform a critical assessment of current data warehousing and data mining techniques.	A, E
CO-04	Understand different data mining tasks and their common real world applications.	U
CO-05	Understand the knowledge of text mining and customer relationship management.	R, U

R-Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S-Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	S	M	S	S	S
CO-02	S	S	S	S	M	S	S	S
CO-03	S	S	S	S	M	S	M	S
CO-04	S	S	S	S	M	S	S	S
CO-05	S	S	S	S	M	S	S	S

S-Strong, M-Medium, L-Low, N-Not relevant

Unit I: Data Mining and Warehousing - Introduction

9

Introduction - Data Mining - Data Warehousing - KDD process - Classifications and Algorithms - Data mining tasks - Machine Learning - Case Study.

Unit II: Data Warehousing Architecture

9

Basic Concept - Data Warehousing Architecture - Data Modeling - Data marts & OLAP - Data Mart Designing - Data Mart Builder - Data Mart Discovery - Online Analytical processing - OLTP VS. DW Environment - Case Study.

Unit III: Applications of Data Mining and Warehousing

9

Relationship of Data Mining and data warehousing - Application of Data Mining - Application of Data Warehousing - Relation between Data Mining and Data Warehousing according to need of business - Case Study.

Unit IV: Statistical Analysis of Data Mining

9

Statistical Analysis and Cluster Analysis - Difference between Statistics and Data Mining – Histograms - Statistic for Predictions - Clustering for Clarity - Hierarchical and Non Hierarchical clusters - Choosing Classics - Case Study.

Unit V: Data mining Techniques

9

Next generation of Informatics Mining and Knowledge Discovery - Business Intelligence and Information Mining - Text Mining - Knowledge Management -Benefits and Product of Text Mining - Customer Relationship Management in the E-Business World - Data Mining Techniques for Optimizing Inventories for Electronic Commerce - Case Study.

TOTAL: 45 HOURS

TEXT BOOKS

1. _Data Mining – Concepts & Techniques‘ – Jiawei Han & Micheline Kamber, 2001.
2. _Data Mining Technology for Marketing, Sales and Customer Support‘ – Michel Berry.
3. _Data Warehousing & Data Mining for Telecommunication‘ – Rob Maltison.

REFERENCES:

- _Distributed Data Warehousing using Web Technology‘ - R.A. Moeller.
- _Building Data Mining Application for CRM‘ – Alex Berson.

MS35I2	ENTERPRISE RESOURCE PLANNING	L	T	P	C
		3	0	0	3

OBJECTIVES:

Enterprise Resource Planning or ERP is referred to a widely used software package to enhance the operational efficiency of a business resource. ERP is nothing but a symphony of software modules, which help company owners to accomplish their business goals at a very faster rate. At present, ERP has become a commonly applied software system in almost all sorts of industrial fields such as small, medium sized and even large companies. Some of the key benefits you get from implementing an ERP include inventory control, customer relationship management, human capital management and order tracking as well.

Course Outcome		Cognitive Skill
CO-01	Understand the concepts Enterprise Resource Planning (ERP) systems.	U,R
CO-02	Classify the main characteristics of different data warehousing and data mining techniques through observation of their operations.	R, An

CO-03	Evaluate perform a critical assessment of current data warehousing and data mining techniques.	U, E
CO-04	Demonstrate the business processes that underlie a business management information system, and how ERP fits into the business model.	An, E
CO-05	Demonstrate modern software including Oracle ERP system to plan and manage resources in organizations.	A, E

R-Remember,U-Understand,A-Apply,An-Analyze,E-Evaluate, S-Synthesis

Mapping of Course Outcome with Programme Outcome

PO \ CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	S	S	S	S	M
CO-02	S	S	S	S	S	S	S	M
CO-03	S	S	S	S	S	S	M	M
CO-04	S	S	S	S	S	S	S	M
CO-05	S	S	S	S	S	S	S	M

S-Strong, M-Medium,L-Low,N-Not relevant

Unit I: Enterprise Resource Planning Introduction

9

Enterprise – an overview ERP Introduction-Basic concept- ERP and related technologies-Business Process Reengineering - Conceptual Model of ERP, The Evolution of ERP, The Structure of ERP – Case Study.

Unit II: Data Warehousing and Data Mining

9

Data ware Housing - Data Mining - Online Analytical Processing (OLAP) – Product Life Cycle Management (PLM) – OLAP - Supply chain Management - Customer relationship management - Advanced Technology and ERP Security – Case Study.

Unit III: ERP Implementation Strategies

9

ERP Implementation Strategies - ERP Implementation Life Cycle and Methodologies - Vendors and Consultants - Contracts with Vendors - Consultants and Employees – Project Management and Monitoring– Case Study.

Unit IV: ERP Packages

9

Business Modules of ERP packages – Finance – Manufacturing – Human Resources – Plant Maintenance – Materials Management – Quality Management – Marketing – Sales Distribution and Service – Case Study.

Unit V: ERP Marketplace Dynamics

9

ERP Marketplace and Marketplace Dynamics – SAP – ORACLE Corporation – Turbo charge the ERP system – Enterprise Application Integration – ERP and E-Business – ERP Internet and WWW – Total Quality Management – Future Direction and Trends in ERP– Case Study.

TOTAL: 45 HOURS

TEXT BOOKS

1. Alexis Leon, -ERP Demystified, second Edition, Tata McGraw Hill publishing Company Ltd., 2008.
2. Rahul V. Altekhar -Enterprise Resource Planning, Tata McGraw Hill, 2004

REFERENCES:

1. Vinod Kumar Garg and Venkitakrishnan N K, -Enterprise Resource Planning –Concepts and Practice, PHI 2002.
2. Joseph A Brady, Ellen F Monk, Bret Wagner, -Concepts in Enterprise Resource Planning, Thompson Course Technology.
3. Mary Summer, -Enterprise Resource Planning- Pearson Education

MS35I3	SOFTWARE PROJECT AND QUALITY MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES:

Software Quality Objectives covers a variety of techniques and measurements, including gathering code metrics, enforcing coding rules, and proving the absence of run-time errors. The guide also takes into account the origin of the code, its stage in the software life cycle, and the safety aspects of the application. Project quality management is the process of continually measuring the quality of all activities and taking corrective action until the desired quality is achieved.

Course Outcome		Cognitive Skill
CO-01	Evaluate and select the most desirable projects.	E
CO-02	Explain familiarity and a working knowledge of the principles and practice of quality management, quality control and assurance.	R, U
CO-03	List terminology, methods and tools which are essential for the quality practitioner, planner, and decision-maker.	A, An
CO-04	Understand the basic functions and responsibilities of software configuration management.	U
CO-05	Analyze the maintenance side effects, characteristics and tasks.	An

R-Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S-Synthesis

PO	Mapping of Course Outcome with Programme Outcome							
	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO								

CO-01	S	S	S	M	S	S	S	S
CO-02	S	S	S	M	S	S	S	M
CO-03	S	S	S	M	S	S	M	M
CO-04	S	S	S	M	S	S	S	L
CO-05	S	S	S	M	S	S	S	S

S-Strong, M-Medium, L-Low, N-Not relevant

Unit I: Introduction to Software Projects

9

Introduction to Software Projects – Software Projects versus other types of projects – Projects Management – Requirements specification – An overview of project planning – Project Evaluation: Strategic and Technical Assessment – Risk Evaluation – Project Analysis and Technical planning – Software Estimation - Case Study.

Unit II: Activity Planning

9

Objectives – Project schedules and activities – Different planning models – Sequencing and Scheduling projects – Network planning model – shortening project duration – Identifying critical activities – Risk Management: Nature of risk-Management risk-Evaluation risk - Case Study.

Unit III: Resource Allocation

9

Nature of resources – Resource requirements – Creating Critical path and counting the cost – Monitoring and control: Responsibility – assessing progress – setting check points – taking snapshots – collecting data – visualizing progress – Cost monitoring – Priority monitoring – Managing people and organizing teams - Case Study.

Unit IV: Software Configuration Management

9

Basic Functions – Responsibilities – Standards – Configuration management – Prototyping – Models of Prototyping – Planning for small projects: Introduction – Some problem with student projects – Content of project plan - Case Study.

Unit V: Software Maintenance and Configuration Management

9

Maintenance characteristics – Management tasks – Maintenance side effects – Maintenance issues – Configuration Management – Source code metrics – Case study – PRINCE project management - Case Study.

TOTAL: 45 HOURS

TEXT BOOKS

1. 'Software project management' - Mike Cotterell, Bob Hughes, Inclination / Thomas Computer press, 1995.
2. 'Introduction to software project management and Quality Assurance' - Darrel Ince, H. Sharp and M. Woodman, Tata McGraw Hill, 1995.
3. 'Software Project Management' – A unified Framework – Walker Royce, Pearson Education Asia, New Delhi, 2000.

REFERENCES:

1. 'Software Quality – Theory & Management' – Alan Gillies, Thomson Learning, 2003.

2. 'Software Engineering – A Practitioners Approach' – Roger S Pressman, McGraw Hill International Edition, New Delhi, 2001.
3. 'Software Quality Metrics and Models' – Stephen Kan, Pearson Education, Asia.

MS35I4	ARTIFICIAL INTELLIGENCE & DEEP LEARNING	L	T	P	C
		3	0	0	3

OBJECTIVES:

Objective of AI (also called heuristic programming, machine intelligence, or the simulation of cognitive behavior) is to enable computers to perform such intellectual tasks as decision making, problem solving, perception, understanding human communication (in any language, and translate among them)

Course Outcome		Cognitive Skill
CO-01	Understand basic concepts of artificial intelligence and various search techniques	U,A
CO-02	Know and understand the need of different algorithms and its purposes	R,U
CO-03	Analyze various applications related to the algorithms and their implementation in the case of programming	U,A,An
CO-04	Analyze the techniques related to planning and reasoning	U,A,An
CO-05	Evaluate and perform the types of learning over the neural network and the statistical methods	U, A, An,E

R-Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S-Synthesis

Mapping of Course Outcome with Programme Outcome

PO \ CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	S	S	S	M	S
CO-02	S	M	S	M	S	S	M	S
CO-03	S	S	S	S	S	S	M	S
CO-04	S	S	S	S	S	S	S	S
CO-05	S	S	S	S	S	S	S	S

S-Strong, M-Medium, L-Low, N-Not relevant

Unit I: Introduction

9

Artificial Intelligence Introduction - Brief history - Problem solving by search - State space – Search and Knowledge representation - Uninformed search - Breadth First Search - Depth First Search –Depth First with Iterative Deepening and Uniform Cost Search – Case Study.

Unit II: Heuristic Search**9**

Heuristic Search –Hillclimbing –Simulated Annealing -A* -problem reduction –
 Algorithm –Minimax search Binary and higher order CSP –Constraint Satisfaction
 Graph –MRV –Degree –Least Constraining –
 ForwardCheckingandArcConsistencyGeneralPurposeheuristicsforCSP–CaseStudy.

Unit III: Genetic Algorithm**9**

Introduction to genetic algorithm – operations – selection – crossover - mutation
 examples – Logic based representations (PL,FoL)and inference –Logic Programming:
 Prolog –Rule based representations –forward and backward chaining - matching
 algorithms–Case Study.

Unit IV: Planning Techniques**9**

Planning Techniques –Goal Stack Planning –Constraint posting –ProbabilisticReasoning –
 Bayesian Network and reasoning –Case Study.

Unit V: Learning**9**

Learning –Neural Network models –Statistical methods -Naive-Bayes –Nearest Neighbor –
 Decision trees –Inductive Learning– Case Study.

TOTAL: 45 HOURS**TEXT BOOKS:**

1. ArtificialIntelligenceModernApproachThirdEditionbyS.Russell,P.Norvig,PHIArtificial
 IntelligenceThirdEditionbyKevinKnight,ElaineRich.

REFERENCES:

1. ArtificialIntelligence,StructuresandStrategiesforComplexProblemSolvingGeorge
 Fluger,Sixth Edition, Pearson.

MS35I5	DECISION SUPPORT SYSTEM	L	T	P	C
		3	0	0	3

OBJECTIVES:

Decision making involves selecting the best alternative out of different options available for performing a task. It chooses the right course of action after properly analyzing its pros and cons for deriving maximum result out of it. Decision Support System refers to a class of systems which support in the process of decision making and does not always give a decision itself. Decision Support Systems (DSS) are a specific class of computerized information system that supports business and organizational decision making activities.

Course Outcome		Cognitive Skill
CO-01	Identify the business relevance and technical basics of business intelligence (BI), knowledge management (KM), and decision support.	R, U
CO-02	List the role of analytics in decision making.	U
CO-03	Explain the concepts, methodologies, and technologies behind decision support systems.	A, An

CO-04	Elaborate the practical uses of BI and KM systems such as Artificial Intelligence and Expert Systems.	A, An, E
CO-05	Understand knowledge management and technologies and tools.	U

R-Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S-Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	M	S	S	M	S
CO-02	S	S	S	M	S	S	M	M
CO-03	S	S	S	M	S	S	M	S
CO-04	S	S	S	M	S	S	M	S
CO-05	S	S	S	M	S	S	M	S

S-Strong, M-Medium, L-Low, N-Not relevant

Unit I: Introduction

9

Managers and Decision making – Managerial decision making and information systems – Managers and computerized support – Framework for decision support – Concept of decisions support systems – Group support systems – Executive information support systems – introduction to Expert systems & Intelligent agents – knowledge management systems – supporting ERP & SCM - Case Study.

Unit II: Decision Making

9

Introduction and Definitions – Systems – Models – preview of modeling process – Decision making phases: intelligence, design, choice – evaluation – implementation phase – alternative models. Introduction to DSS – Characteristics and capabilities of DSS & DSS components – Classifications of DSS - Case Study.

Unit III: Group Decision Support System

9

Decision-making in groups - Characteristics and Challenges - Technology of GDSS - The GDSS meeting process - Creativity and idea generation – GSS and collaborative computing issues and research - Case Study.

Unit IV: Enterprise Decision Support System

9

Concepts and Definitions – Evolution – Executive's roles and their information needs – Characteristics and Capabilities of ESS – Comparison of EIS and DSS – Supply and Value chains and decision support – problems and solutions - Case Study.

Unit V: Introduction to Knowledge Management

9

Knowledge – Organizational learning and Organizational memory – Knowledge Management – Knowledge management development – Methods – Technologies and Tools – Knowledge management and AI – Electronic Document Management - Case Study.

TOTAL: 45 HOURS

TEXT BOOKS

1. ‘Decision Support Systems and Intelligent Systems’ – Efrain Turban, Jay E.Aronson, 6th Edition, Pearson Education, 2001.
2. ‘Decision Support System’ – George M. Marakas, Prentice Hall, India, 2003.

REFERENCES:

1. ‘Decision Support Systems’ – Janakiraman V.S. and Sarukesi. K, Prentice Hall of India, 1999.
2. ‘Decision Support System and Management’ – Lofti, McGraw Hill Inc., International Edition, New Delhi, 1996

MS35I6	SYSTEM ANALYSIS AND DESIGN	L	T	P	C
		3	0	0	3

OBJECTIVES:

Objective of System Analysis is to study procedural components and modules. The goal of System Design is to design whole software, which fulfils all the requirements of customer. This leads to improve organizational systems, by applying software, which helps employees to perform business, tasks more effectively.

Course Outcome		Cognitive Skill
CO-01	Understand system concepts, types and life cycle.	R, U
CO-02	Analyze and investigate system planning.	A, An
CO-03	Able to remember the user information requirements.	R
CO-04	Understand and analyze ER diagram, DFD and OOAD.	U, An
CO-05	List the basic information securities and authentication.	R, U

R-Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S-Synthesis

PO CO	Mapping of Course Outcome with Programme Outcome							
	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	M	S	S	S	S
CO-02	S	S	S	M	S	S	S	M
CO-03	S	S	S	M	S	S	S	S
CO-04	S	S	S	M	S	S	S	S

CO-05	S	S	S	M	S	S	S	S
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S-Strong, M-Medium, L-Low, N-Not relevant

Unit I: Introduction

9

Systems Concept - Characteristics of a System- Elements of System - Types of Systems - Decision Support System - System Development Life Cycle – Investigation – Analysis – Design - Implementation - Post Implementation Review and Maintenance.

Unit II: System Planning

9

Systems Planning and Investigation - Basis for Planning in Systems Analysis - Dimensions of Planning - Initial Investigation - Needs Identification.

Unit III: Information Requirements

9

Determining the User's Information Requirements - Feasibility Study - Feasibility Considerations - Steps in Feasibility Analysis - Feasibility Report.

Unit IV: Analysis

9

Tools of Structured Analysis - Data Flow Diagram (DFD) - Entity Relationship Diagrams - Data Dictionary - Process Modeling - Structured English - Decision Tree and Decision Table - Object Oriented Analysis (OOA) and Object Oriented Design (OOD).

Unit V: Basic Security

9

Basics of Information Security - Types of Attacks – Viruses - Virus Control – Hackers - Overview of Risks associated with Internet - Intrusion Detection Risk Management - Disaster Recovery Plan - Cryptography and authentication - Managing Risk - Information Security Policy - Creating a secure environment - Internet Security Standards.

TOTAL: 45 HOURS

TEXT BOOKS

1. Shah-Software Engineering & SAD(Wiley Dreamtech)
2. Kenneth E Kendall and Julie E Kendall – SAD (PHI Publication, 7 Ed.)
3. Grienstein and Feinman- E-commerce –Security, Risk Management and Control (TMH, 2nd Ed.)

REFERENCES:

1. AnkitFadia -Encryption-Protecting your Data (Vikas Publication, 1st Ed.)
2. Singh B –Network Security (PHI Publication, 1st Ed.)

MS35I7	DATABASE MANAGEMENT SYSTEM	L	T	P	C
		3	0	0	3

OBJECTIVES:

The objective of a database management system is to facilitate the creation of data structures and relieve the programmer of the problems of setting up complicated files. Data base management systems have developed from a concept of the data base as something distinct from the programs accessing it.

Course Outcome		Cognitive Skill
CO-01	Describe fundamental elements of a relational database management system.	R, U
CO-02	Elaborate entity-relationship diagrams to represent simple database application scenarios.	U, A
CO-03	Convert entity-relationship diagrams into relational tables, populate a relational database and formulate SQL queries on the data.	A, An
CO-04	Implement the following for a simple prescribed business problem.	A, E
CO-05	Understand the concept of transaction and concurrent control.	U

R-Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S-Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	S	S	S	S	S
CO-02	S	S	S	S	S	S	S	M
CO-03	S	S	S	S	S	S	S	S
CO-04	S	S	S	S	S	S	S	S
CO-05	S	S	S	S	S	S	S	S

S-Strong, M-Medium, L-Low, N-Not relevant

Unit I: Database System Introduction

9

Data base System Applications, Purpose of Database Systems - View of Data – Data Abstraction –Advantages– Database Architecture – data models: Relational-Hierarchical-Network - Case Study.

Unit II: Storage structure and Relational Data Structure

9

Database design and ER Model – Overview - ER-Model – Constraints - ER-Diagrams - ERD Issues - Weak entity sets - Codd's rules - Relational Schemas - Introduction to UML Relational database model - Logical view of data – Keys - Integrity rules - Case Study.

Unit III: Relational Database Design

9

Relational Database design - Features of good relational database design - Atomic domain and Normalization - 1NF - 2NF - 3NF - BCNF.

Unit IV: Constraints views and SQL

9

Introduction - Types of Constrains - Integrity constraints – Views - Introduction to views - Data Independence – Security - Updates on views - Comparison between tables and views SQL - Data definition - Data Manipulation - Aggregate function - Null Values - Nested sub queries, Joined relations - PL/SQL - Case Study.

Unit V: Transaction Management and Concurrent Control**9**

Transaction Concept - Transaction State - Implementation of Atomicity and Durability – Concurrent – Executions – Serializability- Recoverability – Implementation of Isolation – Testing for serializability - Lock – Based Protocols – Timestamp Based Protocols - Validation-Based Protocols – Multiple Granularity. Recovery and Atomicity – Log – Based Recovery – Recovery with Concurrent Transactions - Case Study.

TOTAL: 45 HOURS**TEXT BOOKS**

1. Data base System Concepts, Silberschatz, Korth, McGraw hill, Sixth Edition, 2010
2. ‘Database Management Systems’ – Rajesh Narang, Eastern Economy Edition, PHI learning Private Ltd, 2010.
3. ‘Data Modeling and Database Design’ – Narayan S. Umanath and Richard W. Scamell, Thomson Course Technology, 2008.

REFERENCES:

1. ‘Introduction Database Management’ – Mark L. Gillenson& el, Wiley India Pvt., Ltd., 2008.
2. ‘Database Systems – Design, Implementation and Management’ – Peter Rob and Carlos Coronel, Thomson Course Technology, 2008.

MS35I8	E- COMMERCE MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES:

The primary objective of e-commerce is to reach maximum customers at the right time to increase sales and profitability of the business. Functions of e-commerce include buying and selling goods, transmitting funds or data over the internet.

Course Outcome		Cognitive Skill
CO-01	Demonstrate the critical building blocks of E-Commerce and different types of prevailing business models employed by leading industrial leaders;	E
CO-02	Understand the benefits of E-Commerce to Organizations, Consumers and society.	U
CO-03	Appraise the opportunities and potential to apply and synthesize a variety of E-Commerce concepts and solutions to create business value for organizations, customers, and business partners;	A
CO-04	Formulate E-Commerce strategies that lever firms’ core competencies, facilitate organizational transformation, and foster innovation; undertake planning, organizing, and implementing of E-Commerce initiatives to effectively respond to of dynamic market environments.	A, E
CO-05	Understand the concept of web based business and SCM.	U

R-Remember,U-Understand,A-Apply,An-Analyze,E-Evaluate, S-Synthesis

Mapping of Course Outcome with Programme Outcome

PO CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	S	M	S	S	S
CO-02	S	S	S	S	M	S	S	S
CO-03	S	S	S	S	M	S	S	S
CO-04	S	S	S	S	M	S	S	S
CO-05	S	S	S	S	M	S	S	S

S-Strong, M-Medium, L-Low, N-Not relevant

Unit I: Introduction

9

What is Electronic Commerce – Brief history of Electronic Commerce – Electronic commerce Framework- Advantages and Limitations of Electronic Commerce – Electronic commerce and businessplans-Types of Electronic commerce - Case study.

Unit II: Market

9

E-Market places –Types of E-Markets –The Role and values of intermediaries –Electronic catalogs and other market mechanisms - Auctions as EC market mechanisms – Bartering and negotiating online – e-Commerce in the wireless environments –Issues in E-Markets - Case study.

Unit III: Electronic Payment Systems

9

Electronic payments - Electronic cards and smart cards - E-cash and Innovative payment methods -E-Checking -B2BElectronicpayments -E-Billing –Launching a successful online business - Case Study.

Unit IV: Security

9

Security in the cyberspace – Designing for security – Virus – Security Protection and Recovery – Encryption – The Basic Algorithm System – Authentication and Trust – Key management – Internet Security Protocols and Standards – Other Encryption issues. - Case Study.

Unit V: Web Based Business

9

Business-to-Business Electronic Commerce – Intranets and Extranets – Intranets and Supply Chain Management – Legal and Ethical issues - Case Study.

TOTAL: 45 HOURS

TEXT BOOKS

1. 'Electronic Commerce' – Elias, M. Awad, Prentice Hall of India Pvt. Ltd, 2002.
2. 'Electronic Commerce' – A Manager's guide'- Ravi Kalakota, Andrew B. Whinston, Addison – Wesley, 2000.
3. Efraim Turban, David King, Jae Lee, Dennis Vichland, -Electronic Commerce 2004: A managerial Perspective -, Pearson Education.

REFERENCES:

1. 'Electronic Commerce' – A Managerial Perspective' - Efraim Turban, Jae Lee, David King, H. Michael Chung, Addison – Wesley, 2001.

2. 'Electronic Commerce from Vision to Fulfillment' - Elias M Award, 3rd Edition, PHI, 2006.
3. 'E-Marketing' – Judy Strauss, Adel El-Ansary, Raymond Frost, 3rd Edition, PHI, 2006.
4. 'Frontiers of Electronic Commerce' – Ravi Kalakota, Andrew B. Whinston, Addison-Wesley, 2000.

MS35I9	DATA VISUALIZATION AND R PROGRAMMING	L	T	P	C
		3	0	0	3

OBJECTIVES:

The main goal of data visualization is to make it easier to identify patterns, trends and outliers in large data sets. The term is often used interchangeably with others, including information graphics, information visualization and statistical graphics.

Course Outcome		Cognitive Skill
CO-01	Understand the basics of R programming.	U,R
CO-02	Able to apply and analyzing and handling the data	A,An
CO-03	Understand and evaluate simple problems related to business using looping.	U, A,E
CO-04	Apply data visualization concepts using chart.	U, A
CO-05	Able to analyze statistical functions	A, An

R-Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S-Synthesis

Mapping of Course Outcome with Programme Outcome

PO \ CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	S	S	S	S	M	S
CO-02	S	M	S	S	S	S	M	S
CO-03	S	S	S	S	S	S	M	S
CO-04	S	S	S	S	S	S	S	S
CO-05	S	S	S	S	S	S	S	S

S-Strong, M-Medium, L-Low, N-Not relevant

Unit I: Introduction to Basics

9

Understanding the interface - Basic R Operations (Math and Text) - Attribute and Data Types - Numeric – Character - and Logical Data Types - Vectors - Arrays and Matrices - Data Frames - Lists – Factors - Contingency Tables.

Unit II: Handling Data

9

Data Import and Export from R - Sorting Data - Selecting Cases - Recoding Existing Variable - Computing New Variables.

Unit III: Control Structures and loops in R

9

Control Structure and Loops in R - If Statement, For Loop, While Loop.

Unit IV: Data Visualization

9

Dotchart and Bar plot – Single Variable, Histogram and Density Plot, Dotchart and Barplot – Multiple Variables, Box-and-Whisker Plot, Hexbinplot for Large Datasets, Scatterplot Matrix, Analysing a Variable over Time.

Unit V: Basic Statistical Analysis

9

Basic Statistical Analysis - Basic Statistical Functions, Descriptive Statistics, Statistical Tests.

TOTAL: 45 HOURS

TEXT BOOKS

Turban, E., Sharda, R., Delen, D. and King, D., Business Intelligence - A Managerial Approach, Pearson Education, New Delhi, 2012.

REFERENCES: Sonar, R. M., Next generation Business Intelligence – A Knowledge Based Approach, VIKAS Publications, New Delhi, 2011.

SYLLABUS FORMAT

SEMESTER IV

Sl.No.	Code No	Title of the Course	L	T	P	C
1.	MS3516	Corporate Sustainability Management	3	0	0	3
2.	XxxE7	Elective – 7	3	0	0	3
3	XxxE8	Elective – 8	3	0	0	3
4.	MS35P5	Final Internship Project Work (8 Weeks)	0	0	16	8
	TOTAL		9	0	16	17

MS3516	CORPORATE SUSTAINABILITY MANAGEMENT	L	T	P	C
		3	0	0	3

OBJECTIVES

- To identify the skills needed to build a strong corporate sustainability strategy for your business.
- To improve the skills which requires for managing sustainability risks and opportunities in the business
- To develop the ability to evaluate the constraints and opportunities facing a variety of institutions and acquire the skills required to implement sustainable policies.
- To increase problem solving scenarios, develop analytical skills and critically evaluate environmental management policies.

Course Outcome - COs		Cognitive Skill
CO-01	Upon completion of the unit on International finance and documentation, students will be able to: Describe how sustainability (economic, social, environmental) is manifested and portrayed in global industrial companies,	R, U
CO-02	Upon completion of the unit on Exchange rate theories students will be able to: Describe how sustainability work is managed in global industrial companies, and how core technologies in the company relate to sustainability,	R, U, A, An, E
CO-03	Upon completion of the unit on International Monetary system students will be able to: Discuss and reflect upon sustainability issues, and how they are managed, in a range of technology-intensive industries.	R, U, A
CO-04	Upon completion of the unit on Factors affecting Exchange rates students will be able to: Plan and execute a project aimed at collecting, systematizing and analyzing information about how sustainability work is managed in global industrial companies, by means of annual reports, sustainability reports, and other sources	R, U, A, An
CO-05	Upon completion of the unit on Currency Derivatives, Students will be able to: Evaluate sustainable marketing opportunities in uncontrollable Environments, Understand buyers and markets.	R, U, A, An, E

R- Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, S- Synthesis

Mapping of Course Outcome with Programme Outcome

PO \ CO	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H
CO-01	S	S	M	S	M	M	S	M
CO-02	M	S	S	S	M	S	M	S

CO-03	S	M	M	S	M	M	M	S
CO-04	S	S	S	S	M	M	S	S
CO-05	S	S	M	S	S	M	S	M

S- Strong, M- Medium, L-Low, N- Not Relevant

UNIT I: Technological Sustainability

9

Introduction to Technologies, market intelligence techniques, and intellectual property issues related to business development, relationship between risk and sustainability. Technological solutions for carbon mitigation and carbon adaptation. prototype development and recommendations for dealing with the supply chain for highly technological and sustainable projects - Case Study

UNIT II:Economical Sustainability

9

Introduction to the management of economic, social, and environmental sustainability issues in global industrial companies. With economic sustainability is meant, for example, strategy, technological innovation, current and future economic prospects, resource base, and market position-Case Study

UNIT III :Marketing Sustainability

9

Building a Sustainability Brand. Sustainability as a Competitive Differentiator. Social Impact Marketing Frameworks. Consumer and Customer Insights. Mainstream appeal-Overcoming Biases and Barriers to Adoption. Customer Education (Vital Farms). Marketing Challenge. -Sustainable Product Design. Setting Goals and Measurement Frameworks-Case Study

UNIT IV: Environmental Sustainability

9

Fundamental aspects of sustainability, environmental issues, climate change, resource depletion, food-energy-water nexus. Green materials, energy conventional and renewable sources, sustainable development- energy cycles and accounting. Carbon cycle, emissions and sequestration. Concepts of green design. Life-cycle analysis- Case Study

UNIT V :Social Sustainability

9

With social sustainability is meant, for example, safety, health, community involvement, tax issues, and corruption. With environmental sustainability is meant, for example, global warming, pollution, local impact, biodiversity, energy use, water use, and waste. - Case Study

TOTAL: 45 HOURS

TEXT BOOK:

1. Ann Brockett ,Zabihollah RezaeeCorporate Sustainability : Integrating Performance And Reporting ; John Wiley & Sons Inc.
2. _Rogers, P.P., Jalal, K.F. and Boyd, J.A., An Introduction to Sustainable Development, Prentice-Hall of India Pvt. Ltd., New Delhi.

REFERENCE:

1. Mark W. McElroy and J.M.L. van Engelen Corporate Sustainability Management:The Art and Science of Managing Non-Financial Performance; Routledge, ISBN-13978-1844079117
2. Weaver, P., Jansen, L., Grootveld, G.V., Spiegel, E.V. and Vergragt, P., Sustainable Technology
3. Development, Greenleaf Publishing, Sheffield,
4. Grubler, A., Technology and Global Change, Cambridge University Press, Cambridge,.

MS35P5	FINAL INTERNSHIP PROJECT	L	T	P	C
		0	0	16	8

1. The student shall do a final project in business /corporate/ Government / private organizations during their final semester of MBA Degree Programme under a faculty guide, preferably in their area of specialization and a guide from the organization.
2. The qualification of guide is the same as that fixed for the summer placement project.
3. The duration of final project is eight weeks.
4. This project work is to be done individually by the students, no group project is allowed.
5. The student shall prepare and submit a project report, printed and bound (preferably spiral bound) with a minimum of 100 A4 pages of text (12 font size, 1.5 spacing, with top margin 1", bottom margin 1", left margin 1.25", right margin 1".) to the Head of the Department before the last working day of the final semester.
6. The student shall prepare at least four copies of the report; two copies for submission to the Department and one copy for the student which he/she has to bring with him/her at the time of viva voce, and one copy for the organization where he / she does the project.
7. The Head of the Department shall send the projects of all the students together (after internal evaluation) to the Controller of Examination on or before the stipulated date.
8. Projects received late shall be forwarded to the Controller of Examinations along with the student's request for late submission supported by prescribed fee for late submission as decided by the University.
9. However, such late submission shall be done within 10 days of after the last date fixed for submission of the final semester major project report.
10. All other regulations for MBA minor project are applicable to major project also.

Evaluation of Major Project Report

The major project report submitted by the students shall be evaluated in two stages – external and internal.

1. Internal assessment by the faculty guide is for a maximum of 40% of the total marks for the project.
2. External evaluation is for a maximum of 60% marks for the major project.
3. The criteria for internal evaluation are same as that of major project.
4. Head of the Department shall send all the project reports of final semester students to the Controller of Examinations after internal evaluation.
5. External evaluation is conducted by the viva-voce board.
6. Sum of the marks awarded, to each student in the Internal evaluation maximum (40%) marks and the external evaluation maximum (60%) marks, shall be the total marks.

Viva Voce

1. At the end of fourth semester, each student shall attend a comprehensive viva- voce examination.
2. The Viva Board shall have three members: the Chairman of Board of Examiners, one external and one internal.
3. The University shall appoint the external examiner.

4. The viva voce will cover all the courses of the four-semester program and major project report.
5. The student should get 50% marks in the viva voce for a pass in viva voce.

Structure of the report

Title page

Declaration the candidate

Certificate, in original, from the organization (for having done the project work and its satisfactory completion)

Certificate from faculty guide

Acknowledgements

Contents

Chapter I : Introduction (Organization profile, Research problem, scope of study, objectives of the study, Research methodology etc.)

Chapter II : Review of Literature

Chapters III and IV : Data organization and Analysis

Chapter V : Findings, Recommendations and Summary

Appendix (Questionnaire, specimen copies of forms, other exhibits etc.)

Bibliography (books, journal articles etc. used or referred for the project work).