Detailed Curriculum for Postgraduate Degree
Masters of Business Administration
(w.e.f. AY: 2025-26)

Part VI: Detailed Curriculum

Course Name:	**Marketing Management**		
Course Code:	MBA201	**Category:**	Management Science Course
Semester:	Second	**Credit:**	4
L-T-P:	4-0-0	**Pre-Requisites:**	Nil
Full Marks:	100		
Examination Scheme:	Semester Examination: 70	Continuous Assessment: 25	Attendance: 05

Course Objectives:	
1	To manage and implement the knowledge about the fundamental concepts of marketing and marketing environment
2	To emphasize on the different issues of strategic marketing along with segmenting, targeting and positioning
3	To elucidate different aspects of consumer behaviour, marketing research and branding
4	To manage and implement the knowledge of pricing, promotion, marketing channels and personal selling

Course Contents:

Module No.	Description of Topic	Contact Hrs.
1.	**Fundamentals of Marketing and Marketing Environment:** Definitions of marketing; Core Concept of Marketing – need, want, demand, offering and branding, value and satisfaction, Evolution of marketing concepts (orientations); Marketing Mix – 4Ps and 4Cs. Major components of Internal Environment, the microenvironment and macro-environment; SWOT Analysis, PESTEL/SLEPPT Analysis	6
2.	Strategic Marketing, Market Segmentation, Targeting and Positioning: Concept of SBU, Choice of Corporate Level Strategy, BCG Matrix, Product-Market Grid, Porter's Five Force Model for Industry Analysis, Concepts of market segmentation: Various bases for segmentation: Geographic, Demographic, Psychographic (VALS-II) and Behavioural; Targeting: Mass marketing, Segment Marketing,	7

	Niche Marketing, Micro Marketing and Customization; Concept of Differentiation and Positioning.	
3.	**Consumer Behaviour and Marketing Research:** A framework of consumer decision making process, overview of major factors influencing consumer behavior; marketing research: Role in decision making, Steps and process of Marketing Research, B2B Marketing.	4
4.	Product, Branding and Packaging: Product Classification, Service – characteristics and expanded service mix elements; Product Levels, Product Mix, Product Line Management, Product Life Cycle: concept and types, New Product Development, Purpose of branding; Brand equity; Branding strategies; Purpose of Packaging; Types of Packaging – primary, secondary, shipping packages.	8
5.	**Pricing, Personal Selling and Marketing Channels:** Procedure for price setting; Pricing objectives; Cost and Demand consideration; Pricing Methods, Pricing Strategies, Definition of Personal Selling, Steps of Personal Selling, Channel flows and functions; Channel design decisions; Wholesaling and Retailing, Concept of Supply Chain Management and Logistics Management, Channel Conflict Management	6
6.	Promotion: Elements of Promotion Mix (Advertising, Sales Promotion, Personal Selling, Direct Marketing, Publicity & PR), 5M model of Advertising, Concept of Digital Marketing; Overview of Selling Process	3
7.	**Basic concepts of market potential:** Sales potential/ Market Share and Sales forecast; Methods of Sales forecasting.	3
8.	**Some Contemporary Topics on Marketing:** Viral Marketing, Green Marketing, Social Media Marketing, Experiential Marketing, Ambush Marketing, Phygital Marketing and Experiential Marketing	3
Total		**40L**

Course Outcomes:	
After completion of the course, students will be able to:	
1	Understand and analyse the fundamental concepts of marketing, marketing environment, strategic marketing and market segmentation, testing and positioning
2	Understand and analyse different aspects of consumer behaviour, marketing research, product, branding and packaging

3	Understand and analyse issues pertaining to pricing, promotion, personal selling and marketing channels
4	Understand basic concepts of market potential and some contemporary issues of marketing

Learning Resources:	
1	Zikmund & Amico - Marketing; John Wiley & Sons
2	TMH Grewal, D. & Levy, M. - Marketing ; TMH
3	Kotler, P., Keller, K., Koshy, A. & Jha, M. - Marketing Management; Pearson
4	Ramaswamy & Namakumari - Marketing Management; McMillan
5	Saxena, R. - Marketing Management; TMH

Corresponding NPTEL/SWAYAM Courses:			
Sl. No.	**Course Name**	**Instructor Name**	**Host Institute**
1	Marketing Management - I	Prof. Jayanta Chatterjee, Prof. Shashi Shekhar Mishra	IIT, Kanpur
	Course Link: https://nptel.ac.in/courses/110104068		
2	Marketing Management - II	Prof. Jayanta Chatterjee, Prof. Shashi Shekhar Mishra	IIT, Kanpur
	Course Link: https://onlinecourses.nptel.ac.in/noc26_mg25/preview		

Course Name:	**Operations and Supply Chain Management**		
Course Code:	MBA202	**Category:**	Management Science Course
Semester:	Second	**Credit:**	4
L-T-P:	4-0-0	**Pre-Requisites:**	Nil
Full Marks:	100		
Examination Scheme:	Semester Examination: 70	Continuous Assessment: 25	Attendance: 05

Course Objectives:	
1	Understand the important role of supply chains in today's business and economy
2	Understand and apply conceptual decision-support to operations and supply chain related decision problems

3	Develop and cultivate students' interests in SCM and critical thinking, to bridge the gap between classroom learning and real world application
4	An understanding of the primary differences between and supply chain management
5.	An understanding of the individual processes of operations and supply chain management and their interrelationships within individual companies and a cross the supply chain

Course Contents:		
Module No.	**Description of Topic**	**Contact Hrs.**
1.	**Introduction to Production and Operations Management:** Functions of production management, relationship between production and other functions, types of production systems, product vs. services, product life cycle, production function, responsibilities of production manager. Production function and productivity. Productivity measurement: productivity indices; factors affecting productivity. Operations management objectives.	4
2.	**Forecasting:** Types of Forecasting Methods - moving average, exponential smoothing, Regression analysis, Delphi, Market survey, Factors affecting forecasting, Use of forecasting in different functional areas of management, Demand patterns and selection of forecasting techniques, forecasting errors.	6
3.	**Operations Management:** Operations scheduling, Jobshop, Batch shop and Service Systems. Management: Purchasing Procedure; Vendor Selection; Negotiation; Make or Buy decision, Inventory Management: Classification of inventory items– ABC, FSN, VED classification; Introduction to inventory models	6
4.	**Production Planning & Control:** Aggregate production planning strategies and methods, Master Production Schedule (MPS), Materials Requirement Planning (MRP) Concept, Product Structure and Bill of Material, Lot sizing in MRP Systems, Evolution from MRP to Manufacturing Resource Planning (MRP II), Concepts of ERP.	5
5.	**Plant Layout and Location:** Need for a good plant location; factors influencing plant location, tangible and intangible factors; economic survey of site selection. Plant Layout: Need for a good plant layout; characteristics of a good layout; costs associated with plant layout; process layout vs. product layout; optimization in a process layout and product layout; assembly line balancing-concept and problems;	6
6.	**Maintenance Management:** Types of Maintenance Break down and Preventive Maintenance; Total Productive Maintenance(TPM)	3

7.	**Work Study:** Definition and its Importance; Basic Procedure in Performing a Work Study; Meth od Study – Objectives and Procedure; Work Measurement–Objectives and Procedure; Concepts of Performance Rating, Basic Time, Allowances and Standard Time Supply Chain Basics and Matching Supply with Demand (e.g.,supply chain strategic alignment, designing supply chain networks, Managing multi-item inventory systems, managing currency risk).	6
8.	**Managing Decentralized Supply Chains**: Supply chain coordination and contracting, supplier management, procurement auction, strategic sourcing, offshoring, supply disruptions managing production across the supply chain.	4
Total		**40L**

Course Outcomes:	
After completion of the course, students will be able to:	
1	Gain knowledge about the professional opportunities in operations and supply chain management
2	Leverage the students research interests and expertise to introduce the most Recent advancement, and meet the evolving needs and challenges of today's supply chains

Learning Resources:	
1	Chary, S.N.–Production and Operations Management; TMH
2	Bedi, K.–Production and Operations Management; Oxford University Press
3	Essentials of Supply Chain Management, 4thEditionMichael H. Hugos, Wiley
4	ILO, Introduction to Work Study, Oxford and IBH Publishing,
5	Buffa, E.S. and Sarin, R.K. –Modern Production/Operations Management;
6	Panneerselvam, R. –Production and Operations Management, PHI

Corresponding NPTEL/SWAYAM Courses:			
Sl. No.	**Course Name**	**Instructor Name**	**Host Institute**
1	Operation Management	Prof. Inderdeep Singh	IIT, Roorkee
	Course Link: https://nptel.ac.in/courses/112107238		
2	Operation and Supply Chain Management	Prof G. Srinivasan	IIT, Madras
	Course Link: https://nptel.ac.in/courses/110106045		

Course Name:	**Human Resource Management**		
Course Code:	MBA203	**Category:**	Management Science Course
Semester:	Second	**Credit:**	4
L-T-P:	4-0-0	**Pre-Requisites:**	Nil
Full Marks:	100		
Examination Scheme:	Semester Examination: 70	Continuous Assessment: 25	Attendance: 05

Course Objectives:	
1	To enable the students to understand the HR Management and system at various levels in general and in certain specific industries or organizations.
2	To help the students focus on and analyse the issues and strategies required to select and develop manpower resources.
3	To develop relevant skills necessary for application in HR related issues.
4	To Enable the students to integrate the understanding of various HR concepts along with the domain concept in order to take correct business decisions

Course Contents:

Module No.	Description of Topic	Contact Hrs.
1.	**Introduction to Human Resource Management:** Meaning, Function, Significance & Challenges of HRM, Nature of HRM, Importance of Human Resource Management. Historical Perspective & Evolution of Human Resource Management in India. Structure & Function of HR Manager, Role of Line Managers in Managing Human Resources. Difference Between Line Function and Staff Function.	4
2.	**Human Resource Planning:** Introduction to HRP, Various Methods of HRP Forecasting, Need for HR Planning, Assessment of Available HR in the Organization, Work Load Analysis, Job Analysis: Concept, Uses, Job Description, Job Specification **Recruitment and Selection:** Process, Sources, Methods of Selection, Interviewing Methods.	8
3.	**Training & Developing Workforce:** Concept, need, method, importance & evaluation of training & development; Training Need Assessment (TNA), Training Process; Designing, Implementation and Evaluation of Training Programmes, **Induction:** Concept, necessity, and methods of induction training	**7**

4.	**Performance Appraisal Systems:** Meaning, Purpose, Methods, Errors in appraisal, Potential Appraisal, Appraisal Interview. **Compensation Management:** Principal compensation issue, job evaluation, pay-structure, individual & group incentives.	7
5.	**Social Security and Labour Welfare:** Concept of Social Security, Workers Participation in Management Significance and various social security legislations in India; . Case Lets and Class Activities (Applying HRM Techniques).	4
6.	**International Human Resource Management:** Introduction and Approaches to international HRM, Expatriate Management: Training, Appraising and Planning,	4
7.	**Organizational Development:** Concept, nature, and scope of OD, its historical perspective, underlying assumptions and values, the nature of planned change, group dynamics, and organizational systems	4
8.	**Strategic Human Resource Management (SHRM)** Meaning, Strategic HRM vs Traditional HRM, SHRM Process, barriers to SHRM. Nature of e-HRM, e-Recruitment& Selection, e-Performance Management, e-Learning; Modern HRM Systems and HRMS Tools	2
Total		**40L**

Course Outcomes:	
After completion of the course, students will be able to:	
1	To develop the understanding of the concept of human resource management and to understand its relevance in organizations.
2	To develop necessary skill set for application of various HR issues.
3	To analyze the strategic issues and strategies required to select and develop manpower resources.
4	To integrate the knowledge of HR concepts to take correct business decisions.

Learning Resources:	
1	George W Bohlander and\ Scott A Snell (2013), "Principles of Human Resource Management". Fifteenth Edition"; Thomson Publications.
2	V S P Rao, "Human Resource Management",(2010),ExcelBooks,3rdEdition
3	KAswathappa,"HumanResourceandPersonalManagement"(2017)TataMcGrawHill, 8th Edition

4	StephenP.Robbins,"HumanResourceManagement",(2002),PearsonEducationAsia.
5	Sarah Gilmore and Steve Williams(2014). "Human Resource Management" .Oxford University Press.
6	Tayeb, M.(2005).International human resource management. Oxford University Press.
7	Agarwala T.-Strategic Human Resource Management,
8	Jyothi P.& Venkatesh, D.N. –Human Resource Management, OUP
9	Ramaswamy, E.A.-Managing Human Resources, OUP
10	Saiyadain, M.S-Human Resource Management: Tata McGraw Hill
11	Mondal Sabari & Goswami Amal- Human Resource Management: Vrinda Publications

Corresponding NPTEL/SWAYAM Courses:			
Sl. No.	**Course Name**	**Instructor Name**	**Host Institute**
1	Legal Essentials For Human Resource Management	Prof. Ameesh Samalopanan	Nalsar University of Law
	Course Link: https://onlinecourses.nptel.ac.in/noc26_lw03/preview		
2	Organizational Behaviour - II	Prof. Susmita Mukhopadhyay, Prof. Sangeeta Sahney, Prof. S. Srinivasan	IIT Kharagpur
	Course Link: https://nptel.ac.in/courses/110105154		

Course Name:	**Business Research Methods**		
Course Code:	MBA 204	**Category:**	Management Science Course
Semester:	Second	**Credit:**	2
L-T-P:	2-0-0	**Pre-Requisites:**	High school mathematics
Full Marks:	100		
Examination Scheme:	Semester Examination: 70	Continuous Assessment: 25	Attendance: 05

Course Objectives:	
1	Conceptualize business problems in statistical terms
2	Enhance the understanding and application of fact and evidence based decision making process
3	Learn the application of advanced statistical techniques
4	Appreciate the use of statistical thinking

5	Have a basic awareness of data analysis, including descriptive & inferential measures

Course Contents:		
Module No.	**Description of Topic**	**Contact Hrs.**
1.	**Introduction to Research :** Business & Management Research – Research Characteristics – Research Approaches – Types of Research- Significance –Research process–characteristics of good research–Types of Research– Problems in research–identifying research Problem-Theoretical-Framework/'Literature Survey-Exploratory Descriptive Studies – Cross Sectional & longitudinal studies.	4
2.	**Research Design And Measurement:** Research design – Definition–types of research design– Exploratory, Descriptive, Causal and Formulation of hypothesis –different types of experimental design-.Scaling techniques meaning, types of scales– Hypothesis testing Statistical significance, statistical test procedure. Multivariate techniques like PCA, Factor Analysis.	4
3.	**Sampling And Data Collection:** Sampling Techniques – Probability and Non–probability sampling methods- Data Collection – Types of data –Primary and Secondary data –Methods of primary data collection–Observation, Interview, Questionnaire and Schedule– Construction of questionnaire –pilot study–case study.	4
4.	**Data Preparation:** Editing – Coding –Data entry-Test of significance – Assumptions about Parametric and nonparametric tests. Parametric tests -Introduction ANOVA-Application of Statistical software for data analysis.	4
5.	**Report Design and Writing:** Introduction - Research Report - Research Proposal – Different types – Contents of report – Important Parts – Title, Table of Contents – Synopsis, bibliography – Introductory Section–Research Design –Result Section – Recommendation & Implementation Section.	4
Total		**20L**

Course Outcomes:	
After completion of the course, students will be able to:	
1	Take up business decisions in terms of statistical terms
2	Enhance their understanding in decision making process
3	Able to use statistical techniques in advanced mode
4	Use Statistical thinking in taking effective decision

5	Be able to write & develop independent thinking for critically analyzing research reports.

Learning Resources:	
1	Kothari, C.R., Research Methodology", Methods and Techniques, New Age International, 6thEdition, 2010.
2	Gupta, SL & Gupta, H (2012), Business Research Methods, TMHE Pvt. Ltd, ISBN: 978-1-25-900503-9.
3	Gupta and Kapoor (2014), Fundamentals of Applied Statistics, Sultan Chand &Sons, ISBN:978-8180547058.
4	Krishnaswamy, KN, SivaKumar, AI and Mathirajan, M(2011), Research Methodology, Pears on,ISBN:978-81-7758-563-6.
5	Gupta and Kapoor, (2002), Fundamentals of Mathematical Statistics, Sultan Chand & Sons, I SBN:81-7014-791-3.
6	Chawala, Deepak & Sondhi, Neena (2016), Research Methodology- Concept & Cases, Vikas Publication, ISBN:978-93259-8239-0.
7	Easwaran, S & Singh, SJ. (2010), Marketing Research, OXFORD UniversityPress, ISBN:978-0-19-567696-9.

Corresponding NPTEL/SWAYAM Courses:			
Sl. No.	**Course Name**	**Instructor Name**	**Host Institute**
1	Research Methodology	Prof. Edamana Prasad and Prof. Prathap Haridoss	IIT Madras
	Course Link: https://nptel.ac.in/courses/121106007		
2	Research Methodology in Humanities and Social Sciences	Prof. Smita Jha	IIT Roorkee
	Course Link: https://nptel.ac.in/courses/109107741		

Course Name:	**Financial and Cost Management**		
Course Code:	MBA 205	**Category:**	Management Science Course
Semester:	Second	**Credit:**	4
L-T-P:	4-0-0	**Pre-Requisites:**	Basic concept of Managerial Finance
Full Marks:	100		
Examination Scheme:	Semester Examination: 70	Continuous Assessment: 25	Attendance: 05

Course Objectives:	
1	To understand the concepts of Financial Management and its application for managerial decision making.
2	To provide an in depth study of the Generally Accepted Cost Accounting Principles and Techniques.
3	To analyze, identify and classify the cost components to facilitate managerial decision making.
4	To make proper investment decisions.

Course Contents:		
Module No.	**Description of Topic**	**Contact Hrs.**
1.	**Overview of Financial Management:** Financial Management – meaning, objectives, scope, related finance disciplines, planning environment, key-decision areas • Sources of Finance (Shares, Debentures, Debt, Public Deposits, Lease Financing, etc.); criteria for selecting sources of finance including finance for International Investments and Venture Capital Funds • Financial Decision Making – Emerging role of finance managers • Contemporary developments –SEBI Regulations, GST and Income Tax	6
2.	**Tools for Financial Analysis & Planning:** • Identification of information required to assess financial performance, Effect of short-term debt on the measurement of gearing • Comparative and Common size Statements	5
3.	**Working Capital Management and Leverage Analysis:** • Working Capital policies related to Inventory, Receivables, Payables, Cash and Marketable securities • Financing of working capital • Concepts and nature of Leverages, Analysis of Operating and Financial Leverages, Operating Risk and Financial Risk and Combined Leverages • Operating leverages and Cost-Volume-Profit (CVP) analysis, Earning Before Interest and Tax (EBIT), Earning Per Share (EPS), Indifference point, Marginal Costing and Break-even Analysis	5
4.	**Cost of Capital:** Meaning, components, methods of determination of cost of capital related to debt, preference shares, equity shares, retained earnings, depreciation fund Capital Asset Pricing Models (CAPM) Weighted Average Cost of Capital and Marginal Cost of Capital	5
5.	**Capital Budgeting:** • Purpose, objective, process Techniques of decision making: non-discounted and discounted cash flow approaches – payback period	6

	method, accounting rate of return, net present value, internal rate of return, and profitability index. • MIRR, Adjusted NPV, Benefit-cost ratio • Ranking of competing projects, ranking of projects with unequal lives.	
6.	**General Purpose Cost Statement:** • Generally Accepted Cost Accounting Principles (GACAP) – Purpose, Objective and Applicability; Standard Costing and Variance Analysis; Budget-Fixed, Flexible and Master Budget; Budgetory Control	7
7.	**Business Process Analysis:** • Cost Centre and Cost Allocation • ABC Control • Scrap, wastage, pilferage, obsolescence, normal loss, abnormal loss • Direct expenses and problems connected therewith • Overhead - Classification of overheads; Overhead Cost Accounting, Accounting and control of overheads, computation of pre-determined overhead recovery rates, treatment of over and under absorption of overhead costs. Reports of control of overhead costs, Miscellaneous items of expenses – capacity costs, treatment of depreciation in costs • Unit Costing, Job Costing, Batch Costing and Cost Audit	6
Total		**40L**

Course Outcomes:	
After completion of the course, students will be able to:	
1	Identify and apply the concepts of Financial Management.
2	Explain the basic concepts and processes in determination of products and services cost.
3	Understand and explain the conceptual framework of Cost & Management Accounting.
4	Analyse and understand major interest valuation models.

Learning Resources:	
1	Management Accounting- Khan & Jain .
2	Cost Accounting and Financial Management- M.N. Arora, Vikash Publication.
3	Cost Accounting – Charles T Homgren, Foster and Datar, Pearson Education Asia.
4	Financial Management: Theory & Practice 15th Edition —by— EugeneF. Brigham and Michael C. Ehrhardt.
5	Financial Management: M.R.Agarwal.
6	Financial Management-Theory and Practice-10th Edition- Prasanna Chandra
7	Cost Accounting: Text and Problems-M.P.Gupta.

Corresponding NPTEL/SWAYAM Courses:			
Sl. No.	**Course Name**	**Instructor Name**	**Host Institute**
1	Financial Management for Managers	Prof. Anil Kumar Sharma	IIT Roorkee
	Course Link: https://nptel.ac.in/courses/110107144		

Course Name:	**Business Analytics and Information System**		
Course Code:	MBA206	**Category:**	Computer Science and Engineering Course
Semester:	Second	**Credit:**	3
L-T-P:	3-0-0	**Pre-Requisites:**	Basic concept of computer
Full Marks:	100		
Examination Scheme:	Semester Examination: 70	Continuous Assessment: 25	Attendance: 05

Course Objectives:	
1	To facilitate students with the basic concept of a Business Analytics
2	To develop the ability to apply knowledge of Analytics for solution of Business problems.
3	To provide the knowledge of contemporary issues related to the field of managing information systems, develop knowledge and skills required to work effectively in a professional manner
4	To facilitate understanding of Cloud Computing concepts, infrastructures and capabilities for cost effective Business System deployment.

Course Contents:		
Module No.	**Description of Topic**	**Contact Hrs.**
1	**Business Analytics:** Introduction to Business Analytics (BA) – Need, Components (Business Context, Technology, Data Science), Types (Descriptive, Predictive and Prescriptive), Business Intelligence versus Business Analytics, Transaction Processing v/s Analytic Processing OLTP v/s OLAP. OLAP Operations, Data models for OLTP (ER model) and OLAP (Star & Snowflake Schema)	4

2	**Types of Digital Data:** Definition, Sources, Storage and Characteristics of Structured, Unstructured and Semi Structured, Data Data Warehouse: Definition, characteristics, framework, Data lake, Definition, concepts Different types of charts and graphs with Python/R/Tableau, Emergence of data visualization and visual analytics, Data Mining: Concepts and applications, Data mining process & KDD, Web mining overview, Anatomy of Social media analytics	6
3	**Understanding Management Information Systems (MIS):** Introduction to Management Information Systems, History of MIS, Implementing MIS, ERP and Enterprise System Application. Preliminary idea of different diagrams like Use Case Diagram, ER Diagram, Class Diagram, and Activity Diagram should be clear. Introduction to Object Oriented concepts should be made clear with Object Oriented Programming like Java.	10
4	**Organization and Computer Networks:** Basics of computer systems, Basic Network Terminologies, Definitions and Application, The Intranet and the Extranet, Basic Internet Architecture, Database Management System, Types of Database Users, DBMS, Designing of DBMS to support, Operations and decisions. Conversant with creation of tables and attribute features.	4
5	**Cloud Computing:** Cloud Computing Fundamentals, Cloud Computing Architectures, Models of Cloud Computing, Cloud Types and Services, Virtualization and Resource Management, Application of Cloud: Application of Cloud for different business with use cases. Introduction to AWS/Azure/Google Cloud at the preliminary level.	6
Total		**30L**

Course Outcomes:	
After completion of the course, students will be able to:	
1	Understand the role of Business analytics in Management Systems
2	Understand the role of data analytics in different domains, i.e. Healthcare, Finance, HR etc.
3	Develop domain knowledge of various technology and its application to facilitates managerial decision /MIS
4.	Enhance capabilities for innovative use of I.T with Enterprise systems
5	Identify the possibilities of implementation of Cloud in different business problems in cost effective way

Corresponding NPTEL/SWAYAM Courses:			
Sl. No.	**Course Name**	**Instructor Name**	**Host Institute**
1	Business Analytics for Management Decision	Prof. Rudra P. pradhan	IIT Kharagpur
	Course Link: https://nptel.ac.in/courses/110105089		
2	Business Analytics and Text Mining Modelling Using Python	Prof. Gaurav Dixit	IIT Roorkee
	Course Link: https://nptel.ac.in/courses/110107129		

Course Name:	**Operations Research**		
Course Code:	MBA 207	**Category:**	Basic Science Courses
Semester:	Second	**Credit:**	04
L-T-P:	4-0-0	**Pre-Requisites:**	Elementary Mathematics, MBA105
Full Marks:	100		
Examination Scheme:	Semester Examination:70	Continuous Assessment:25	Attendance: 05

Course Objectives:	
1	To impart knowledge of LPP
2	To focus on more practical than theoretical.
3	To Learn application in Business decision process and Management.
4	To do proper analysis in forms the judgment of the ultimate decision-maker

Course Contents:		
Module No.	**Description of Topic**	**Contact Hrs.**
1	**Linear Programming:** Introduction to Operations Research, Formulating maximization/minimization problems, Graphical solution, Simplex method, Artificial Variables – Big M – Method, Special cases of LP Duality of LP and its interpretation, Sensitivity Analysis, Applications of LP.	**7**
2	**Transportation Problems:** ➢ Mathematical formulation of transportation problem ➢ North West Corner Method ➢ Vogel's Approximation method ➢ MODI method-loops in transportation table –Degeneracy	**7**

3	**Assignment Problems:** ➢ Mathematical statement of the problem-Hungarian method of solution - Maximization case in assignment problem—unbalanced assignment problem-restrictions on assignment ➢ Travelling sales man problem	**6**
4	**Networking:** ➢ CPM/PERT analysis ➢ Dijkstra's Algorithm ➢ Floyd's Algorithm	**7**
5	**Theory of Games:** ➢ Two person zero sum games ➢ Purestrategies-gameswithsaddlepoints-rulestodeterminesaddlepoints ➢ Mixed strategies - Game without saddle points - the rules of dominance- Methods of solution for games without saddle points ➢ Algebraic methods, graphical methods	**7**
6	**Queuing Theory:** Introduction; Basic Definitions and Notations; Axiomatic Derivation of the Arrival & Departure (Poisson Queue). Pure Birth and Death Models; Poisson Queue Models: M/M/1: ∞/FIFO and M/M/1: N/ FIFO.	6
Total		**40L**

Course Outcomes:	
After completion of the course, students will be able to:	
1	Facilitate Objective Solutions in Business Decision Making
2	Be able to build and solve Transportation Models and Assignment Models
3	Be able to design new simple models, like: CPM,MSPT to improve decision–making
4	Draw Conclusions over pay-off matrix with the concepts of Game Theory
5	Acquire skills in analyzing queueing models

Learning Resources:	
1	Hamdy A. Taha, "Operations Research: An Introduction", 10thEdition,Pearson, 2017
2	Panneerselvam R.,"Production & operations management",Prentice Hall India private limited, 2012
3	Mahapatra.,"OperationsManagement",PrenticeHallIndiaprivatelimited,2010

Corresponding NPTEL/SWAYAM Courses:			
Sl. No.	**Course Name**	**Instructor Name**	**Host Institute**
1	Introduction to Operations Research	Prof. G. Srinivasan	IIT Madras
	Course Link: https://nptel.ac.in/courses/110106062		
2	Operations Research	Prof. Kusum Deep	IIT Roorkee
	Course Link: https://onlinecourses.nptel.ac.in/noc22_ma48/preview		

Course Name:	**Personality Development Lab**		
Course Code:	MBA291	**Category:**	Humanities Course
Semester:	Second	**Credit:**	2
L-T-P:	0-0-4	**Pre-Requisites:**	Students must have basic knowledge of English language
Full Marks:	100		
Examination Scheme:	Semester Examination: 60	Continuous Assessment: 35	Attendance: 05

Course Objectives:	
1	To develop a positive Personality which is more at tuned to Corporate Life
2	Develop Employability quotient

Course Contents:		
Module No.	**Description of Topic**	**Contact Hrs.**
1.	**Introduction To Personality Development:** The concept of PERSONALITY significance of personality development. The concept of SUCCESS and FAILURE - What is success? - Hurdles in achieving success –Over coming hurdles –Factors responsible for success –What is failure –Causes of failure. ATTITUDE - Concept - Significance - Factors affecting attitudes - Positive attitude and its Advantages – Negative attitude and its Disadvantages-Ways to develop positive attitude – Differences	4

	between people / personalities with positive and negative attitude. Concept of motivation and Significance. SELF-ESTEEM-Esteem, Self-esteem–Significance and importance. INTERPERSONAL RELATIONSHIPS - Interpersonal Relationships – Defining the difference between aggressive, submissive and assertive behaviours -Lateral thinking	
2.	**Non-verbal Communication:** Personality Grooming, Executive Corporate Attire, Good manners and etiquettes, Work Place Etiquettes, Body Language, Building Self Confidence, Positive Attitude, Self-Motivation, Creative Thinking.	2
3.	**Honing Listening Skills:** And its sub skills through Language Lab Audio device	2
4.	**Honing Speaking Skills and its sub skills:** Pronunciation, Phonetics, Voice modulation, Stress, Intonation, Pitch and Accent of connected speech- Developing Speaking habits, Story narrations, Verb Patterns, Time management, Public speaking – significance	4
5.	**Honing Conversational Skills using Language Lab Audio**: Visual input- Conversational Practice Sessions (Debate / Role Play / Reporting), Listening and Feedback	4
6.	**Introducing Group Discussion through audio**: Visual input and acquainting them with key strategies for success. Group etiquettes, GD Practice Sessions to understand the basic Principles (turn-taking, Creative intervention, courtesies & other soft skills) of GD.	4
7.	**Honing Reading Skills and its Sub skills:** Reading Skills for Effective Business Communication: Introduction-What is reading- Types of reading, SQ3R Technique of Reading	2
8.	**Mind Maps**: Visualization of thought – radial vs. sequential way of visualization – mind map as a tool for organizing thought and improving clarity-hierarchy in mind maps – software tools for mind maps viz. Free Mind, Mind Meister, X Mind, Mind Jet, MS Visio, Lucid Chart etc.	2
9.	**Presentation Skills**: Planning, Preparation, Using Visual tools (e.g.MS - Powerpoint) and Delivery	4
10.	**Negotiations Skills:** What is negotiation? – Nature and need for negotiation–factors affecting negotiation – stages of negotiation process negotiation strategies.	1
11.	**Meetings:** Planning meetings – objectives – participants – timing –Venue of meetings – minutes of meeting-leading meetings.	1
12.	**Communication:** Face to face communication – telephonic conversation. Media management – the press release- press conference – Media interviews Seminars – workshop– conferences.	2

13.	**Mock Interview sessions**	4
14.	**Conflict and Stress Management:** Decision-making skills -Qualities of a successful leader - Character-building -Team-work - Time management -Work ethics, Psychometric Analysis	4
Total		**40P**

Course Outcomes:	
After completion of the course, students will be able to:	
1	Develop and exhibit a positive personality and nurture a deep understanding of personal motivation
2	Develop an understanding of and practice personal and professional responsibility
3	Acquire the skills to manage stress and conflict.
4	Demonstrate strong verbal and non- verbal communication skills and become employable

Learning Resources:	
1	How to Win Friends and Influence People. Dale Carnegie
2	Communication Skills. Sanjay Kumar and Pushp Lata. OxfordUniversityPress.2011
3	Exercises in Spoken English. Parts. I -III. CIEFL, Hyderabad. Oxford University Press
4	Lateral Thinking –Creativity Step by Step. Edward de Bono
5	Mind Map Mastery: The Complete Guide to Learning and Using the Most Powerful Thinking Tool in the Universe. Tony Buzan.
6	Kulbhushan Kumar, R S Salaria, Effective Communication Skills, Khanna Publishing House, Delhi.
7	Failing Forward: Turning Mistakes into Stepping Stones for Success, John C Maxwell
8	Gajendra Singh Chauhan, Smita Kashiramka and L.Thimmesha.Functional English.Cengage, 2019
9	Getting things Done-The Art of Stress- free productivity by David Allen
10	Soft Skills: Key to success in Workplace and Life, Meenakshi Ramanand Shalini Upadhyay
11	50 Mantra's of Personality Development, Arti Gurav.
12	Six Thinking Hats. Edward de Bono
13	The 10X Rule: The Only Difference between Success and Failure. Grant Cardone
14	Make The Most of Your Mind. Tony Buzan.

Course Name:	**BRM Project (Lab)**		
Course Code:	MBA 292	**Category:**	Management Science Course
Semester:	Second	**Credit:**	2
L-T-P:	0-0-4	**Pre-Requisites:**	Theoretical knowledge of business research methods
Full Marks:	100		
Examination Scheme:	Semester Examination: 60	Continuous Assessment:35	Attendance: 05

Course Objectives:	
1.	To enable students to apply the computer-based research tools
2.	To enable students to handle data, analyse, and interpret
3.	To develop skills in questionnaire design and report writing
4.	To enable students to apply statistical software packages for decision making

Course Contents:

Module No.	**Description of Topic**	**Contact Hrs.**
1.	Identification of Research Problem through the exploration of research repositories using bibliometric networking software.	2
2.	Literature Review through the exploration of research repositories using bibliometric networking software and by manual process.	4
3.	Citation and referencing using reference managers.	2
4.	Development of the Conceptual Framework using the generative artificial intelligence (AI) chatbot.	2
5.	i. Questionnaire Design & Online Data Collection ii. Pilot testing of the questionnaire	4
6.	i. Exporting data from spreadsheet to data analysis software ii. Data coding, entry, and cleaning iii. Coding qualitative and quantitative data iv. Handling missing data v. Data validation and transformation vi. Data tabulation and frequency distribution	8
7.	Descriptive Statistical Analysis: i. Measures of central tendency: ii. Mean, Median, Mode iii. Measures of dispersion: iv. Range, Variance, Standard Deviation v. Cross-tabulation vi. Graphical presentation (Bar chart, Pie chart, Histogram, Line graph)	4

8.	Inferential Statistical Analysis: i. Hypothesis formulation ii. Testing of hypotheses using following data analysis tools (whichever is/are applicable for the business research project): a) Chi-square test b) t-test (one-sample, independent sample, paired sample) c) ANOVA d) Correlation analysis e) Simple regression analysis	10
9.	Research Report Writing: a) Interpretation of statistical output b) Writing findings and conclusions c) Formatting research reports d) Preparation of tables, charts, references, and appendices e) Research presentation	4
Total		**40P**

Course Outcomes:	
After completion of the course, students will be able to:	
1.	Use software for exploratory research
2.	Enter, clean, and manage research data using software
3.	Carry out descriptive and inferential statistical analysis using relevant software
4.	Interpret output and present research findings effectively

Learning Resources:	
1.	Kothari, C.R., Research Methodology", Methods and Techniques, New Age International,
2.	Chawala, Deepak & Sondhi, Neena (2016), Research Methodology- Concept & Cases, Vikas Publication
3.	Panneerselvam, R., "Research Methodology", Prentice- Hall of India, NewDelhi

Corresponding NPTEL/SWAYAM Courses:

Sl. No.	Course Name	Instructor Name	Host Institute
1	Research Methodology	Prof. Edamana Prasad and Prof. Prathap Haridoss	IIT Madras
	Course Link: https://nptel.ac.in/courses/121106007		
2	Research Methodology in Humanities	Prof. Smita Jha	IIT Roorkee

	and Social Sciences		
	Course Link: https://nptel.ac.in/courses/109107741		

Course Name:	**Business Analytics and Information Systems(Introduction to Python Lab)**		
Course Code:	MBA-296	**Category:**	Computer Science and Engineering Course
Semester:	Second	**Credit:**	1
L-T-P:	0-0-2	**Pre-Requisites:**	Basic knowledge of Computers
Full Marks:	100		
Examination Scheme:	Semester Examination: 60	Continuous Assessment: 35	Attendance: 05

Course Objectives:	
1	Master the fundamentals of writing Python scripts Learn core Python scripting elements such as variables and flow control structures
2	Use Python to read and write files make their code robust by handling errors and exceptions properly
3	Explore Python's object-oriented features search text using regular expressions

Course Contents:		
Module No.	**Description of Topic/ Experiment**	**Contact Hrs.**
1.	Introduction, History, Features, setting up path, Working with Python, Basic Syntax, Variable and Data Types, Operator	1
2.	Conditional Statements If, If- else, Nested if-else, Looping, For, While, Nested loops	1

3.	Control Statements Break, Continue, Pass String Manipulation Accessing Strings, Basic Operations, String slices, Function and Methods	2
4.	Lists Introduction, accessing list, Operations, Working with lists, Function and Methods Tuple Introduction, Accessing tuples, Operations, Working, Functions and Methods Dictionaries Introduction, accessing values in dictionaries, Working with dictionaries, Properties	4
5.	Functions Defining a function, Calling a function, Types of functions, Function Arguments, Anonymous functions, Global and local variables Modules Importing module, Math module, Implementation of Array using NumPy module, Random module, Packages, Composition, Input-Output	6
6.	Exception Handling Exception, Exception Handling, except clause, Try- finally clause, User Defined Exceptions	4
7.	The Object-Oriented Approach: Classes, Methods, Objects Basic concepts of object programming, Implementation of Properties of Object-oriented Programming, Inheritance.	2
Total		**20P**

Course Outcomes:	
After completion of the course, students will be able to:	
1	Solve basic problems by using fundamentals of Python Programming like variable, data types, operators
2	Implement the conditional statements, iterative statements, and functions
3	Implement the modules, packages, exception-handling techniques
4.	Illustrate lists, tuples, set, string, and dictionaries of Python

Learning Resources:	
1	“Core Python Programming” by Nageswara Rao
2	“Python: the complete reference” by Martin C. Brown
3	“Let us Python” by Yashvant Kanetkar
4	“Programming and Problem Solving with Python” by Ashok Namdev Kamthane and Amit Ashok Kamthane- McGraw Hill Publication

Corresponding NPTEL/SWAYAM Courses:			
Sl. No.	**Course Name**	**Instructor Name**	**Host Institute**
1	Business Analytics for Management Decision	Prof. Rudra P. pradhan	IIT Kharagpur
	Course Link: https://nptel.ac.in/courses/110105089		
2	Business Analytics and Text Mining Modelling Using Python	Prof. Gaurav Dixit	IIT Roorkee
	Course Link: https://nptel.ac.in/courses/110107129		