

RTU

MBA Syllabus

RajasthanTechnicalUniversity, Kota

FOURTH SEMESTER MBA

TEACHING SCHEME & SYLLABUS

FOURTH SEMESTER MBA TEACHING SCHEME

S. No.	Course Type	Paper Code	Paper Title	No of Sessions		Credits	Internal / Minimum Marks	External/ Minimum Marks	Total
				Per Semester	Per Week				
			Theory Courses : Dual Specialization is proposed: Six Subjects (Three from each group) The student will get specialized in two Majors.						
1	PEC1			24	2	3	30/12	70/28	100
2	PEC2			24	2	3	30/12	70/28	100
3	PEC3			24	2	3	30/12	70/28	100
4	PEC4			24	2	3	30/12	70/28	100
5	PEC5			24	2	3	30/12	70/28	100
6	PEC6			24	2	3	30/12	70/28	100
7	MCC		Audit Course	12	1	0	30	70	100*
8	PEC	M-417	Major Lab (Functional Area I)	24	2	1.5	60/30	40/20	100
9	PEC	M-418	Major Lab (Functional Area II)	24	2	1.5	60/30	40/20	100
10	REW	M-419	Project Work	48	4	3			100
11	SODECA		Social Outreach, Discipline & Extra Curriculum Activities	-				100/40	100
			Total for IV Semester	252	21	24	330	670	1000

*Note: Marks of audit course will not be considered for credit purpose

List of Functional Areas for MBA (Fourth Semester)

Group A [FINANCE]		
S.No.	Subject Code	Subject Title
Semester IV		
1	M-410	Financial Derivatives
2	M-411	Financial System, Institutions and Instruments
3	M-412	Mergers, Acquisitions and Corporate Restructuring
4	M-413	Behavioural Finance
Group B [MARKETING]		
S.No.	Subject Code	Subject Title
Semester IV		
1	M-420	Consumer Behavior
2	M-421	Services Marketing
3	M-422	International Marketing Management
4	M-423	Rural Marketing
5	M-424	Digital and Social Media Marketing
6	M-425	Customer Relationship Management
Group C [HUMAN RESOURCE MANAGEMENT]		
S.No.	Subject Code	Subject Title
Semester IV – Electives		
1	M-430	Employee Relations & Labour Laws
2	M-431	Performance Management System
3	M-432	Cross Cultural Human Resource Management
4	M-433	Human Resource Analytics
Group D [OPERATIONS & SUPPLY CHAIN MANAGEMENT]		
IVSemester		
1	M-440	Supply Chain and Logistics Management
2	M-441	Project Management
3	M-442	Service Operations Management
5	M-443	Technology Management
Group E [INFORMATION TECHNOLOGY MANAGEMENT]		
S.No.	Subject Code	Subject Title
IVSemester		
1	M- 450	Software Project Management
2	M- 451	Managing Digital Innovation and Transformation
3	M- 452	Artificial Intelligence for Managers
4	M- 453	Emerging Technologies in Data Base Management

Group F [BUSINESS ANALYTICS]		
S. No.	Subject Code	Subject Title
IV Semester		
1	M- 460	Data Mining for Business Decisions
2	M- 461	Data Visualization for Managers
3	M- 462	Business Forecasting
4	M- 463	Functional Analytics

M-417 Major Lab (Functional Area I)

M-418 Major Lab (Functional Area II)

(The guidelines for the Major Lab Functional Area I & Functional Area II are common for III & IV Semester)

Finance (Group A)

Course Objectives:	1. To understandthefinancialindustrymilieu. 2. To gain practical exposure to understand intricacies of the financial sector.
Learning Outcomes:	1. Studentswillbeabletousefinancesoftware for day to daytradingandotherfinancialapplications. 2. Studentswillbeabletocomprehendand provide solution tothefinancialaspectsofacompany. 3. Studentswillhaveknowledgeaboutfund raising from differentsourcesandtheywillbe able to analyze whetherM&Aforacompanywillbe useful.

S.No.	Component		Assessment Criteria
1.	Practical Component/ Field Based Assignments		Manual and Presentation
	M -410 FINANCIAL DERIVATIVES		
	Title/Activity	1. Conduct a study on Algorithmic Trading (AT) by gathering data from individuals/ trading firms using it. Prepare a feasibility report as to what extent the AT is useful in earning profits. Study and document different software available on AT and AT trading strategies. 2. Conduct a study of a broking firm engaged in derivatives trading. Analyse the trading of derivative instruments in these firms. Also study trading strategies adopted by these firms.	
	M-411 FINANCIAL SYSTEM, INSTITUTIONS AND INSTRUMENTS		
	Title/Activity	1. Analyse and prepare a report on the monetary policy measures adopted by the RBI keeping in view the money market for past two years. 2. Prepare a report on the financial instruments used by	

		the Indian Corporate sector for both short term and long-term fund raising. Highlight the most popular financial instruments used by the Indian companies.	
	M-412 MERGERS, ACQUISITIONS AND CORPORATE RESTRUCTURING		
	Title/Activity	1. Identify and analyze a case of Merger/Substantial Acquisition involving at least one Indian company. Evaluate pre-merger and post-merger on below mentioned criteria: a) Share Market price momentum and reactions b) Position of Financial statements in terms of the consolidated values of the companies c) Impact on EPS of the companies d) Employee Base and Senior Management Restructuring e) Product Portfolio/Service Portfolio offered f) Competitive Landscape for the companies Involved g) Extent of Market/ Geographical Presence 2. Analyse the facts of any one recent case in which a company has acquired a competitive start up. Analysis has to be done in terms of, objectives, financing mechanism, valuation method used, capital restructuring, expected outcome and actual post-merger outcome.	
	M-413 BEHAVIOURAL FINANCE		
	Title/Activity	1. Conduct a survey of 50 respondents dealing in equity trading to study biasness in buying and selling decisions of shares. 2. Study and document a report on market bubble events and the pre and post market bubble reaction of investors dealing in equity.	

2.	Hands on Practice on any one Marketing Software	1.Eka's derivative trading software. 2.Derivagem. 3.Mint. 4. DealRoom. 5.Resolution Software for Derivatives.	Manual (IT Based)
3.	Book Reviews	1. Palak Shah(2020)The Market Mafia: Chronicle of India's High-Tech Stock Market Scandal & The Cabal That Went Scot-Free, Notion Press 2. Alice Schroeder (2009),The Snowball: Warren Buffett and the Business of Life, Bantam 3. Don Tapscott, (2018), Blockchain Revolution: How the Technology Behind Bitcoin and Other Cryptocurrencies is Changing the World, Penguin	Presentation

Books Recommended

1. Donald De Pamphilis, Merger Acquisitions and Other Restructuring Activities, Elsevier India , 9th
2. M.Y. Khan, Indian Financial System, Tata McGraw Hill Education, 9th Edition, 2015.
3. Rajiv Srivastava Derivatives & Risk Management, Oxford University Press, second edition, 2014.
4. Edwin Burton and Sunit Shah, Behavioral Finance: Understanding the Social, Cognitive, and Economic Debates,Wiley Finance, 2013.

Marketing (Group B)

Course Objectives:	1. To develop an appreciation and understanding of the unique challenges inherent in managing marketing efforts students will have hands on experience on tools and strategies that address these challenges. 2. To integrate the various psychological, social and cultural concepts and build a useful conceptual framework that would equip the students for practical application of strategic marketing decisions.
Learning Outcomes:	1. Gain knowledge, skills and competencies to design marketing strategies in order to manage a marketing programme efficiently. 2. Develop knowledge, conceptual and analytical skills for effective marketing of products and services. 3. Foster critical thinking, analytical and problem-solving skills in customer acquisition and retention.

S.No.	Component	
1.	Practical Component/ Field Based Assignments	
	M-420-CONSUMER BEHAVIOUR	
	Title/Activity	1. Conduct interview of around 50 respondents on their last three restaurant visits and the situation in which they visited the restaurant. What can you conclude about the impact of the situation on their consumption behaviour? Can you draw an impact of the individual on consumer behaviour? 2. Conduct Focus Group interview with your batchmates on the issue of suggesting improvements in any newly launched product or service. As a researcher how can you use the collected information through this process and write a report on same.

	M-421-SERVICES MARKETING	
	Title/Activity	1. Develop a simple questionnaire designed to measure the key components of customer expectations(i.e., desired, adequate and predicted service, the zone of tolerance, etc). Conduct 10 interviews with key target customers of a service of your choice to understand the structure of their expectations. Based on your findings, develop recommendations for firms offering this service. 2. Identify firms from three different service sectors where the service environment is a crucial part of the overall value proposition. Analyse and explain in detail the value that is being delivered by the service environment in each of the three firms.
	M-422-INTERNATIONAL MARKETING MANAGEMENT	
	Title/Activity	1. Conduct a trade analysis for India and identify country's major trading partners. Find out the impact of economic integration on trade patterns and relate it with the concept of scanning the international economic environment. 2. Contact an office of a multinational firm in your town and discuss with the company's marketing manager about the different marketing research techniques and strategies adopted by them in different countries. Identify the difference in research techniques and marketing strategies adopted in India vis a vis other countries.
	M-423-RURAL MARKETING	
	Title/Activity	1. Visit minimum of five retail stores in nearby villages and understand the product strategy, pricing strategy and distribution strategy being adopted by FMCG marketers for selling products like, soaps, shampoos, tea, etc. 2. Choose one brand popularinRuralIndia and Prepare a questionnaire covering 4A's related to the chosen brand and interview minimum 10 rural consumers and present your findings.

	M-424-DIGITAL AND SOCIAL MEDIA MARKETING	
	Title/Activity	1. Make a list of 20 Indian companies which are using Internet extensively for marketing and different Internet tools they use. List the different Internet tools they use. Make a note on how the companies benefitted from the usage with reference to CRM, online advertising, IMC, consumer segmentation, sales and trade promotion. 2. Track the online presence of five product brands. Trace how each brand has used the online world to do the following: a. Create a brand identity in the online sphere b. Generate brand salience and resonance c. Develop brand personality d. Develop consumer-brand relationship.
	M-425-CUSTOMER RELATIONSHIP MANAGEMENT	
	Title/Activity	1. As manager of a Media company engaged in news broadcast, you are supposed to conduct a study for designing a set of programs and address related issues that may build customer loyalty among your viewers. What course of action would you adopt and how would you carry out the study? 2. Conduct a study on Private Banks and make a comparative study of the top three players about their customer Retentions Strategies.
2.	Hands on Practice on any one software	1. Marketo Lead Management. 2. Five9 Virtual Call Centre. 3. Plan Plus Online. 4. Racker RMS CRM. 5. Digital Marketing Boot Camp
3.	Book Review (Any one)	1. Dondakanti H. (2021), Breakthrough: The Rise of India's Largest Private Dairy Company, Penguin Viking. (India-Hatsun Agro). 2. Sitapati S. (2019), THE CEO FACTORY: Management Lessons from Hindustan Unilever, Juggernaut. 3. Piyush P.(2016), Pandeymonium, Penguin Random House India (Indian ads and Ogilvy).

Books Recommended

1. Michael R. Solomon, Consumer Behavior: Buying, Having, Being, Pearson Publication, (2020).
2. Jayanta Chatterjee Christopher Lovelock, & Jochen Wirtz, Services Marketing, 8/e Eighth Edition, Pearson Education(2020) .
3. Cateora R Philip & Graham L John: International Marketing, McGraw Hill; 18th edition; (2019).
4. Pradeep Kashyap, Rural Marketing, Third Edition, ,Pearson Education India (2016).
5. Aleksej Heinze, Gordon Fletcher, Tahir Rashid & Ana Cruz, Digital And Social Media Marketing A Results-Driven Approach, Taylor and Francis publication, (2020).
6. Max Fatouretchi, The Art of CRM: Proven strategies for modern customer relationship management, Packt Publishing, (2019).

Human Resource Management (Group C)

Course Objectives:	1. To provide opportunity to students to interact with industry leaders & HR professionals and learn through practical activities and assignments. 2. To imbibe research acumen and develop inter-personal, analytical and cross-cultural skills in HRM.
Learning Outcomes:	1. Stimulate thinking on rationale behind the laws and their enforcement problems. 2. Ability to understand and develop various training and non training solutions to improve employee performance. 3. Develop managerial skills for and ability to understand the issues and challenges involved in managing a diverse workforce

S.No.	Component	
1.	Practical Component/ Field Based Assignments	
	M-430-EMPLOYEE RELATIONS AND LABOUR LAWS	
	Title/Activity	1. Locate a local unionized organization. Interview both a manager and a union employee to determine the level of satisfaction each has with the employment relationship. What type of union activity/inactivity contributes to the position? 2. Investigate in depth any union in an organization and examine its member base and a recent activity. Does it appear that union has become more or less effective in any way?
	M-431-PERFORMANCE MANAGEMENT SYSTEM	
	Title/Activity	1. Examine the methods used to monitor employee performance in any five organizations of your choice from at least two different sectors. 2. Visit any organization of your choice to: Analyze the various performance criteria (standards) established in the organization. Investigate the problems associated with Performance Appraisal in the organization. Identify the characteristics of Performance Management Systems of the organization. Examine how appraisal interviews are conducted in the organization.

	M-432-CROSS CULTURAL HUMANRESOURCE MANAGEMENT	
	Title/Activity	1. Identify a firmpreferably an MNC and highlight the strengths and weaknesses of workforce diversity over there? Also discuss the firm's strategies to manage workforce diversity. 2. Also discuss thechallenges faced by that MNC in deploying employees from one country to another and what strategies do they adopt in overcoming those challenges.
	M-433-HUMAN RESOURCE ANALYTICS	
	Title/Activity	1. Identify the important HR metrics used in any company of your choice. 2. Ask students to collect manpower data of your institute and prepare HR Dashboards.
2.	Hands on Practice on any one software	1. Sentrifugo 2. WaypointHR 3. Staff Squared 4. Teamdeck 5. Bitrix24
3.	Book Review (Any one)	1. HR Rising!!: From Ownership to Leadership Steve Browne 2. The HR Scorecard Brian Becker, Mark Huselid, Dave Ulrich 3. Predictive HR Analytics: Mastering the HR Metric Kirsten & Martin Edwards

Books Recommended:

1. Sinha, P. R. N., Sinha, I. B., & Shekhar, S. P. (2017). Industrial Relations, Trade Unions and Labour Legislation. Pearson Education India.
2. Armstrong, M. (2020). Performance management: Key strategies and practical guidelines.
3. Aswathappa, K., & Dash, S. (2020). International Human Resource Management|. McGraw-Hill Education.
4. Bhattacharyya, D. K. (2017). HR Analytics: Understanding Theories and Applications. SAGE Publications India Pvt Limited.

Operations & Supply Chain Management (Group D)

Course Objectives:	1. To develop analytical approach among students regarding manufacturing related concepts and tools. 2. To understand how Managers, take decisions – strategic, tactical and operations - and how they are taken in different areas of Operations & Supply Chain Management.
Learning Outcomes:	1. Students will be able to Identify and Analyze Business Models, Business Strategies and, corresponding Competitive Advantage. 2. Students will be able to Formulate and implement Warehouse Best Practices and Strategies. 3. Students will be able to plan, Warehouse and Logistics operations for optimum utilization of resources.

S.No.	Component	
1.	Practical Component/ Field Based Assignments	
	M-440- SUPPLY CHAIN & LOGISTICS MANAGEMENT	
	Title/Activity	1. Prepare a chart for Supply chain network of petroleum, milk products, etc 2. Study of FMCG inventory management at any retail warehouse/ retail mall.
	M-441- PROJECT MANAGEMENT	
	Title/Activity	1. Study and prepare a report on Project Cost Estimation Techniques for a manufacturing Project. 2. Study and prepare a report on Project Scheduling & Tracking Tools - An Overview for a Construction Project
	M-442- SERVICE OPERATIONS MANAGEMENT	
	Title/Activity	1. Being a manager inventory in a retail sector mall, analyse the FMCG items stocking philosophy so that stock out condition and expiration does not exists. 2. Being a Head of Marketing for a new fertilizer plant, establish the SCM up to retailers, keeping in mind that entire daily production is distributed to retailers and also sold to the customers on one day lead basis.

	M-443- TECHNOLOGY MANAGEMENT	
	Title/Activity	1. Study and prepare a report for BPR for Motor cycle vehicles for fuel efficiency design and parameters. 2. Study and analyse any two products of ITC or HUL for its recognition as world class leaders for lean manufacturer & 5S practice.
2.	Hands on Practice on any one software	Students must be given exposure to some of the following Softwares: 1. Forecasting software, 2. PLM, 3. Prima Vera, 4. REPLICON, 5. Mavenlink
3.	Book Review (Any one)	1. Christopher, M. (2016). Logistics & supply chain management. Pearson Uk. 2. Slack, N., Chambers, S., & Johnston, R. (2010). Operations management. Pearson education. 3. Gaither Norman., Frazier Greg (2015), Operations Management, Cengage Learning.

Books Recommended:

1. Russell, R. S., & Taylor-Iii, B. W. (2008). Operations management along the supply chain. John Wiley & Sons.
2. Harrison, F., & Lock, D. (2017). Advanced project management: a structured approach. Routledge.
3. Parker, D. (2012). Service operations management: the total experience. Edward Elgar Publishing.
4. Narayanan, V. K. (2001). Managing technology and innovation for competitive advantage. Pearson Education India.

Information Technology Management (Group E)

Course Objectives:	1. Prepare students to meet their needs within an organizational and societal context through selection, creation, application, integration and administration of computing technologies. 2. Prepare students to become skilled in Artificial Intelligence, Internet and Web technologies, and project management, and have a strong grasp of business concepts and technical communications.
Learning Outcomes:	1. Develop skills for observing and analyzing and understanding how the role of digital technology is rapidly shifting, from being a driver of marginal efficiency to being an enabler of innovation. 2. Utilize interpersonal skills to negotiate and communicate effectively with both technical and non-technical stakeholders verbally and in writing. 3. Comprehend how technological transformation has enabled business to remodel their own resources, their relationship with consumers and the services they offer.

S.No.	Component	
1.	Practical Component/ Field Based Assignments	
	M-450 SOFTWARE PROJECT MANAGEMENT	
	Title/Activity	1. Develop a project for a company which explains the risks for their on going projects on and also develop a risk mitigation strategy and activities for the risks mentioned for the project. 2. Visit any manufacturing company to develop a task network for the upcoming or currently ongoing projects. Establish milestones for the project. Define the critical path for the network using project management tools.
	M-451 MANAGING DIGITAL INNOVATION AND TRANSFORMATION	
	Title/Activity	1. The students have to pick one company/industry that deploys any of the technology enablers such as Artificial Intelligence (AI)/Machine Learning/IoT/Block Chain Technology or any other related aspect(s). For example Amazon uses AI to anticipate when an ad has value; Google uses natural language processing to automate translation. For this assignment, choose a company that uses any of the above mentioned

		technology enablers in a creative way to derive value creation, value capture, or its operating model. You may focus on the use of technology enabler(s) as a service, or as an enhancement of a process for some part of its business. 2. Students should use customer-level data of actual customer purchases offline and online to track changes in consumer behaviour over time due to digital or technological transformation. The students have to make use of two industries of different domains like pharmacy and grocery or cosmetics and clothing etc. This project contributes to Omni channel retailing by offering a way to understand changes in customer behaviours over time
	M-452 ARTIFICIAL INTELLIGENCE FOR MANAGERS	
	Title/Activity	1. Students should visit companies which deal in real estate and see their datasets. The dataset for this project might contain the prices of houses in different areas of the city, construction cost, prices of flats etc. Similar datasets may be studied from sites like the UCI Machine Learning Repository. On the basis of the data obtained predict the selling price of a new home in a particular city. 2. Students who are planning to work in the finance sector, this project can help them get a great insight into different sections of the sector. They need to visit corporates dealing with share market and see its working and collect data. They can get different kinds of data sets. The feedback cycles of the stock market are short, so it helps in validating predictions. You can try to predict 6-month price movements of a stock by using the data you get from the organization's provided reports in this AI project.
	M-453 EMERGING TECHNOLOGIES IN DATA BASE MANAGEMENT	
	Title/Activity	1. Analyze database requirements for a departmental store. Visit different departments such as grocery, confectionery, cosmetics, clothing, bakery, crockery etc. to gather requirements. Record the business requirements and document them. On the basis of the requirements gathered, draw entity relationship diagram(s) and design a normalized database for the software for automation of the inventory and billing process of the store.

		2. Survey the types of advanced database models applied in different domains in organizations working in your area of study. Generate a report depicting the evolution, expanse and extent of use of these databases.
2.	Hands on Practice on any one software	1. Python 2. Click Up 3. 42OAI 4. A sana 5. Mycollab
3.	Book Review (Any one)	1. IT Project Management: Infamous Failures, Classic Mistakes, And Effective Practices: Top Reasons Why Software Projects Fail Paperback – Import, 21 May 2021, by Bertram Rangel, Publisher: Independently Published (21 May 2021)), Paperback: pag 138 es 2. Artificial Intelligence: The Insights You Need from Harvard Business Review (HBR Insights Series) Paperback – Illustrated, 4 October 2019, by Harvard Business Review, Thomas H. Davenport, Publisher: Harvard Business Review Press; Illustrated edition (4 October 2019), Paperback: pages 192 3. Neoskilling for Digital Transformation and the Artificial Intelligence Revolution Paperback – 1 January 2018, by S. Ramachandran, Prof. L. Prasad.

Books Recommended:

1. Bob Hughes, Mike Cotterell and Rajib Mall "Software Project Management", 6th Edition, McGraw Hill Edition, 2017.
2. Michael Lewrick, Patrick Link, Lary Leifer, The Design Thinking Playbook: Mindful Digital Trasformation of Teams, Product, Services, Businesses and Ecosystems, Wiley, 2018.
3. Russell, S., Norvig, P. "Artificial Intelligence: A Modern Approach", Third Edition, Prentice Hall, 2010.
4. Thomas Connolly and Carolyn Begg, "Database Systems: A Practical Approach to Design, Implementation, and Management, Addison Wesley, 6th Edition, 2014.

Business Analytics (Group F)

Course Objectives:	1. Gain an understanding of how managers use business analytics to formulate and solve business problems and to support managerial decision making. 2. Learn how to use and apply tools to solve business problems.
Learning Outcomes:	1. Interpret results/solutions and identify appropriate course of action for a given managerial problem or opportunity. 2. Apply practical experience in IT projects developed through assessment projects for real world clients focussing on technology auditing and recommendations, and system development 3. Translate results of business analytic projects into effective courses of action.

S.No.	Component	
1.	Practical Component/ Field Based Assignments	
	M-460 DATA MINING FOR BUSINESS DECISIONS	
	Title/Activity	1. In this project, Students may use customer level data of actual customer purchases offline and online to perform association rule mining on data sets. Explore various options available for preprocessing data and apply different discretization filters on numerical attributes on the generated rules. Derive interesting insights and observe the effect of discretization in the rule generation process. Students can gather data from two different industries of different domains. 2. Students will collect data from one company/ Industry; identify the requirement of regression analysis on specific parameters. Use Regression analysis using Excel or other data mining tool to derive probabilistic conclusions about any event by analysis of historical data sets. Data trends and linear regression. Data mining algorithms which must be used.

	M-461 DATA VISUALIZATION FOR MANAGERS	
	Title/Activity	1. Collect data from a company to analyze customer behavior. Data should contain browsing history and customer engagement time, purchases in online stores, registering in events, time to visit etc. Analyze the behavior of customers using data visualization tools. 2. Visit the industry and discuss with maintenance team regarding looking for insights' part which are on the verge of break down. Understand how maintenance team helps the analytical team. Create a project which describes the connections between machinery failure and certain events that trigger them, using data visualization tools
	M-462 BUSINESS FORECASTING	
	Title/Activity	1. The Students can pick one or more companies working on marketing and promotion of disposable tableware/ sanitizer / plastic packaging material to forecast the requirements and suggest changes in products for manufacturing companies. For this assignment, choose good marketing companies, conduct surveys to collect data for changes in existing one and new products. Apply analysis tools and techniques for predictions. IT tools may also be used for data collection. 2. This project focuses on the use of smart products and solar panels for rural/urban India, the students should collect data for the needs of smart mobile phones/ smart televisions / solar panels /smart devices in rural India. Students can use different platforms for data collection like forms, electronic shop sales data situated in rural/urban areas, and some marketing campaigns, etc. The customer-level data of actual customers interested in smart devices and the solar panel should be gathered. Purchases both offline and online should be included to track changes in customer behavior over time due to Digital or technological transformations. The students may make use of forecasting models and apply various techniques learned in the course for regression and errors.

	M-463 FUNCTIONAL ANALYTICS	
		1. Collect data from Financial Asset Management Companies which have a portfolio management system using which an investor can calculate the Net Asset Value (NAV) of their investments in the stock market. Identify types of assets, stocks and mutual funds. Stock has a name, price and quantity. Mutual funds have a name and a list of stocks. Each investor of the firm has a named portfolio. The investor can ask the portfolio management system to get the NAV by invoking the operation on portfolios to calculate the NAV for his/her total investments that he/she made in several stocks and mutual funds. Analyze the portfolios using financial analytics tools. 2. Create HR Metrics dashboard for a company by collecting data regarding monitoring human capital, significant changes or development within the teams, employee turnover and employee retention.
2.	Hands on Practice on any one software	1. Weka 2. Orange 3. Rapid Miner 4. Python 5. GapMinder
3.	Book Review (Any one)	1. Fundamentals of Data Visualization: A Primer on Making Informative and Compelling Figures Paperback – 31 March 2019, by Claus O. Wilke (Author), Publisher: Shroff/O'Reilly; First edition,31 March 2019, Paperback: 392 pages 2. Winning in the Digital Age: Seven Building Blocks of a Successful Digital Transformation Hardcover – 24 February 2021, by Nitin Seth, Publisher: Penguin Enterprise,24 February 2021, Penguin Random House India, Hardcover: 544 pages 3. Bridgital Nation: Solving Technology's People Problem Hardcover – 12 October 2019 by N. Chandrasekaran, Publisher: Penguin Allen Lane, 12 October 2019, Hardcover: 344 pages

Books Recommended:

1. Jiawei Han & Micheline Kamber, "Data Mining: Concepts & Techniques", Morgan Kaufmann Publishers, 3rd edition, 2002
2. Claus O. Wilke , "Fundamentals of Data Visualization: A Primer on Making Informative and Compelling Figures", 1st Edition, O Reilly Media, Inc., 2019
3. Michael Gilliland, Len Tashman, Udo Sglavo ,"Business Forecasting: Practical Problems and Solutions", Wiley, 2010

4. Shonna D. Waters, Valerie Streets, LindsayMcFarlane,RachaelJohnson-Murray, "The Practical Guide to HR Analytics:UsingDatatoInform,Transform,and Empower HR Decisions", 2018, SocietyForHumanResourceManagement.

M-419PROJECTWORK

Course objectives:	1. To increaseproficiencyinspecificbusinessdisciplines;such as humanresourcemanagement,operationsmanagement, marketing, accounting, analytics, economics, finance, and IT. 2. To developandimprovebusinessskillsincommunication, technology, quantitative reasoning, and teamwork.
Learning Outcomes :	1. Developworkhabitscommunication,interpersonal&other criticalskillsandattitudesnecessaryforjobsuccess. 2. Acquireemploymentcontactsleadingdirectlytoafull-timejob following program completion from college. 3. Demonstratetheabilitytoharnessresourcesbyanalysing challenges and considering opportunities.

The projectworkisreallifeshorttermcorporatestudy.Thecandidatewillbe allotted the project by the faculty of the institute in consultation with the director/principal of the institute.

The problemidentifiedduringProjectsstudyshouldpertaintostudent'sareaof specialization. It can be from any one area of specialization. The report will contain the objectivesandscopeofthestudy.Researchmethodology,use,importanceof the study,analysisofdatacollected,conclusionsandrecommendations.Itwill contain relevantcharts,diagramsandbibliography.

A certificatebytheSupervisoroftheprojectcertifyingtheauthenticityofthereport shall be attachedtherewith.Thestudentwillsubmittwohardcopiesofthereportto the HeadoftheMBAprogram.Anexternalexaminerwillbeselectedbythe Director/Principal of the institute from the panel of examiners, proposed by BOS and approved by Dean, Faculty of Management Studies (FOMS). The concerned institute will bearthetraveling,remuneration,DAandotherincidentalexpenditureof external examiner with recourse to RTU.

There shall be regular internal assessment and a time line to be followed according to theguidelinesforprojectwork.Theguidelinesforprojectworkwillbeissued separately.

Extra 10 days for Project work will be given to the students after their last working day.

The guidelinesforProjectWork(M-419)duringFourthSemesterMBA

INTRODUCTION:

Project work is an integral part of the academic curriculum of RTU MBA. It is an initiative to bridge the gap between knowledge and its application through a series of interventions that will enable students of RTU MBA program to gain insights and exposure to the industry.

The Project Work has been positioned during fourth semester of the MBA program as it serves the twin purpose of providing critical business insights to students as well providing industry with graduates of a high caliber who are ready to get ahead in the world from day one.

General Guidelines:

A. Nature of Project Work: The student will have to identify a Project Work in a business enterprise that matches the student's area of specialization. Project Work is a combination of In-plant study and a research project. Students are expected to study the functioning of an organization, identify a problem area and provide suggestions to overcome the problems.

B. Duration of Project Work: The Project Work shall be done in fourth semester. Students are expected to take up work such as identifying the organization, finalization of topic and review of literature during the fourth semester and start the Project Work immediately after this.

C. Guide: Internal guide of the Project Work is a full time faculty member working in management department of respective institution with minimum of three years of experience. External guide is from the business organization where the student is carrying out his/her Project Work. Maximum of ten students can work under an internal guide. Internal guide is expected to be in continuous interaction with external guide during the course of the Project.

D. No two students of an institute shall work on the same problem in the same organization.

E. Schedule to be followed before commencement of Project

Activity	Time-line	Remarks
Identifying the Organization and Problem Identification	1st week of 4th semester.	Student individually identifies an organization and identifies problem for his / her study, according to his / her interest
Problem Statement	2nd week of 4th semester.	His / her interests are discussed with selected guides
Research design	3rd week of 4th semester.	Discussion with internal guide to decide on suitable design for the research
Synopsis preparation	4th week of 4th semester.	Preparation of synopsis* incorporating the Objectives

Presentation of synopsis	5th week of 4th semester.	The student will present Synopsis with the detailed execution plan to the Project committee** who will review and may (a) approve, (b) approve with modification or (c) Reject for fresh synopsis.
Approval status	6th week of 4th semester.	The approval status is submitted to HOD who will officially give concurrence for execution of the Project

*Synopsis: It is a 3 page document / hard copy to be submitted to the HOD with the signatures of Guide and the Student.

Page 1	Title, contact addresses of student - with details of internal & External Guide
Page 2	Short Introduction with objectives and summary (300 words), Review of articles/literature about the topic with source of information.
Page 3	Time-Activity Chart

**Composition of the Project committee

1. Director/HOD
2. Domain expert from the department
3. Internal Guide

F. Schedule to be followed during Project

Activity	Time-line	Remarks
Understanding structure, culture and functioning of the organization.	7th and 8th week of 4th semester.	Student should understand products/ services and problems of the Organization.
Preparation of research instrument for data collection	9th and 10th week of 4th semester.	Discussion with the guide for finalization of his/her research instrument in domain and present the same to the guide.(First presentation)
Data collection	11th and 12th week of 4th semester.	Data collected to be edited, coded, tabulated and presented to the guide for suggestions for analysis. (Second presentation)
Analysis and finalization of report	13th and 14th week of 4th semester.	Students must use appropriate and latest statistical tools and techniques for analyzing the data (It is must to use latest statistical packages whose results should be shown in the report) (Third presentation)

Submission of report		Final report should be submitted to the university before one week of the commencement of theory examination.

G. Evaluation:

Project work carries 100 marks consisting of 60 marks for internal evaluation by the internal examiner, 40 marks for external evaluation by external examiner through viva-voce examination.

The Project work Report comprises of 100 marks and will be evaluated by two examiners (external and internal). The evaluation will consist of (1) Project Report evaluation (2) Project Presentation and Viva Voce. The Project Report evaluation will comprise of 60 marks and would be evaluated by internal project guide. The Presentation and Viva Voce would comprise of 40 marks and would be evaluated by two examiners (1 external and 1 internal).

Break-up of components for evaluation of Project Study Report

<table>
<tr><th></th><th colspan="7">Components</th><th>Marks</th><th>Total Marks</th></tr>
<tr><td rowspan="11">Internal Evaluation Criteria</td><td colspan="7">Interaction with Mentor/ faculty supervisor</td><td>10</td><td rowspan="11">60</td></tr>
<tr><td colspan="7">Project daily-activity record</td><td>10</td></tr>
<tr><td colspan="8">Project Report Internal Evaluation: Evaluation Criteria</td><td rowspan="9">40</td></tr>
<tr><td>SN</td><td></td><td>Unsatisfactory</td><td>Satisfactory</td><td>Good</td><td>Excellent</td><td>Score</td></tr>
<tr><td></td><td></td><td>2</td><td>4</td><td>6</td><td>8</td><td></td></tr>
<tr><td>1</td><td>Understanding of Objectives with topic</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>2 3</td><td>Understanding of Reliance of topic</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>4 5</td><td>Interpretation & Analysis</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td>Presentation</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td>Query handling</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td rowspan="9">External Evaluation Criteria</td><td colspan="8">Project Report External Evaluation: Evaluation Criteria</td><td rowspan="9"></td><td rowspan="9">40</td></tr>
<tr><td>SN</td><td></td><td>Unsatisfactory</td><td>Satisfactory</td><td>Good</td><td>Excellent</td><td>Score</td></tr>
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<tr><td></td><td>Query handling</td><td></td><td></td><td></td><td></td><td></td></tr>
</table>

H. FORMAT OF REPORT:

The Project Work report shall be prepared using word processor Viz., MS word, using Times New Roman font sized 12, on a page layout of A4 size with 1" margin on all sides and 1.5 line spacing. The Project Work report shall not exceed 60-70 pages.

Formats for Project Report

- ☐ Format of Cover Page
- ☐ Format of certificate by College/Institution
- ☐ Format of Declaration Page
- ☐ Format of Contents
- ☐ Format of List of Tables and Charts
- ☐ Format of Bibliography

I. Submission of report:

Students should submit the Project Work report in Hard copy (hard bound) and electronic data form also in PDF file (Un-editable format) to the Institute one week before the commencement of the examination.

J. Publication of research findings:

Students are expected to present their research findings in seminars / conferences / technical fests or publish their research work in journals in association with their internal examiner. Appropriate weightage should be given to this in the internal evaluation of the project report.

Contents of the Project Report

Cover page

A certificate from the Organization (Scanned copy of the certificate)

A certificate from the guide, HOD and Head of the Institution (Scanned copy of the certificate) indicating the bonafide performance of Project by the student. Declaration (Scanned copy of the declaration) – An undertaking by the student to the effect that the work is independently carried out by him/her.

Acknowledgement Table of contents

List of Tables and Graphs Executive summary

Chapter 1 Introduction: Introduction about the Project, Topic chosen for study, Need for the study, Objectives of the study, Scope of the study, Methodology adopted, Literature review and Limitations of the study

Chapter 2: Industry profile and company profile: (Promoters, Vision, Mission & Quality Policy, Products / Services profile, Areas of Operation, Infrastructure facilities, Competitors' information, SWOT analysis, Future growth and prospects and Financial Statement

Chapter 3: Theoretical background of the study – elaborative information on the subject chosen for better understanding and usage in the analysis.

Chapter 4: Analysis and interpretation of the data Collected with relevant tables and graphs. Results obtained by using statistical tools must be included.

Chapter 5: Summary of Findings, Conclusion and Suggestions / recommendations. Bibliography

Annexure relevant to the project such as figures, graphs, photographs etc.

Project Work report on
(Title of the Report)

BY

(StudentName)
(Roll No)

Submitted to

RAJASTHAN TECHNICALUNIVERSITY
In partial fulfilment of the requirementsfortheaward of the degree of
MASTER OF BUSINESSADMINISTRATION

Under theguidanceof

INTERNAL GUIDE
(Name)
(Designation)

EXTERNAL GUIDE
(Name)
(Designation)

(Institute Logo)

DepartmentofMBA

(Institute namewithAddress)

(Batch)

CERTIFICATE

This is to certify that (Name of the Student) bearing Roll No (xxxx), is a bonafide student of Master of Business Administration course of the Institute (Batch), affiliated to Rajasthan Technical University, Kota.

Project Work report on "(Title of Report)" is prepared by him/her under the guidance of (Name of the Guide), in partial fulfillment of the requirements for the award of the degree of Master of Business Administration of Rajasthan Technical University, Kota, Rajasthan.

Signature of Internal Guide

Signature of HOD

Signature of Principal

DECLARATION

I,(Student Name) , hereby declare that the Project Work report entitled "(Title) "with reference to "(Organization with place)" prepared by me under the guidance of (Guide Name), faculty of M.B.A Department, (Institute name) and external assistance by (External Guide Name, Designation and Organization).

I also declare that this Project work is towards the partial fulfillment of the university regulations for the award of degree of Master of Business Administration by Rajasthan Technical University, Kota.

I further declare that this project is based on the original study undertaken by me and has not been submitted for the award of any degree/diploma from any other University/Institution.

Place: Signature of the student

Date:

This shall be the sequence of various pages in the report

Title
Certificate
Abstract
☐ Acknowledgements
Table of Contents
Executive Summary
Definitions and
Notations List of
Tables
List of Figures and
Charts Chapter 1
Introduction
Chapter 2
Chapter 7 Conclusions and Directions for further work
Bibliography
Annexure

TABLE OFCONTENTS

Executive Summary
Definitions and Notations
List of Tables
List of Figures and Charts

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Chapter 2. Industry and Company profile..... (Page Number)
Chapter 3. Theoretical Background of the Study ..... (Page Number)
Chapter 4. Data Analysis and interpretation..... (Page Number)
Chapter 5. Summary of Results and Findings ..... (Page Number)
Chapter 6. Suggestions ..... (Page Number)
Chapter 7. Conclusions and Directions for further work..... (Page Number)
Bibliography

Annexure

LIST OF TABLES

Table No	Particulars	Page Numbers
Table 4.1	Table showing ABC Analysis	
Table 4.2	Table showing FSN Analysis	
Table 4.3	Table showing EOQ	
Table 4.4	Table showing Stock of Raw Materials	

LIST OF FIGURES AND CHARTS

Chart No	Particulars	Page Numbers
Chart 4.1 Or Figure 4.1	Graph showing ABC Analysis	
Chart 4.2	Graph showing FSN Analysis	
Chart 4.3	Graph showing EOQ	
Chart 4.4	Graph showing Stock of Raw Materials	
Chart 4.5	Graph showing Raw Materials Turn Over Ratio	

BIBLIOGRAPHY

BOOKS:

Name of the Author, Title of the Book, Name of the Publisher, Edition, year of Publication.

ARTICLES:

Name of the Author, Title of the article, Name of the Journal, Volume Number, Issue Number, Year, Page Number (pp)

WEBLIOGRAPHY

Name of the Author, Title of the article, retrieved on mm/dd/yy, from URL

Finance(Group A)

S. No.	Subject Code	Subject Title
Semester IV		
1.	M-410	Financial Derivatives
2.	M-411	Financial System, Institutions and Instruments
3.	M-412	Mergers, Acquisitions and Corporate Restructuring
4.	M-413	Behavioural Finance

M-410-FINANCIAL DERIVATIVES

OBJECTIVES

1. To know about various aspects and mechanism of derivatives.
2. To understand the structure of Indian derivatives market.
3. To understand derivatives markets and trading mechanism in forward, futures, options and swaps contracts.

LEARNING OUTCOMES

1. Determining the pricing of forwards and futures using cost of carry model.
2. Determining the pricing of options using one step binomial option pricing model and the B-S model.
3. Designing and illustrating a swap arrangement.
4. Making informed decision while using derivatives to mitigate risk.

Section A

UNIT	COURSE DESCRIPTION	SESSIONS
UNIT I	Financial Derivatives: Definition, types and classification of financial derivatives, Difference between Forwards and Futures and Futures and Options, Participants in the Derivative Markets.	3
UNIT II	Forward Market: Forward Contracts, Concept and Features, Classification of Forward Contracts, Forward Trading Mechanism.	2
UNIT III	Futures Markets: Futures Market Trading Mechanism Specifications of a Futures Contract, The Operation of Margins, Clearing House, Lot Size, Tick Size, Open Interest, Closing out a futures position.	3
UNIT IV	Pricing of Derivatives: Pricing of Forwards/Futures, Index Futures, Currency Futures, Commodity Futures using Cost of Carry Model, Relationship between Spot Price and Futures Price, Contango and Normal Backwardation Market.	2
UNIT V	The Indian Scenario of Derivatives Markets: Introduction, Evolution of Derivatives in India. Regulation: Structure of the Derivatives Market, Derivatives Regulation in Indian Stock Market, L.C Gupta committee recommendations.	3
UNIT VI	Interest Rate Futures: Introduction, Short Term Interest Rate Futures, Pricing A T-Bill future. Long Term Futures Contracts: Application of Interest Rate Futures, Long Hedge, Short Hedge.	4
UNIT VII	Swaps: Introduction, Features and mechanics of Swaps, Major types of Financial Swaps, Valuation of Interest Rate Swaps and Currency Swaps.	3
UNIT VIII	Options: Introduction, Options terminology, Types of options, payoffs from options positions, Option valuation: Intrinsic and time value of an option. Pricing of options: Determinants of Option Prices, The Black-Scholes Option Pricing Model, One Step Binomial Option Pricing Model.	4

Section B

At least one case study/problem from each unit. Questions will be case/inferences/application based

PRACTICAL COMPONENT

Study the participation of a hedger, a speculator and an arbitrageur and analyze their strategies in the derivatives market.

☐ Calculate gain/loss from a marked to market derivative trading account.

☐ Forecast price of forward/ futures contract using cost of carry model.

☐ Calculate option pricing of any five NSE listed companies using B-S model for next three months.

☐ Study and illustrate a swap arrangement.

BOOKS RECOMMENDED

1. John C. Hull and Sankarshan Basu, Options, Future & Other Derivatives, Pearson, 10th edition, 2018.
2. S. Kevin, Commodity and Financial Derivatives, 2nd edition, PHI, EEE, 2014.
3. S.L Gupta, Financial Derivatives: Theory, Concepts and Problems, second edition, PHI, EEE,2017.
4. Sundaram Janakiramanan, Derivatives and Risk Management, Pearson, first edition, 2011.
5. Rajiv Srivastava Derivatives & Risk Management, Oxford University Press, second edition, 2014.
6. S S S Kumar, Financial Derivatives, PHI, EEE.

LIST OF JOURNALS/PERIODICALS/MAGAZINES/NEWSPAPERS

1. Journal of Derivatives and Quantitative Studies, Emerald.
2. Review of Derivatives Research, Springer.
3. The Journal of Derivatives, Portfolio Management Research.
4. International Journal of Financial Marketsand Derivatives, Inderscience Publishers.

M-411-FINANCIAL SYSTEM, INSTITUTIONS AND INSTRUMENTS

OBJECTIVES

1. To acquaint students with the financial system.
2. To introduce students with different financial institutions and markets.
3. To impart knowledge of different financial instruments to students.

LEARNING OUTCOMES

1. Taking informed financial decisions while raising funds from financial markets.
2. Acquaintance with the mechanism of money market.
3. Understanding of functioning of merchant bankers.
4. Fair and in depth understanding of capital and money market instruments.

Section- A

UNIT	COURSE DESCRIPTION	SESSIONS
UNIT I	Introduction to Indian Financial System: Introduction, Components of the Formal Financial System, functions of a financial system, key elements of a well-functioning financial system.	2
UNIT II	Financial institutions, Types of financial institutions – Banking, NBFCs, Development financial institutions, Mutual funds, pension funds Insurance and Housing finance companies.	3
UNIT III	Money Market: Introduction, Meaning, Market intermediaries, Call/Notice money, Term money, Liquidity in the money market, Money market derivatives.	3
UNIT IV	Money market instruments: Call/Notice money, T bills, Commercial bills, Commercial papers, Certificate of deposits.	3
UNIT V	Capital Market: Primary Market - Methods of raising funds from capital market- Public issue, Rights issue, Private Placement, Preferential Issue. Secondary market – NSE and BSE, Secondary market - Role of stock exchanges in India, Depositories and custodians, depository participant. Capital market	6
UNIT VI	instruments: Meaning, primary and secondary securities, Equity shares, Debentures, preference shares, Derivatives, GDR's, ADR's, IDR's Other quasi equity instruments – Subordinated loans, Convertible bonds, senior debt, Mezzanine financing.	3
UNIT VII	Debt Market: Introduction, private corporate debt market, PSU Bonds market Government securities market.	2

UNIT VIII	Emerging Issues and Challenges: Low liquidity and shallowness in financial markets, Ethical issues in Merchant Banking, Effectiveness of regulators like RBI and SEBI in controlling Money market and Capital market.	2

Section B

At least one case study/problem from each unit. Questions will be case/inferences/application based

PRACTICAL COMPONENT

- ☐ Study any four financial institutions and their role in financial intermediation.
- ☐ Study any four latest IPOs and document their listing price along with merchant banker, registrar, bankers to the issue.
- ☐ Study any four merchant bankers in India and their role in the public issue.
- ☐ Study the process of fund raising in the debt market and its mechanism. Conduct a critical analysis of the role of RBI and SEBI in controlling financial markets.

BOOKS RECOMMENDED

1. Bharti V. Pathak, The Indian Financial System, 5th Edition, Pearson, 2018.
2. Frederic S. Mishkin, Stanley G. Eakins, Financial Markets and Institutions, 9th Edition, Pearson, 2018.
3. M.Y. Khan, Indian Financial System, Tata McGraw Hill Education, 9th Edition, 2015.
4. Sarkhel & Salim, Indian Financial Sytem & Financial Market Operations, McGraw Higher Education, 2017.
5. L.M. Bhole, Indian Financial Systems and Markets, Tata McGraw Hill, 2012.
6. Kohn Meir, Financial Institutions and Markets, Oxford University Press, 2013.
7. Rajesh Chakrabarti ,Sankar De ,Capital Markets in India, Sage Publications, First Edition

LIST OF JOURNALS/PERIODICALS/MAGAZINES/NEWSPAPERS

1. Journal of Money, Credit and Banking, Wiley Online Library
2. Journal of Finance, Wiley Online Library
3. International Review of Financial Analysis, ScienceDirect.
4. Journal of Financial Economics, Elsevier

M-412 - MERGERS, ACQUISITIONS AND CORPORATE RESTRUCTURING

OBJECTIVES

1. To explain the concept and significance of using different types of corporate restructuring strategies for achieving business objectives.
2. To explain the principles and practices of Mergers & Acquisitions and their contribution in achieving various corporate objectives.
3. To explain the framework of business valuation and price determination under Purchase and sale contract of Businesses.

LEARNING OUTCOMES

1. Understanding of different types of mergers and acquisitions and the process involved in executing their deals.
2. Develop an ability to understand factors influencing the valuation of a business and different methods used in Business Valuation.
3. Familiarity towards different techniques of corporate restructuring.
4. Basic understanding about regulatory environment of mergers and acquisitions in India.

Section A

UNIT	COURSE DESCRIPTION	SESSIONS
UNIT I	Corporate Restructuring: Meaning of corporate restructuring, significance of corporate restructuring, Classification of corporate restructuring. Corporate Restructuring practices adopted in India, Role of SEBI, RBI and Competition Commission of India	2
UNIT II	Introduction to Mergers and Acquisition: Meaning and definition of Merger and Acquisition, Motives of Merger and Acquisitions, Expectations of different stakeholders from Merger and Acquisition deals, Reasons for buying a Business, Reasons for selling a Business, Types of Mergers and Acquisitions, Difference between Merger and Acquisitions, Factors contributing to success and failure of Merger & Acquisition Deal.	3
UNIT III	Execution Process of Merger &Acquisition Deals : Process of Mergers & Acquisitions Due diligence – Concept and significance of Due Diligence in Merger and Acquisition Deal. Process of Due Diligence- Steps in Due Diligence- Planning Phase, Data Collection Phase, Data Analysis Phase, Reporting & Discussion Phase, Deal Negotiation – Factors discussed before and after finalizing the deal, Causes of Dispute at time of negotiation and execution of terms of deal	4

UNIT IV	Corporate Valuation: Introduction, Concept of Valuation, Objectives of Corporate Valuation, Corporate V/s Equity Valuation, Factors influencing value of a business, Principles of Business Valuation, Over Valuation and Under Valuation, Different types of values - Fair Market Value, Fair Value, Book Value, Intrinsic Value, Replacement Value, Liquidation Value, Going Concern Value, Equity Interest Value, Insurable Value.	3
UNIT V	Corporate Perspective): Valuation (Practical Approaches of Business Valuation- Asset-based approaches, Earning value approaches, Market value approaches Exchange Ratio-Concept & Significance of Swap Ratio, Determinants of Swap Ratio, Methods of Calculation of Swap Ratio.	4
UNIT VI	Post-Merger Integration Planning and & Legal Considerations: Factors considered in Post-merger Integration Planning – HRM issues, Political and cultural compatibility, management interdependencies and autonomy, Problems faced in integration, rules for effective integration post-merger Basic understanding Regulatory Framework for Merger and Acquisitions in India (only introductory overview).	3
UNIT VII	Takeovers: Concept, Classification of Takeover, Benefits and Limitations of takeover, Friendly v/s Hostile Takeover, Defensive strategies for hostile takeover, Regulatory framework of Substantial Acquisition of Shares and Takeover in India (case study based).	3
UNIT VIII	International Merger & Acquisition: Overview of International M&A activity, Opportunities and threats involved in International M&A, Contribution of International M&A in growth and expansion of businesses, Impact of various macro factors on International M&A Deals. Benefits and Limitations of International M&A deals, recommendation for effective cross-border M&A.	2

Section B

At least one case study/problem from each unit. Questions will be case/ inferences/ application based

PRACTICAL COMPONENT

- ☐ Study of any two cases each of successful and failed merger deals and prepare a brief report on factors contributing the success & failure of such deals.
- ☐ Prepare a list of items to be negotiated in a merger deal and discuss under a mock negotiation round as sellers and buyers in the class
- ☐ Read and analyse the contents of any one sample Merger & Acquisition Deal.
- ☐ Compute the value of business any one Indian listed company using suitable method of business valuation.
- ☐ Compare and analyse the features of a Domestic and Cross Border Mergers & Acquisition using one real case of each involving an Indian company.

BOOKS RECOMMENDED

1. Kavita Shetty, Sharad R. Kale and Rajinder S. Aurora, Mergers and Acquisitions, Oxford University Press, 2014.
2. Donald De Pamphilis, Merger Acquisitions and Other Restructuring Activities, Elsevier India , 9th
3. Enrique R. Arzac, Valuation for Mergers, Buyouts & Restructuring, Wiley India (P) Ltd., Second Edition
4. Prasant Godbole , Mergers, Acquisitions and Corporate Restructuring , Vikas Publication , Latest Edition
5. Rabi Narayan Kaur and Minakshi, Mergers Acquisitions & Corporate Restructuring Strategies & Practices, Taxmann Publications , 2017
6. J. Fred Weston, Mark L. Mitchell, J. Harold Mulherin, Takeovers, Restructuring and Corporate Governance, Pearson Education, 2014
7. Kamal Ghosh Ray, Mergers and Acquisitions: Strategy, Valuation and Integration, PHI Learning Private Limited , Latest Edition
8. Vishwanath S. R. & Chandrashekar Krishnamurti, Mergers, Acquisitions and Corporate Restructuring, Sage Publications, 2008

LIST OF JOURNALS/PERIODICALS/MAGAZINES/NEWSPAPERS

1. Journal of Finance, Wiley Online Library
2. The Review of Financial Studies, Oxford Academic
3. Journal of Banking & Finance, Elsevier
4. Research Reports on corporate restructuring published by PWC and Deloitte

M-413 BEHAVIOURAL FINANCE

OBJECTIVES

1. To acquaint students with aspects of Behavioural finance.
2. To familiarize with the tools of Behavioural finance in financial decision making.
3. To understand how investors perceive market for investments.

LEARNING OUTCOMES

1. The students should be able to apply logic and reasoning in making investment decisions.
2. Apply traits of Behavioural finance so that investors can take more prudent financial decisions.
3. Use knowledge about anomalies and biases in designing investment strategies.
4. Identifying market bubble scenario and its implications in investment decisions.

Section- A

UNIT	COURSE DESCRIPTION	SESSIONS
UNIT I	Introduction: Meaning, nature, scope and history of Behavioural Finance; Comparison between Behavioural Finance and Standard Finance; Are financial markets efficient? Limits to arbitrage-Fundamental Risk, Noise Trader Risk, Behavioural Finance scenario in India.	3
UNIT II	Behaviour and Decision Making: Cognitive Bias, Emotional Bias, Concept of bounded rationality. beliefs and heuristics-Preferences: Prospect Theory, Ambiguity aversion, Loss aversion, Framing, Non-consequentialism: Disjunction Effect.	3
UNIT III	Theories of Behavioural Finance: Asymmetric information, Ego centricity, Human Behavioral Theories. Heuristics: Familiarity, Ambiguity Aversion Diversification, Functional Fixation Status Quo, Endowment Effect Representativeness: Innumeracy, Probability matching and conjunction fallacy, Base Rate Neglect, Availability and Salience, Anchoring.	4
UNIT IV	Bias: Interaction amongst biases Outcomes of biases Dealing with biases Overcoming the biases and debiasing Cognitive Biases: Self-Deception, Framing, Overconfidence, Miscalibration, better than average effect, overoptimism Causes: illusion of knowledge, control, understanding, skill, Self-attribution, Confirmation, Representativeness, Recency. Emotional Biases: Regret, Hindsight, Denial, Loss aversion, Affinity, Self-control.	4

UNIT V	Behavioural aspects of Investing: Behavioural Portfolio theory, Psychographic models, Sound Investment Philosophy.	2
UNIT VI	Value Investing: Central tenets of value investing Evidence and prospects of value investing. Neuro finance: Neural processes during financial decision-making Future of Neuro finance Adaptive Market Hypothesis.	3
UNIT VII	Anomalies: Fundamental anomalies, Accounting Based Anomalies, Calendar Anomalies, Technical anomalies: Value v/s Growth, size, equity premium myopia.	2
UNIT VIII	Market Bubbles: Identification and causes, investor behaviour during bubbles, case study of prominent market bubbles/scams.	3

Section B

At least one case study/problem from each unit. Questions will be case/inferences/application based

PRACTICAL COMPONENT

- ☐ Analyse a case study on market bubble and its implications on the market.
- ☐ Prepare a questionnaire-based survey comprising 50 respondents to understand their perception towards investments.
- ☐ Prepare a report on anomalies taking a time period of two years.
- ☐ Prepare a decision-making process of value investing and document it.
- ☐ Conduct a survey of 50 respondents to judge the level of biasness towards investment.

BOOKS RECOMMENDED

1. Prasanna Chandra, Behavioural Finance, McGraw Hill, 2020, 2nd edition.
2. Sujata Kapoor, Jaya Mamta Prasad, Sage, 2019. 5th edition.
3. M. M. Sulphey, Behavioural Finance, PHI, 2014, 1st edition.
4. Parag Parikh, Value Investing and Behavioural Finance, McGraw Hill, 2009. 2nd edition.
5. James Montier, Behavioural Finance: Insights into Irrational Minds and Markets, Wiley Finance,2008.
6. Lucy Ackert and Richard Deaves, Understanding Behavioral Finance, Cengage Learning, India Edition2012.
7. Sujata Kapoor, Jaya Mamta Prosad, Behavioural Finance, Sage Publications, 2019

LIST OF JOURNALS/PERIODICALS/MAGAZINES/NEWSPAPERS

1. Journal of Behavioral Finance, Taylor & Francis.
2. Journal of Behavioral and Experimental Finance, Elsevier.
3. Review of Behavioral Finance, Emerald Publishing.
4. Review of Behavioral Finance, Wiley Online Library.

Marketing (Group B)

S.No.	Subject Code	Subject Title
Semester IV		Consumer Behavior
1.	M-420	Services Marketing
2.	M-421	International Marketing Management
3.	M-422	Rural Marketing
4.	M-423	Digital and Social Media Marketing
5.	M-424	Customer Relationship Management
6.	M-425	

M-420-CONSUMER BEHAVIOUR

OBJECTIVES

1. To develop a comprehensive picture of the consumer psychology in order to explain consumer motivation, learning, personality, perception, and attitude formation.
2. To develop an understanding of consumers' social and cultural settings to examine how group involvement and membership influence one's actions as a consumer.
3. To integrate the various psychological, social and cultural concepts and build a useful conceptual framework that would equip the students for practical application of consumer behaviour principles on strategic marketing decisions.

LEARNING OUTCOMES

1. To identify the dynamics of human behaviour and the basic factors that influence the consumers' decision process.
2. To demonstrate how concepts may be applied to marketing strategy.
3. To explore and compare the core theories of consumer behaviour in both consumer and organisational markets.
4. To appraise models of Consumer Behaviour and determine their relevance to particular marketing situations.

Section-A

UNIT	COURSE DESCRIPTION	SESSIONS
UNIT I	Consumer Behavior: Introduction to Consumer Behavior, Nature & Psycho-Demographics of Indian Consumers, Consumer Movement in India, Rights & Responsibilities of consumers and Benefits of consumerism.	3
UNIT II	Individual Determinants of Consumer Behavior I: Motivation, Personality, Consumer Perception. Individual Determinants on Consumer Behaviour II: Learning theories and their applications, Brand loyalty, Brand extensions. Consumer behaviour and society.	5
UNIT IV	Indian Perspective on Culture: Factors affecting culture, Role of customs, values and beliefs on Consumer Behaviour. Subculture: Cross-cultural consumer analysis: Problems and Strategies in India.	3
UNIT V	Group Influences: Family buying decision & marketing implications. Reference Groups: Understanding the power & benefits of reference groups, Factors that affect reference group influence, Types of reference groups, Celebrities, Endorsements and Marketing Implications.	5

UNIT VI	Consumer Decision Making Models: Models of decision making, Diffusion of innovations: Diffusion Process, Adoption Process.	1
UNIT VII	Organisational Buying: Differences between Industrial Marketers and Consumer Market, Organizational and Consumer Buying, Buying Decisions in Organizational Buying Process; Types of Decision Making, Organization Buyer's Decision-Making Process.	5
UNIT VIII	Consumer Behavior Analysis and Marketing Strategy: Consumer Behavior and Product Strategy, Pricing Strategy, Distribution Channel Strategy, Promotion Strategy.	2

Section B

At Least one Case Study from each Unit. Questions will be case/inferences/application based.

PRACTICAL COMPONENT

☐ Find three advertisements that appeal to the need for power, affiliation and achievement and discuss their effectiveness. Rewrite these for persons in different levels of Maslow's Hierarchy?

☐ Students can visit a mall and unorganised retail outlets and observe the behaviour of consumers of different demographic segments while buying different categories of goods. Come back to class and present the findings/observations, followed with a group discussion.

☐ Choose five recent successful FMCG Advertisement campaigns and identify their insights through consumer interviews. Then, present your findings to the class. Conduct a survey on youth to find the influencing factors in their purchase of mobiles, shoes, bags etc. There are now plenty of advertisements regarding most products – how do they deal with this information overload?

☐ Students can carry out a primary, qualitative/quantitative research on any dimension related to consumer behaviour.

☐ Students can identify how marketers are addressing the various components and stages of the decision-making process.

BOOKS RECOMMENDED

1. Solomon, M.R. (2020). Consumer Behavior: Buying, Having, Being, Pearson Publication.
2. Sethna, Z. & Blythe, J. (2020). CONSUMER BEHAVIOUR, Sage Publications Pvt. Ltd.
3. Sethna, Z. & Blythe, J. (2019). Consumer Behaviour, Sage publication.
4. Mothersbaugh,D.L., Hawkins, D.I. & Mookerjee, A.(2019). Consumer Behavior: Building Marketing Strategies, Mc Graw Hill publication.
5. Kapoor, Nnamdi, R.O., Madichie (2017), Consumer Behaviour, Mc Graw Hill publication.
6. Solomon, (2015). Consumer Behaviour, Pearson India.

LIST OF JOURNALS/PERIODICALS/MAGAZINES/NEWSPAPERS

1. Journal of Consumer Behaviour, Wiley Online Library.
2. Journal of Business Research, Elsevier.
3. Journal of Consumer Research, Oxford Academic.
4. Journal of Consumer Psychology, ScienceDirect.com.

M-421-SERVICES MARKETING

OBJECTIVES

1. To provide an in-depth appreciation and understanding of the unique challenges inherent in managing and delivering quality services.
2. To understand how the interface between customers and the service is managed, identify and close the gaps for improving the services.
3. To acquaint the students with elements of services marketing mix, ways to manage the service delivery process and strategies to effectively implement Services marketing.

LEARNING OUTCOMES

1. Understand the key concepts and principles of services marketing, unique characteristics of service products, impact on design and execution of marketing strategies for services.
2. Foster critical thinking and problem-solving skills in services management.
3. Design service quality measurements to build customer loyalty and evaluate the effectiveness and efficiency of customer service offerings.
4. Manage service blueprinting, integrate new technologies, and address other key issues facing today's customer service providers and service managers.

Section –A

UNIT	COURSE DESCRIPTION	SESSIONS
UNIT I	Introduction to Services Marketing: Understanding Services, Differences in Goods versus Services, Emerging Service Environment, Classification of Services, Service Encounters.	2
UNIT II	Service Market Segmentation, Targeting & Positioning: Process of market segmentation, Targeting and Positioning, service value addition to the service product, planning and branding service products, new service development, concept of flower of Service.	3
UNIT III	Pricing Strategies for Services: Service pricing, revenue Management, pricing objectives, Challenges in Pricing.	4

UNIT IV	Service Promotion: The role of marketing communication, setting Implication for communication strategies, communication objectives, marketing communication mix, role of Digital Marketing and social media marketing.	3
UNIT V	Place & Process Decisions: Methods of Service Delivery, Role of Intermediaries, Franchising, Service Process, Developing a Service Blueprint, Application of Service Blueprint.	3
UNIT VI	People, Service Employees, Service Encounter, Service Environment, Service Leadership & Culture, Physical Evidence, Service Climate, Service Scapescape Model, Designing Servicescapes.	3
UNIT VII	Service Excellence, Delivering Value, Service Failure & Recovery, Service Quality, SERVQUAL Model, Customer Loyalty.	4
UNIT VIII	Customer Relationship Marketing: Relationship Marketing, the nature of service consumption, understanding customer needs and expectations, Strategic responses to the intangibility of service performances.	2

Section B

At Least one Case Study from each Unit. Questions will be case/inferences/application based.

PRACTICAL COMPONENT

Students are required to select one high-contact and one low-contact service. Using the Flower of Service framework, define the core product and then identify and categorise all the supplementary elements for each of the two services. Describe the results of your analysis. Finally, explain how the petals can be used for service differentiation and competitive advantage.

Students shall devise a service script for a high-contact service. Possibilities include visiting a lawyer, getting a car repaired, eating a restaurant meal, renting a car, getting a haircut, visiting a fitness center or health club, attending a theatre performance etc. Students may need to take notes during their visit so that they can remember the process accurately. After you visit the service firm in a team, have to create a blueprint with maximum details.

☐ Suppose you are the marketing manager of a social club in Jaipur. What factors will you keep in mind to meet customer expectations? (Use SERVQUAL method) Students have to identify 2-4 points in the service, where the quality of the service needs to be improved or where problems in service quality are likely to occur. Then, using the Gaps-model as guide, try to find root causes for these shortcomings and identify the relevant.

☐ Select a service that you have to consume or experience (hairdresser, drinking coffee in a café, having a meal in a restaurant, etc.). Before consumption/experience, you need to discuss and prepare a brief paragraph about the type and level of service you expect to receive. You have to act as mystery

shopper and experience the service as if you were a real consumer. In some instances, the cost might be involved here, so choose the service you are evaluating wisely. You have to assess the service across the following criteria:

- Reliability
- Responsiveness
- Assurance
- Empathy
- Tangibles
- Overall service quality impression

Prepare a short presentation of the assessment with recommendation on how the service can be improved.

BOOKS RECOMMENDED

1. Chatterjee, J. Lovelock, C. & Jochen Wirtz, J. (2020). Services Marketing, 8/e Eighth Edition, Pearson Education.
2. Zeithaml, Bitner, M.J., Gremler, D.D., (2018). Services Marketing: Integrating Customer Focus Across the Firm, Seventh Edition, New York, NY: McGraw-Hill Companies.
3. Dutta, K. & Vinnie Jauhari, V. (2017). Services Marketing: Text and Cases Oxford University Press; Second edition.
4. Hoffman, K.D and Bateson, J.E.G. (2017). Services Marketing: Concepts, Strategies and Cases, Cengage India Private Limited; Fifth edition.
5. Verma, H. (2017). Service-Marketing: Text and Cases, 2/Ed, Pearson Education India; 2nd edition.
6. Chowdhary, N. & Chowdhary, M. (2005). Textbook of Marketing of Services: The Indian Experience, Macmillan India Ltd.

LIST OF JOURNALS/PERIODICALS/MAGAZINES/NEWSPAPERS

1. Journal of Service Marketing, SCI.
2. Service Business: An international Journal, Springer.
3. Journal of Service Marketing, Emerald Insight.
4. Service Marketing Quarterly, Taylor & Francis.

M-422-INTERNATIONAL MARKETING MANAGEMENT

OBJECTIVES

1. To acquire the basic knowledge, concepts, tools, and international terminology necessary to understand global problems and issues.
2. To understand how companies adjust their international strategies based on the global environmental changes.
3. To build skills and understanding of nations' cultures by critically analysing the social, political, legal, and economic forces that affect the business performance in international marketing.

LEARNING OUTCOMES

1. To analyse the environmental variables that influence international marketing.
2. To devise strategies and tactics that can lead to successful international marketing strategies given environmental constraints.
3. To analyse the issues and challenges related to market entry and expansion strategies into foreign markets.
4. To understand how managers perform the functional tasks that constitute international marketing such as marketing intelligence and "mix" adaptations.

Section-A

UNIT	COURSE DESCRIPTION	SESSIONS
UNIT I	International Marketing: Concept, Domestic Vs. International Marketing, E.P.R.G. Framework, International Trade Environment, Political Environment, legal and Regulatory Environment, Socio-cultural Environment, Economic Environment, Technological Environment.	3
UNIT II	International Market Environment: Identifying and analysing opportunities in the international trading environment, understanding the changes in the world trading environment-IMF, W.T.O., impact on international marketing.	3
UNIT III	International Marketing Research: Concept of Marketing Research, International Marketing Research Process, market surveys, marketing information system, International Product Life Cycle, Selecting Market Entry Modes.	4
UNIT IV	International Product Policy and Planning: International new Product Development, International Product Planning, International Product Adoption and Standardisation, International Market Segmentation, Influences on Marketing Plan and Budget, International Product Marketing.	2

UNIT V	Managing International Pricing: Environmental influences on Pricing Decisions - Grey Market goods, Transfer pricing, Pricing Strategies.	4
UNIT VI	Strategies: International Introduction, Promotional Strategies, Communications Process, communication principles, Promotion Appeals, Media Selection, Personal Selling, Public Relations and Publicity, Sales Promotion, advertising, e-marketing.	3
UNIT VII	International Distribution and Logistics: International Logistics Planning, Distribution – Definition and Importance, Direct and Indirect Channels, factors Involved in Distribution Systems, Modes of Transportation, International Packaging.	3
UNIT VIII	Evaluating and Controlling: Evaluating and controlling international marketing strategy, Legal and Ethical Issues in International Marketing, ethical Consideration in International Marketing.	2

Section B

At Least one Case Study from each Unit. Questions will be case/inferences/application based.

PRACTICAL COMPONENT

An India-based firm is engaged in importing rough stones from Africa and polishing and selling precious stones in the international market. The firm has recently started polishing Tanzanite-stones imported from Tanzania. As recently appointed head of the firm's International Market development Division, prepare a research plan detailing out the requirement for secondary information and possible sources of collecting information.

☐ Surf the internet and list various resources from where you could get information that can be used for conducting international market research. Critically comment on the limitations of each of the information sources from the internet. Discuss your findings.

☐ Suppose you are the marketing manager of a modern and technically equipped international Gym chain. What measures will you take before opening a store or chain of stores in a new city?

☐ Write a ten page essay on 'Challenges and opportunities in International Marketing'. Also mention Favourable government policies for promoting International Trade in India.

☐ Watch one interview of any International Business Personality of your choice; create a PowerPoint Presentation on same personality and include the following heads:

☐ Life story
☐ Achievements
☐ Challenges Faced
☐ Marketing Campaigns of the organisation

BOOKS RECOMMENDED

1. Paul, J. and Kapoor, R. (2012). International Marketing-Text and Cases, Tata McGraw Hill.
2. Joshi, R.M. (2014). International Marketing, Oxford University Press.
3. Green, M.C. & Keegan, W.J. (2020). Global Marketing, 10th Edition, Pearson.
4. Jain, K.S. (2014). Export-Import Procedures and Documentation, Himalaya Publishing House.
5. Philip, C.R. & John, G.L. (2019). International Marketing, McGraw Hill; 18th edition.
6. Mathur, U.C. (2008) INTERNATIONAL MARKETING MANAGEMENT Text and Cases, Sage Publications Pvt. Ltd.

LIST OF JOURNALS/PERIODICALS/MAGAZINES/NEWSPAPERS

1. Journal of International Marketing Management, Sage Publoshng.
2. Journal of International Marketing Management, American Marketing Association.
3. Journal of International Marketing Management. JSTOR
4. Journal of Global Marketing, Taylor and Francis.

M-423-RURAL MARKETING

OBJECTIVES

1. To make students understand the rural market environment and 4 A's of rural marketing.
2. To provide an understanding of the changing profile of the rural consumer, their consumption pattern, and buying process.
3. To comprehend development of product, price, distribution and communication strategies for different segments of rural markets.

LEARNING OUTCOMES

1. Understand the rural marketing concepts and the contemporary issues in rural marketing.
2. Analyse the rural market based on segmentation, targeting and positioning.
3. Know the rural consumer behaviour and their decision-making process.
4. Develop strong foundation of applied knowledge, concepts and analytical skills for effective marketing of products and services to rural consumers.

Section-A

UNIT	COURSE DESCRIPTION	SESSIONS
UNIT I	Introduction to Rural Marketing: Definition, concept and scope of rural marketing, Features of rural markets, classification of rural markets, Rural Marketing Mix- 4 A's concept, Opportunities and Challenges, Difference between Urban and Rural Markets.	3
UNIT II	Rural marketing environment: Evolution of Rural Marketing, Rural Environment: Demographic environment, Social & Cultural environment, Technological environment, Physical environment, political environment, Rural economic environment and economic structure, Rural Development Programme and Schemes of Government.	3
UNIT III	Rural Consumer behaviour: Factors affecting Consumer Behaviour, Cultural factors, social factors, Personal Factors, Psychological factors, Consumer Buying Decision Process, Role of Opinion Leaders.	3
UNIT IV	Researching, Segmenting and Targeting Rural Markets: Rural Marketing Research Process, Tools used in Rural Marketing Research, Bases of Segmentation, Thomson Rural Market Index, Evaluation, Selection and coverage of Segments, Identifying, selecting, developing and communicating the positioning concept.	4
UNIT V	Rural Product and Pricing Strategies: Rural Product classification, Product decisions and strategies, Rural product, Designing and new product development, Brand building in Rural India, Packaging and after-sales service for rural markets, Fake Brands, Pricing in rural India, Price setting strategies.	3

UNIT VI	Rural Distribution Strategies: Rural Channel members, Channel behaviour, Conventional Distribution Models in Rural Markets, Rural retail environment, Rural specific Distribution Models, Rural Logistics: Hub & Spoke System, Syndicated Distribution.	3
UNIT VII	Communication strategies for Rural Markets: Challenges in Rural Communication, The Communication Process, Designing the message, Creating an advertisement for rural audiences, Rural media- Conventional and Non-Conventional Media, Role of Social Media in Rural Marketing.	3
UNIT VIII	Rural Services Marketing and future of Rural Marketing: Telecommunications and I.T. in Rural India, Financial Services, Rural healthcare services, Future of Rural Marketing in India.	2

Section B

At Least one Case Study from each Unit. Questions will be case/inferences/application based.

PRACTICAL COMPONENT

Imagine that you are the product development manager in a fairness cream manufacturing company. How would you augment the product and create its brand identity in rural markets?

Students should design new product launch strategies in FMCG and Consumer Durable category keeping the rural marketing mix 4 As (Awareness, Acceptability, Adaptability and Affordability) in mind.

Undertake a rural survey on purchase patterns of automobiles, mobiles or any other consumer durable.

Study H.U.L.'s "Project Shakti" model, Coca-Cola "Parivartan", and I.T.C.'s e-choupal initiative and make a presentation on the same.

Visit a rural village and find out about rural communication strategies, including use of unconventional media for promoting products.

An international processed food manufacturing company has come up with its new fortified products (biscuits and snacks), which it wants to promote in iron-deficient areas of India. Devise communication and distribution plan for the company.

BOOKS RECOMMENDED

1. Kashyap, P. (2016). Rural Marketing, Third Edition, Pearson Education India.
2. Puri, S.S.(2020). Rural Market Unleashed: Position Yourself in the Rural Market Effectively, First Edition, Notion Press.
3. Kumar, D., Gupta, P. (2019). Rural Marketing: Challenges and Opportunities, SAGE Publications.
4. Krishnamacharyulu. (2010). Rural Marketing: Text and Cases, Second Edition, Pearson Education India.
5. Kumar D. & Gupta P. (2017). Rural Marketing Challenges and Opportunities, Sage Publications Pvt. Ltd

6. Dogra, B., Ghuman, K.(2007) Rural Marketing: Concepts and Practices, First Edition, McGraw Hill Education .

LIST OF JOURNALS/PERIODICALS/MAGAZINES/NEWSPAPERS

1. Journal of Rural Marketing, Rural Marketing Agencies Association of India (R.M.A.A.I.).
2. International Journal of Rural Management, SAGE Publications.
3. Journal of Rural Studies, Elsevier.
4. International Journal of Rural Management (I.J.R.M.), Institute of Rural Management Anand (I.R.M.A.).

M- 424-DIGITAL AND SOCIAL MEDIA MARKETING

OBJECTIVES

1. To develop a framework for understanding the forces driving the digital revolution in marketing and business.
2. To understand a digital marketing mix
3. To integrate different digital media and create effective marketing content.

LEARNING OUTCOMES

1. Able to identify the role of digital and social media marketing for success.
2. Manage customer relationships across all digital channels and build better customer relationships.
3. Develop insight on Current Trends of Digital and Social Statistics and gain understanding of marketing analytics.
4. Gain knowledge, skills and competencies to design digital marketing plans in order to manage a digital marketing programme efficiently

Section - A

UNIT	COURSE DESCRIPTION	SESSIONS
UNIT I	Introduction to Digital Marketing Evolution of Digital Marketing from traditional to the modern era, Role of Internet; Current trends, Info-graphics, implications for business & society; Emergence of digital marketing as a tool; Digital marketing strategy; Paid, Owned, Earned Media (P.O.E.M.)framework, Digital marketing plan.	3
UNIT II	Internet Marketing and Digital Marketing Mix – Internet Marketing, opportunities and challenges; Digital marketing framework; Digital Marketing mix, Impact of digital channels on I.M.C.; Search Engine Advertising: - Pay for Search Advertisements, Ad Placement, Ad Ranks, Creating Ad Campaigns, Display marketing: - Types of Display Ads - Buying Models - Programmable Digital Marketing - Analytical Tools - YouTube marketing, online branding.	3
UNIT III	Social Media Marketing: Introduction to social media platforms, penetration & characteristics; Building a successful social media marketing strategy, Meaning, Purpose, types of social media websites. Blogging: Types of blogs, Blogging platforms & recommendations. Social Media Engagement, Sharing content on social media, advantages and disadvantages of social media.	3

UNIT IV	Social Media Tools: Facebook Marketing-Introduction, Anatomy of an Ad Campaign, Role of Adverts-Types & Targeting. Linkedin Marketing: Introduction and Importance of Linkedin Marketing, Framing Linkedin Strategy, Lead Generation through Linkedin, Content Strategy, Analytics and Targeting. Twitter Marketing: Introduction to Twitter Marketing, , framing content strategy, Twitter Advertising Campaigns. Instagram and Snapchat: Digital Marketing Strategies through Instagram and Snapchat.	3
UNIT V	Mobile Marketing: Mobile Advertising, Forms of Mobile Marketing, Features, Mobile Campaign Development. Introduction to SEO: Web Analytics, Mobile Marketing, Trends in Digital Advertising– - Introduction and need for SEO, application of internet & search engines; search engine and its working pattern, On-page and off-page optimisation, SEO Tactics - Introduction to Search Engine Marketing(S.E.M.). Web Analytics: Google Analytics & Google Adverts; data collection for web analytics, multi-channel attribution, Universal analytics, Tracking code.	3
UNIT VI	E-Marketing Management: Product – Products on Internet, Creating Customer Value Online– Product Benefits, E-Marketing Enhanced Product Development, Price – Change in Pricing Strategies, Payment Options, Pricing Strategies, Distribution– Online Channel Intermediaries – Distribution Channel Length and Functions, Channel Management and Power, Distribution Channel Metrics.	3
UNIT VII	E-Marketing Research: Data Drive Strategy, Marketing Knowledge Management, Monitoring Social Media, Technology-Enabled Approaches, Real-Space Approaches – Marketing Databases and Data Warehouses – Data Analysis and Distribution, Knowledge Management Metrics. Data Analytics: Introduction, Key terms and concepts. Working with data., setting objectives, goals and KPIs, tracking and collecting data.Analysing data.	3
UNIT VIII	Customer RelationshipManagement: Concept of CRM, goals of CRM, e-CRM,benefits of e-CRM, role of CRM technology, e-enterprise,next-generation CRM.	3

Section B

At Least one Case Study from each Unit. Questions will be case/inferences/application based.

PRACTICAL COMPONENT

The students need to create a hypothetical business and devise its launch campaign. Students should consider website design, blog strategy, search engine optimisation, landing page creation, call to action placement, social media interaction and email marketing.

Divide students into two groups. One will advocate inbound marketing as an effective marketing strategy and the other traditional marketing strategies. For the debate, students should use specific business examples to demonstrate that their advocacy strategy effectively generates leads and customers.

Collect a group of recently published blog posts from various blogs and industries and make a list of their titles. Students to discuss whether they think the article title would successfully attract visitors through search engines and social media. Students to carefully read full articles. Create new headlines for each blog post optimising for keywords, social media sharing, and comprehensive summary.

Students to write a blog post to get as many page views as possible in 24 hours. After the 24 hours are up, students should prepare data to show their success or progress and why they were the most successful. Then, in a class discussion, students should examine the five top-performing posts and discuss how the headline, topic, content and promotion strategies may have driven that success.

Students to create a Facebook Fan Page or a Group on Facebook for a hypothetical company. Compare how the capabilities of each Facebook tool differ and discuss which might be better depending on the campaign.

Each student should select a business website of an industry of their choice. Next, students in each group will review their Website and identify elements that are missing or can be improved to increase the Website's marketing effectiveness. After compiling a list, students should run their Website on Website Grader and compare elements they identified with those they identified. Using the feedback from Website Grader, students should propose for the company to improve its on-page SEO, off-page SEO and overall website quality.

BOOKS RECOMMENDED

1. Hanlon, A. (2021).Digital Marketing : Strategic Planning and Integration, Sage Publications Pvt. Ltd.
2. Tracy L. Tuten, T. L., Solomon M.R. & Rishi B. (2020). Social Media Marketing, 3e, Sage Publications Pvt. Ltd.
3. Heinze, A., Fletcher,G., Rashid,T. & Cruz, A. (2020). Digital And Social Media Marketing A Results-Driven Approach, Taylor and Francis publication.
4. Kagan, J. & Singh, S.S. (2020). Digital Marketing: Strategy & Tactics, Wiley Pvt. Ltd.
5. Visser, M., Sikkenga, B & Mike (2018). Digital Marketing Fundamentals, Routledge Publications.

6. Gupta, S. (2017). Digital Marketing, Mc Graw Hill publication.

LIST OF JOURNALS/ PERIODICALS/ MAGAZINES/ NEWSPAPERS

1. Journal of Digital & Social Media Marketing, Henry Stewart Publications.
2. International Journal of Internet Marketing and Advertising, Inderscience publications.
3. Journal of Digital and Social Media Marketing by Scimago Journal and country rank.
4. Journal of Innovations in Digital Marketing, Luminious insights.

M-425-CUSTOMER RELATIONSHIP MANAGEMENT

OBJECTIVES

1. To emphasise on the importance of acquiring customers and retaining them for a lifetime.
2. To provide a conceptual understanding of CRM, its processes, and structure.
3. To enable participants to develop analytical approaches, methodologies, tools, and techniques for applying CRM.

LEARNING OUTCOMES

1. Understand the benefits delivered by CRM and comprehend strategies for its effective implementation.
2. To critically evaluate recent trends and issues in CRM.
3. Implement various technological tools for data mining and have conceptual understanding of e-CRM.
4. Design customer relationship management strategies by understanding customers' preferences for the long-term sustainability of the Organisations.

Section-A

UNIT	COURSE DESCRIPTION	SESSIONS
UNIT I	Customer Relationship Management Fundamentals: Relationship Marketing, Significance of relationship marketing, Historical Perspectives, CRM cycle, CRM Strategy, Customer Life Time Value, Relationship Life Cycle.	4
UNIT II	Building Customer Loyalty: Prerequisites for Effective Customer Relationship Management, Customer Acquisition, Customer Knowledge Management for Effective CRM, Customer Retention Process, Strategies to Prevent Defection and Recover Lapsed Customers.	3
UNIT III	CRM Implementation: CRM framework for Implementation, Implementing CRM Process, Integration of CRM with ERP System, Barriers to effective CRM .	2
UNIT IV	Functional Components of CRM: Database Management: Database Construction, Data Warehousing, architecture, Data Mining. Characteristics, Data Mining tools and techniques, Meaning, Significance, Advantages, Call Center, Multimedia Contact Center, Important CRM software's.	2
UNIT V	Customer Relationship Management: Technology Dimensions: Perspective,- E-CRM in Business, CRM: A changing Features of e-CRM, Advantages of e-CRM, Technologies of e-CRM, Voice Portals, Web Phones, Virtual Customer Representative, Customer Relationship Portals.	3

UNIT VI	Sales Force Automation (S.F.A.): Definition and need of Sales Force Automation, barriers to successful Sales Force Automation functionality, technological aspect of Sales Force Automation, data synchronisation, flexibility and performance, reporting tools.	4
UNIT VII	Impact of CRM on Marketing Channels: Meaning, how does the traditional distribution channel structure support customer relationship, emerging channel trends that impact CRM.	4
UNIT VIII	Trends and Issues in CRM: CRM in e-business (B2B & B2C), Measuring the Effectiveness of CRM, Factors Influencing the future of CRM.	2

Section B

At Least one Case Study from each Unit. Questions will be case/inferences/application based.

PRACTICAL COMPONENT

☐ Identification of the type of customer information held by the chosen organisation and recommendations made for how 'information gaps' could be filled for acquisition and retention of customers

☐ Evaluation of how customer information held by the chosen organisation is applied in the selection and use of two promotional tools to build long¯-term relationships.

☐ Write a ten-page essay on "CRM failure" in the chosen Organization.

☐ Prepare a Comparative study report of different CRM software's and their applications.

☐ Visit one public and one private sector bank and study the effectiveness of CRM services provided by the Banks to its customers. Compile the observations in a powerpoint presentation.

BOOKS RECOMMENDED

1. Buttle, F. (2019). Customer Relationship Management, Routledge.
2. Fatouretchi, M. (2019). The Art of CRM: Proven strategies for modern customer relationship management, Packt Publishing.
3. Baran, R. J. & Robert J. Galka, R.J.(2016). Customer Relationship Management: The Foundation of Contemporary Marketing Strategy, Routledge publication.
4. Chorianopoulos, A. (2016). Effective CRM using Predictive Analytics, Wiley Pvt. Ltd.
5. Peppers, D.& Rogers, M. (2016). Managing Customer Experience and Relationships: A Strategic Framework, Wiley Pvt Ltd.
6. Peelen, E. & Beltman, R. (2013). Customer Relationship Management, Pearson Education.

LIST OF JOURNALS/PERIODICALS/MAGAZINES/NEWSPAPERS

1. International Journal of Research in Marketing, Elsevier
2. International Journal of Customer Relationship Marketing and Management, Scimago Journals
3. International Journal of Electronic Customer Relationship Management, Inderscience Publisher
4. International Journal on Customer Relations, Publishing India Group

Human Resource Management (Group C)

S.No.	Subject Code	Subject Title
SemesterIV - Electives		Employee Relations & Labour Laws
1	M-430	Performance Management System
2	M-431	Cross Cultural Human Resource Management
3	M-432	Human Resource Analytics
4	M-433	

M-430: EMPLOYEE RELATIONS & LABOUR LAWS

OBJECTIVES	1. To Provide conceptual framework of Industrial Relations. 2. To make students aware about the major provisions of Indian Labour legislations. 3. To make students aware with the basic requirements and mandate of labour legislations.
LEARNING OUTCOMES	1. Knowledge of Industrial Relations framework. 2. Competency to understand the importance of Employee Relations within the perspective of Industrial Relations. 3. Competency to interpret and implement the Labour Laws within organization. 4. Competency to use Collective Bargaining and Grievance redressal Mechanism.

Section A

UNIT	COURSE DESCRIPTION	SESSIONS
UNIT I	Introduction and Importance of Employee Relations Management: Employee Management Tool, Aspects of Industrial Relations, Emerging challenges of IR in India, Linking Industrial Relations with economic growth of a country.	3
UNIT II	Trade Unionism: Development of Trade Unionism, Functions, Type and Structure, Problems & Suggestive Remedial Measures of Trade Unions, Major Provisions of the Trade unions act, 1926.	3
UNIT III	Collective Bargaining: Significance, Types & Procedure of Collective Bargaining, Employee Participation and Employee Involvement- Objectives, Advantages of Participation, Employee Participation in India, Methods of Participation.	3
UNIT IV	Discipline: Misconduct, Disciplinary Action, Types of Punishments, Code of Discipline, Domestic Enquiry. Grievance: Concept, Types, Grievance Settlement Procedure.	4
UNIT V	Industrial Disputes Preventive & Settlement Machinery in India: The Industrial Disputes Act, 1947 Settlement and Prevention of Disputes.	3
UNIT VI	Law of Wages: Code on Wages, 2019, Wages Code Concerns, Impact of the Code and Way Forward.	2

UNIT VII	Major Provisions of the Factories Act 1948: Factories Act, 1948, TheInspecting Staff, Health, Safety, Welfare, Working HoursofAdults, Employment of Young Persons, Annual LeaveWithWages, Special Provisions, Penalties And Procedure.	3
UNIT VIII	The Industrial Employment(Standing Orders) Act 1946: Major provisionofTheIndustrial Employment (Standing Orders) Act 1946.	3

Section B

At Least one Case Study from each UNIT.Questions will be case/ inferences/ application based.

PRACTICAL COMPONENT

Students should present the interpretation of Laws through Case study on Industrial disputes.

- ☐ Stimulate their thinking on rationale behind the laws and their enforcement problems through Case Analysis.
- ☐ Develop an understanding of the interaction pattern among labour, management and the State through structured case and role plays.
- ☐ Awareness of certain important and critical issues in Industrial Relations and tackling them through case studies and role plays.

Role plays/ case studies on the existing industrial disputes.

BOOKS RECOMMENDED

1. Sahoo, D. P. (2020). Employee Relations Management: Text and Cases. Sage/Texts.
2. Industrial Relations, Trade Unions and Labour Legislation. (2017). India: Pearson India.
3. Srivastava, S. C. (2012). Industrial Relations and Labour Laws, 6th Edition. India: Vikas.
4. Sharma, R. C. (2016). Industrial Relations and Labour Legislation. India: PHI Learning.
5. Taxmann (2009) Labour Laws", Taxmann Allied Services Pvt. Ltd.
6. Kumar, H. L. (2010). Compliances Under Labour Laws. India: Universal Law Publishing.

LIST OF JOURNALS/PERIODICALS/MAGAZINES/NEWSPAPERS

1. Industrial Relations Journal, John Wiley & Sons
2. European Journal of Industrial Relations, Sage Publications
3. Industrial and Labor Relations Review, Sage Publications
4. Management and Labour Studies, Sage Publications

M-431: PERFORMANCE MANAGEMENT SYSTEMS

OBJECTIVES

1. To make students understand the basic concepts of Performance Management.
2. To expose students to different approaches of Performance Appraisal with their industry application.
3. To explore different types of performance management and evaluation criteria, techniques and programmes.

LEARNING OUTCOMES

1. Understand and apply performance management processes.
2. Learn to manage underperformance using a defined performance improvement process.
3. Ability to provide effective and regular feedback on performance.
4. Develop ability to set clear expectations that improve performance and productivity.

Section A

UNIT	Course Description	SESSIONS
UNIT I	Introduction of Performance Management System: Definition of Performance Management System, Performance Planning, Performance Coaching and Performance Appraisal, Role of Appraisals in Performance Management, Role of Performance Management System, Characteristics of an ideal PM system.	4
UNIT II	Reviewing & Managing Performance: Performance Appraisal: Definition and objectives of Performance Appraisal, Process of Performance Appraisal- Self Assessment and its importance, Methods of Performance Appraisal- Traditional and Modern; Performance Management Process.	3
UNIT III	Performance Management and Strategic Planning: Definition and Purpose of Strategic Planning, Process of Linking Performance Management to the Strategic Plan.	2
UNIT IV	Performance Coaching: Performance Appraisal as a training need assessment, Counseling for better performance, Feedback Mechanisms in Organizations- training the superiors to give constructive feedback.	3
UNIT V	Potential Appraisal: Meaning & objectives of Potential Appraisal, Potential Appraisal & Performance Appraisal.	2
UNIT VI	Models for Assessing Performance: Balance score card- Different Perspectives and Benefits, HR Scorecard- The HR Scorecard Approach, Process of Developing the HR Scorecard, Benefits of the HR Scorecard, Building a High Performance Culture.	3
UNIT VII	Employee Development and Retention Strategies: Personal Development Plans, Performance Management & Reward Systems- Performance linked remuneration system, Performance linked career planning & career development. Employee Retention- Meaning, Factors Responsible for High	4

Employee Turnover, Employee Retention Strategies.

UNIT VIII Ethics in Performance Management: Ethical Perspective in Performance Appraisal System, Objectives of Performance Management Ethics, Code of Ethics and Code of Conduct, Implementing Code of Ethics in the Workplace, Ethical Dilemma in Performance Management. 3

Section B

At least one Case study from each UNIT. Questions will be case/inferences/application based.

PRACTICAL COMPONENT

Conduct a study on how talents are acquired and retained – in various industries – and various strategies followed by the respective companies.
Students are excepted to collect the information related to attrition rates in various sectors and identify the possible reasons for the same through a survey.
Conduct role plays on Performance Coaching.
Conduct role plays and presentations on giving constructive feedback.
Student should prepare a performance appraisal form.

BOOKS RECOMMENDED

1. Armstrong Michael, (2020). Performance Management: Key Strategies and Practical Guidelines, Kogan Page.
2. Rao, T. V. (2016). Performance management: toward organizational excellence. SAGE Publications India.
3. Armstrong Michael, (2014). Handbook of Performance Management, Kogan Page, fifth edition.
4. Dessler Gary, (2011). Human Resource Management, New Delhi, Pearson Education Asia.
5. Aguinis Herman, (2009). Performance Management, Pearson Education.
6. Durai, Pravin, (2010). Human Resource Management, Pearson, New Delhi.

LIST OF JOURNALS/PERIODICALS/MAGAZINES/NEWSPAPERS

1. Harvard Business Review, Harvard Business Publishing
2. Journal of Human Resource Development, Sage Publications
3. Journal of Applied Behavioural Science, Sage Publications
4. Human Resource Development Review, Sage Publications
5. International Journal of Human Capital and Information Technology, IGI Publishing

M-432: CROSS CULTURAL HUMAN RESOURCE MANAGEMENT

OBJECTIVES

1. To familiarize students with the latest global trends in HRM, HR Systems & policies.
2. To develop understanding for global managerial staffing & International decision-making.
3. To understand the challenges and development in international human resources management, the stages of internationalization of companies and methods of entry into international business.

LEARNING OUTCOMES

1. Understand the institutional context of international business; different employment standards and laws that relate to international human resource management; obstacles to multinational bargaining; approaches to multinational enterprises and labour relations.

2. Role of IHRM to develop leaders in a multinational organization; how companies plan development activities for their leaders based on their strategic objectives and company culture.
3. Learn how companies manage their expatriates; who is an expatriate and why companies use expatriates; what are the challenges in international assignments and how to manage the whole expatriation process.
4. Training and development of global employees.

Section A

UNIT	COURSE DESCRIPTION	SESSIONS
UNIT I	Introduction to IHRM: Definition, Difference between IHRM and Domestic HRM, Models of IHRM-Matching model, Models of SHRM in Multinational Companies, Internationalization of HRM. The Challenges of International Human Resource Management.	3
UNIT II	Cultural Factors: Dimensions of culture, the impact of culture on business practices, leadership across cultures, challenging role of Global Manager/Leader, need for cross-cultural management.	3
UNIT III	Issues in Cross-Cultural HR Management: The challenge of managing multicultural/ cross-cultural workgroups and international teams, virtual and multicultural teams, cross-cultural communications and negotiation- Decision-making within diverse cultures - ethical dilemmas and social responsibility facing firms in different cultures, Building cultural intelligence and cultural competence.	4

UNIT IV	Recruitment, Selection and Staffing in International context: International Managers, Parent Country Nationals, Host Country Nationals, Third Country Nationals, Selection Criteria and Techniques, use of selection tests, interviews for international selection, different approaches to multinational staffing decisions, recruitment methods using head-hunters, cross-national advertising, e-recruitment.	4
UNIT V	Training and Development in International Context: Backdrop of international training, role of expatriate training, HCN training, Career Development, repatriate training, components of effective pre-departure training programmes, developing international staff and multinational teams, knowledge transfer in multinational companies.	3
UNIT VI	International Compensation: Forms of compensation and factors that influence compensation policy, key components of international compensation, Approaches to international compensation, compensation practices across the countries, emerging issues.	3
UNIT VII	International Labor Relations: Key issues in International Labor relations, response of labor unions to MNCs.	2
UNIT VIII	HRM Practices in Different Countries: Japan, USA, UK, India and China.	2

Section B

At Least one Case Study from each UNIT. Questions will be case/inferences/application based.

PRACTICAL COMPONENT

- ☐ Students are expected to discuss the challenges faced by Indian multinational companies in deploying employees from one country to another.
- ☐ Design and present a recruitment strategy for any two MNCs.
- ☐ Conduct a debate on the challenges involved in measuring performance of employees in multinational context.
- ☐ Identify whether too much dependence on home market leads to neglect of international opportunities.
- ☐ Identify whether role of international HR expanding from staffing to higher order planning.

BOOKS RECOMMENDED

1. Aswathappa, K., & Dash, S. (2020). International Human Resource Management|. McGraw-Hill Education.
2. Edwards, T. (2017). International Human Resource Management. Pearson Education Limited.
3. Dowling, P. (2004). International Human Resource Management: Managing People in a Multinational Context: Thomson, Cengage Learning.
4. Tayeb, M. (2005). International Human Resource Management: A Multinational Company Perspective. Oxford University Press.
5. Rao, P. L. (2008). International Human Resource Management: Text and cases. Excel Books India.
6. Srinivas, R. Kandula (2018). International Human Resource Management. Sage.

LIST OF JOURNALS/PERIODICALS/MAGAZINES/NEWSPAPERS

1. International Journal of Cross Cultural Management, Sage Publications
2. Management Review- IIM Banglore, Elsevier Ltd
3. Technium Social Sciences Journal, Technium Science
4. ELK's International Journal of Human Resource Management & OB, ELK Asia Pacific Journals

M-433: HUMAN RESOURCE ANALYTICS

Objectives

1. To introduce students to the theory, concepts, and business application of human resource research, data, metrics, systems, analysis and reporting.
2. To develop an understanding of the role and importance of HR analytics, and the ability to track, store, retrieve, analyze and interpret HR data to support decision making.
3. To enable students to use applicable benchmarks/ metrics to conduct research and statistical analysis related to Human Resource Management

Learning Outcomes

1. Student will learn to apply quantitative and qualitative analysis to understand trends and indicators in human resource data; understand and apply various statistical analysis methods.
2. Learn to employ appropriate software to record, maintain, retrieve and analyze human resource information (e.g., staffing, skills, performance ratings and compensation information).
3. Develop understanding to connect HR results to business results.
4. Ability to identify HR benchmarks and metrics relevant to agency mission and goals.

Section A

UNIT	COURSE DESCRIPTION	SESSIONS
UNIT I	Introduction to HR Analytics: Concept and Definitions of Analytics, Importance and Significance of Human Resource Analytics, Benefits of HR Analytics, Evolution of HR Analytics, Application of HR and Predictive Analytics, LAMP framework of HR Analytics.	4
UNIT II	HR Business Process and HR Analytics: HR Research Tools and Techniques, Data Analysis for Human Resources, Parametric and Non-parametric Tests.	2
UNIT III	HR Information Systems and Data Sources: Introduction to HRIS, HRIS for HR Decision-making, HR Data and Data Quality, HR Data Collection, Transforming HR Data into HR Information, Process of Data collection for HR Analytics, HR Reporting, Data Visualization, Performing Root Cause Analysis.	4
UNIT IV	Predictive Analytics: Introduction, Different Phases of HR Analytics or HR Predictive Modelling, Data and Information for HR Predictive Analysis, Software Solutions, Predictive Analytics Tools and Techniques.	3
UNIT V	HR Metrics : Recruitment Metrics, Metrics for Training and Development Function, HR Analytics as a Better Tool for HR Decisions, Compelling Reasons for HR Analytics, HR Dashboards.	4

UNIT VI	HR Scorecard: Linking HR Data to Operational Performance, Creating HR Scorecard, Developing HR Measurement System, Guidelines for Implementing HR Scorecard.	2
UNIT VII	Value Proposition and HR Decisions: Introduction to Value Proposition and HR Decisions, Sustainability in HR Decisions, HR Analytics and HR Value Propositions, HR Optimization through HR Analytics; HR Forecasting, HR Plan and HR Analytics.	3
UNIT VIII	HR Analytics for Future: Understanding Future Human Resources, Generic Future HR Skill Sets and Knowledge, Ethical Issues in HR Analytics, HR Analytics and Empowerment of HR Function.	2

Section B

At Least one Case Study from each UNIT. Questions will be case/ inferences/ application based.

PRACTICAL COMPONENT

Identify any hypothetical HR research issue and collect data for the proposed research to analyze and draw inferences to help in HR decision-making in the hypothetical organization.

☐ Identify the important HR metrics used in manufacturing companies.

☐ Design HR Dashboard on Performance Management issues for the sales force of any organization of your choice.

☐ Study and prepare HR report on any three Performance Metrics of HR function of any Organization.

☐ Prepare a presentation on how human resources can be empowered with HR Analytics with reference to any organization.

BOOKS RECOMMENDED

1. HR Analytics: Understanding Theories and Applications: Deepak Kumar Bhattacharya, Sage 2017.
2. Moore, McCabe, Duckworth, and Alwan. The Practice of Business Statistics: Using Data for Decisions, Second Edition, New York: W.H.Freeman, 2008.
3. Predictive analytics for Human Resources, Jac Fitz- enz, John R. Mattox, II, Wiley, 2014.
4. Human Capital Analytics: Gene Pease Boyce Byerly, Jac Fitz-enz, Wiley,2013.
5. The New HR Analytics: Predicting the Economic Value of Your Company's Human By Jac FITZ-ENZ, 2010.
6. The HR Scorecard: Linking People, Strategy, and Performance, by Brian E. Becker, Mark A. Huselid, Mark A Huselid, David Ulrich, 2001.

LIST OF JOURNALS/PERIODICALS/MAGAZINES/NEWSPAPERS

1. Organizational Dynamics Journal, Elsevier Ltd.
2. The International Journal of Human Resource Management, Taylor & Francis (Routledge)
3. Journal of Organizational Effectiveness, Nature Publishing Group
4. Human Resource Management International Digest, Emerald Group Publishing Ltd

Operations & Supply ChainManagement (Group D)

S. No.	Subject Code	Subject Title
IV Semester		
1	M-440	Supply Chain and Logistics Management
2	M-441	Project Management
3	M-442	Service Operations Management
5	M-443	Technology Management

M-440 SUPPLY CHAIN & LOGISTICS MANAGEMENT

OBJECTIVES 1. To learn about the role of supply chain management in value, customers and pricing. Also to understand how to integrate a manufacturing unit with customer.

2. Logistics as movement of smooth flow of material movement with optimizing the warehousing, transportation and network of materials transfer.

3. To describe the increasing significance of logistics and its impact on both costs and service in business and commerce.

LEARNING OUTCOMES

1. Develop an understanding of the importance of logistics in the formulation of the business strategy and the conduct of supply chain operations.

2. Develop an in-depth understanding of logistics operating areas and their interrelationship.

3. Define and establish the strategic importance of logistics to achieve business success by creating value through supply chains.

4. Analyzing, comparing and interpreting the combination of customer accommodation, market distribution, procurement, and manufacturing represents the supply chain areas that are linked and supported by logistics and lean management.

Section A

UNIT	COURSE DESCRIPTION	SESSIONS
UNIT I	Introduction: Nature of supply chains, Historical perspective, objectives, importance, decision phases and process views of supply chain. Supply chain performance: competitive and supply chain strategies, achieving strategic fit and its challenges. Supply chain drivers and metrics: Impellers of supply chain, financial measures of performance, derivers of supply chain performance, framework for structuring drivers.	3
UNIT II	Logistics Management: Scope and definition, historical perspective, Value added nature of logistics, logistics and supply chain management, customer service and logistics, key issues and challenges for logistics. Designing the supply chain network: distribution networks: Role of distribution in supply chain, factors influencing distribution network design, design options for a distribution network, online sales and distribution network. Network design in supply chain: role of network design, factors influencing network design decisions, framework for network design decisions. Impact of globalization on supply chain networks.	4

UNIT III	Demand forecastinginasupplychain,Aggregateplanningina chain, supply chain, Salesand operationsplanning in supply Coordination in a supply chain: Bullwhip effect, effect on performance, obstacles to coordination in a supply chain, continuous replenishment and vendor managed inventories, collaborative planning forecasting and replenishment.	3
UNIT IV	PlanningandManaginginventoriesinasupplychain: Managing economies of scale in supply chain, managing uncertainty in supply chain, determination of optimal level of product availability	3
UNIT V	Designingandplanningtransportationnetwork:Roleof transportation in a supply chain, modes of transportation and their performance,transportationinfrastructureandpolicies, design optionsforatransportationnetwork,tradeoffs,tailored transportation.	3
UNIT VI	Sourcing decisionsinasupplychain:Roleofsourcing,In-house or Outsource, third party suppliers, total cost of ownership, sharing riskandrewardsinsupplychain. Pricing and revenuemanagementinsupplychain:Role of pricing and revenuemanagementinasupplychain,pricing and revenue managementformultiplecustomerssegments, perishable products,seasonaldemand,bulkandspotcontract.	3
UNIT VII	Sustainability andsupplychain:Roleofsustainability,key pillars of sustainability,sustainability,andsupplychaindrivers, closed loop supply chains. The role of InformationTechnologyinasupplychain	3
UNIT VIII	Decision-support systems for supply chain management: Thechallengesofmodeling,structureof decision support systems, input data analytical tools, presentation tools, supplychaindecisionsupportsystems.	2

Section B

At least one case study/ problem fromeachunit.Questionswillbe case/ inferences/ application based

PRACTICAL COMPONENT

- ☐ Prepare a chart for Supply chain network of petroleum , milk product, etc
- ☐ Study and design a supply chain network for film distribution system to distributors and release of film
- ☐ Study and analysis of logistics integration system of Walmart company
- ☐ Study and prepare a report for decision support system and with retail
- ☐ Analysis for DSS of reliance fresh or any other retail company for FMCG product
- ☐ Study and comparison for pull v/s push system for coke , pepsi products or any other company
- ☐ Study of FMCG inventory management at any retail warehouse/ retail mall.

BOOKS RECOMMENDED

1. Mohanty, Supply chain Management, Pub Wiley, 2016
2. Roberta S Russell and Bernard W Taylor, Operations and supply chain management Pub Wiley, 8th Edition, 2017.
3. Donald J Bowersoy& David J Closs , Logistical Management- - Tata Mc GrawHill, 2015
4. R P Mohanty& S G Deshmukh, Supply Chain Management- Theories & Practice –- Pub: Biztantra House, 2017
5. Donald Waters, Logistics: An introduction to SCM, pub. Palgrave,McMillan, 1st edition, 2003.
6. Sunil Chopra, Supply Chain Management-–Pub: Peter Meindi, 2009
7. Badi N V, Supply chain Management- - Pub : Vrindra Publications (P) Ltd.,Delhi, 2011
8. Sunil Sharma, Supply Chain Management- Concept, Practice &Implementation - Pub: Oxford Univ. Press, 2016
9. V.VSople- Logistics Management-Pub.- Pearson edition-2013

LIST OF JOURNALS/PERIODICALS/MAGAZINES/NEWSPAPERS

1. American Journal of Supply Chain Management,
2. Asian journal of Naval Research Logistics,
3. International Journal of Logistics Management,
4. International Journal of Physical Distribution and Logistics Management

M-441 PROJECT MANAGEMENT

OBJECTIVES
1. Discuss essential concepts project management.
2. Understand the project feasibility analysis and the key steps involved therein.
3. To understand fundamentals of project costing and Budgeting.
4. Discuss the nature and use of network techniques for project management.
5. Understand the importance of scheduling / allocating resources to a project & concept of time and resource constraints
6. Understand the process for crashing a project, and concept of optimum duration/cost projects

LEARNING OUTCOMES:
1. Apply project management tools and methodologies.
2. Develop network for the project
3. Compute critical path and float/slack
4. Successfully plan and implement projects
5. Perform project crashing and optimum resource allocation.

Section A

UNIT	COURSE DESCRIPTION	SESSIONS
UNIT I	Philosophy, Characteristics, and Concepts: Project typology of projects, need for PM, Projects goals, key features: The project manager, the project team, and project management system. Different forms of project management, Project environments	3
UNIT II	Systems approach to project management: Project life cycle, Systems development cycle and project management, Conception phase: Project initiation, Project feasibility, Request for proposal, feasibility study, project proposal, selection of proposal, project contracting. Definition phase, Execution phase, Execution phase: Production and implementation stage. Operation phase	3
UNIT III	Project Planning Tools: Work Breakdown structure and work packages, Responsibility matrix, Events and milestones, Gantt charts	2
UNIT IV	Project scheduling: Project representation as network: AON and AOA, role of dummies, topological ordering of jobs, Fulkerson's rule for node numbering, Adjacency matrix. Time estimates: Optimistic, pessimistic, and most likely time, Single and multiple time estimates. Program Evaluation and review Technique (PERT): The Beta distribution, Expected time or average time, variance of activity, Computation of Earliest expected time and latest allowable occurrence time, Forward pass and backward pass, Slack time, and Critical path. Probability of achieving project completion date. Central limit theorem and application to a network.	4

UNIT V	Critical Path Method (CPM): Network construction, determination of critical path, floats and their significance, Crashing the network and optimum duration of project completion using time scaled network. Resource allocation: Resource smoothing and resource levelling.	4
UNIT VI	Cost Estimating and Budgeting: Cost estimating, cost escalation, cost estimating and systems development cycle, cost estimating process, elements of budgets and estimates. Project cost accounting and management information systems, cost schedules and forecasts. Managing Risks in Projects: Risk concepts, risk identification, sources of risk, identification of project risk, risk assessment, risk impact: consequence and priority, Risk response planning.	4
UNIT VII	Project Control: Internal and external project control, cost accounting systems for project control, project control process, project control emphasis. Performance analysis: Cost and schedule analysis with budged cost of work performed, work package analysis and performance indices. Estimation of cost remaining to complete the project. Variance limits.	3
UNIT VIII	Project Management Information Systems: Functions of PMIS, Computer based PMIS systems: MS Project, Project Scheduler, Primavera etc., Web based project management. Project Evaluation, Reporting and Termination: Formative and summary evaluation, review meetings. Project reporting for top management, project managers and customers. Reasons for project termination, causes of project failure and success. Introduction to project force field analysis	3

Section B

At least one case study/ problem from each unit. Questions will be case/ inferences/ application based

PRACTICAL COMPONENT

Case study related to project formulation & execution of chemical / petrochemical / automobile / building construction and / or event management

- ☐ Example /case for project responsibility matrix
- ☐ Example / case for project appraisal
- ☐ Example / case for scope management
- ☐ Example / case for project Networking
- ☐ Example / case for project quality management
- ☐ Example / case for project risk management
- ☐ Example /case for project performance and closure

Assigning specific situations to the students for developing a project plan and

presenting the same in the class.

Feasibility analysis of a live project to be undertaken by the students.

- Students to visit any two financial institutions and study the project appraisal criteria adopted by them.

BOOKS RECOMMENDED

1. Projects: Planning, Analysis, Selection, Financing, Implementation and Review, Prasanna Chandra, McGraw Hill Education (India) Private Limited, Eighth edition (1 July 2017)
2. Engineering Project Appraisal, Martin Rogers and Aidan Duffy, Wiley-Blackwell; 2 edition, 2012
3. Kerzner, H., Project Management – Systems Approach to Planning, Scheduling and Controlling, 2001.
4. Meredith and Mantel, Project Management, 2001.
5. PMI, A Guide to Project Management Body of Knowledge, 2000.
6. Wiest, J.D. and Levy, F.K., A Management Guide to PERT / CPM, 2001.
7. John M. Nicholas, Project Management for Business, Engineering and Technology, Elsevier publications, 2008.

LIST OF JOURNALS/PERIODICALS/MAGAZINES/NEWSPAPERS

1. American Journal of Supply Chain Management,
2. Asian journal of Naval Research Logistics,
3. International Journal of Logistics Management,
4. International Journal of Physical Distribution and Logistics Management

Project Management Journals and Articles published in India and internationally such as International Journal of Project Management Association, Project Management Journal, Journal of Organizational Change Management, Project Manager Today Periodical, Journal of Productivity Analysis and use of Software like M.S. Project, SAP, etc. is encouraged.

M-442 OPERATION MANAGEMENT IN SERVICE

OBJECTIVES

1. LearnforOperationmanagementinserviceindustry
2. Abletomakeanalysisforcustomerrequirementand product feature
3. Learnandabletoframeforlayoutofdesigningdeliverysystem

LEARNING OUTCOMES

1. Knowledge and understanding of key concepts, tools and techniquespertainingtothemanagementoftransaction-based service processes.
2. Anappreciationoftheroleofstrategicoperationsplanning and skillinconstructingandoptimisingastrategicoperations plan for ServiceIndustry.
3. Developanunderstandingoftheterminologyandresponsibilities that relate to Service Operations Management.
4. Interpret basic tools and skills used in solving problems traditionally associated with operating the service operations system.

Section A

UNIT	COURSEDESCRIPTION	SESSIONS
UNIT I	Role of Services inan Economy: Service definitions, dependency of manufacturing on services, Economic evolution, , nature of service sector. The nature of services: service classification, the service package, characteristics of service operations, classifying services for strategic insights, systems view of services. Service strategy: Strategic service vision, competitive service strategies, winning customers in marketplace, service firm competitiveness, measuring service quality, productivity.	3
UNIT II	Designing and developing service products: Service design elements, service blueprinting, strategic positioningthroughprocessstructure,taxonomyfor service processdesign,genericapproachestoservicesystem design, customervalueequation. Technology in services: Role of technology in the service encounter, emergenceofselfservice,automationinservices, service net services, electronic and traditional services, product andprocessdimensions.Technologicalinnovationin services.	3
UNIT III	Service Quality:dimensionsofservicequality,measuring service quality,qualityservicebydesign,walkthroughaudit, achieving service quality, service recovery, stages in quality development. The serviceencounter:Theserviceencountertriad,service organization, contact personnel, the customer, creating customer service orientation,serviceprofitchain	3

UNIT IV	Service Facility Planning: Servicescapes, facility design, location: analysis, classification of service facility, Service facility location issues, facility location technique-single and multiple facilities, site considerations	3
UNIT V	Managing Service Operations: Forecasting demand for services: Subjective models: Delphi method, cross impact analysis, historical analogy. Causal Models and time series models. Managing capacity and demand: strategies for managing demand, strategies for managing capacity, yield management	3
UNIT VI	Managing waiting lines: Queuing systems, essential features of queuing system, capacity planning and queuing models: analytical queuing models, capacity planning criteria.	3
UNIT VII	Service Supply Relationships: Supply chain management, service supply relationships, managerial implications of bidirectional relationships, sources of value in service supply relationships, outsourcing services and its managerial considerations.	3
UNIT VIII	Growth and Globalization of Services- Domestic growth and expansion strategies: Focused service, focused network, clustered service, diversified network. Franchising: nature, benefits to franchisee and issues, Generic international strategies, Globalization of services: borderless world, planning transnational operations. Global service strategies.	3

Section B

At least one case study/ problem from each unit. Questions will be case/ inferences/ application based

PRACTICAL COMPONENT

- ☐ Being a manager in five star Hotel industry ,prepare norms and quality systems for best service practice to delight customers
- ☐ Being a manager marketing in motor vehicle insurance company, how you would develop a economic justification for equipment insurance of fertilizer company for four compressors which are costing of worth Rs. 3000 Million.
- Being in a Hotel Industry, Design total logistics for supply of food plates to airway service industry 2000 numbers per day basis, distance travelled is 20 km.
- ☐ Being a manager inventory in a retail sector mall how you would analyses the FMCG items stocking philosophy so that stock out condition and expiration does not exists
- ☐ You are Head of Marketing for a new fertilizer plant under project stage, How you would establish the SCM up to retailers,so that one day company producing 2000 MT per day basis you would be able to claim management that complete per day production is distributed to retailers and also sold to the customers one day lead basis.
- ☐ Design your plan and branding, as well as seeding program for your own brand product which is expected after a year so that you can ensure management commitments at full confidence.

BOOKS RECOMMENDED

1. Service Management: Operations Strategy, Information Technology, James A Fitzsimons, Mona J. Fitzsimons, Tata McGraw Hill
2. K Shridhara Bhat, Service Operations Management, Pub. Himalaya,2015.
3. Christopher Lovelock, Services Marketing, Pearson Education. 2017
4. Ashwathappa K, & Sridhar Bhat K , Production and Operations Management Himalaya Publications, 2015
5. Russel and Taylor , Operations Management: Along the supply chain -, 6/e, Wiley India. 2014
6. UpendraKachru, 1/e Production and Operations Management: Text and cases Excell Books. 2016

LIST OF JOURNALS/PERIODICALS/MAGAZINES/NEWSPAPERS

1. International Journal of Service Industry Management
2. Journal of Financial Services Research
3. American Journal of Retailing and Consumer Services
4. Manufacturing and Service Operations Management

M-443 TECHNOLOGY MANAGEMENT

OBJECTIVES

1. Understand basic concept and meaning of technology
2. Discuss evolution and growth of technology
3. Understand role and significance of technology management

LEARNING OUTCOMES

1. A working understanding of the concepts and techniques of strategy technology management.
2. An ability to critically analyse the behaviour of organizations and organisational members in developing, implementing, and managing technology from a strategic perspective
3. Expertise on Innovation and Productivity Improvement Techniques to enhance organisation performance.
4. To develop the perspective for continuous improvement through change.

Section A

UNIT	COURSE DESCRIPTION	SESSIONS
UNIT I	Introduction : Understanding Technology and its Relationship with Wealth of Nations and Firms Specific Knowledge; Technology Life Cycles, Technology Acquisition and Absorption; Technology Exports / Joint venture Abroad.	2
UNIT II	Change Management: Understanding the Nature, Importance, Forces, Types of Change; Diagnosing Organizational Capability to Change strategy, Structure, Systems and People; Building Culture and Climate for Change: Role of Leadership; Managing Transformations.	3
UNIT III	Productivity Improvement Techniques: Definition & Concept of Productivity : Partial productivity, Total Productivity model Salient features of TPM, Causes of poor productivity, Sumanth's five pronged approach to productivity improvement, Limitations	3
UNIT IV	Innovations Management: Invention vs. Innovation; Innovation Strategies and Models; Concurrent Engineering; Process Innovation, Product Innovation, Innovation Management	3
UNIT V	Creative and Lateral Thinking Management: Thinking, Creative Thinking, Problem Solving, Managing Lateral Thinking.	3
UNIT VI	Make or Buy Decisions: Concept of outsourcing, Factors influencing Make Or Buy Decisions, Trends in Make Or Buy Decisions in context of core competency.	3
UNIT VII	World Class Manufacturing Techniques: Historical perspective Bench marks, Bottlenecks and Best Practices: Concepts of benchmarking, bottleneck and best practices, Best performers - Gaining competitive edge through world class manufacturing, Value added manufacturing,	4

	eliminating waste, Toyota Production System, example. System & tools for world class manufacturing: Improving Product & Process	
UNIT VIII	Business Process Reengineering: Concept of BPR, process of BPR, prerequisites for effective BPR implementation, application of BPR in productivity improvement.	3

Section B

At least one case study/ problem from each unit. Questions will be case/ inferences/ application based

PRACTICAL COMPONENT

Study and analysis of Technology upgradation for crude oil extraction Techniques/ fuel engine Study and prepare a report for BPR for Motor cycle vehicles for fuel efficiency design and parameters.

Study and analysis of any two products of ITC or HUL for its recognition as world class leaders for lean manufacturer & 5S practice.

☐ Study and report preparation for how to increase the productivity of any FMCG manufacturing company.

☐ Concept study for any organization ,which has practice of change management and its benefits

☐ Study and analysis of Innovation management of Dr.fix –it products for house and roof interior finishing Or Innovation in tyre industry as radial tyre and its benefits.

☐ Study and analysis of make or buy decision for washing mc electronic parts for long run success of company.

BOOKS RECOMMENDED

1. Business driven Technology- Hagg& Philip- McGraw Hill, 2012
2. Murthy C S V , Technology Management –pub. Himalaya Publishing house, 2009 3. HosseinBidgoli (2010), The Handbook of Technology Management (3 Volume Set), Wiley.
4. Tushman, Michael L and Philip Anderson (2004). Managing Strategic Innovation and Change, 2nd Edition, Oxford University Press.
5. Adair, John (2007). Leadership for Innovation, Kogan Page India Private Limited.
6. Narayanan, V K. (2001). Managing Technology and Innovation for Competitive Advantage. Pearson Education.
7. Frederick Betz (2003), Managing Technological Innovation, Competitive Advantage from change, Second Edition, John Wiley & Sons, Inc., USA.

LIST OF JOURNALS/PERIODICALS/MAGAZINES/NEWSPAPERS

1. Technology Information Forecasting & Assessment Council" (TIFAC),
2. International Journal of Technology Management,
3. Journal of Manufacturing Technology Management,
4. Journal of Research Technology Management.

Information TechnologyManagement (Group E)

S. No.	Subject Code	Subject Title
IV Semester		
1	M- 450	Software Project Management
2	M-451	Managing Digital Innovation and Transformation
3	M-452	Artificial Intelligence for Managers
4	M-453	Emerging Technologies In Database Management

M-450 SOFTWARE PROJECT MANAGEMENT

OBJECTIVES
1. Understand the fundamental principles of Software Project management
2. Resolve the process of managing software from conventional to modern.
3. Familiarity with different methods and techniques used for project management.

LEARNING OUTCOMES
1. Develop the model from the conventional software product to the modern.
2. Analyze and design software architecture.
3. Apply, analyze, design and develop a software project.
4. Design various estimation levels of cost and effort.

Section A

UNIT	COURSE DESCRIPTION	SESSIONS
UNIT I	Software Development Organization and Roles: The Management Spectrum; Organizational Structure; Types of Organizational Structures –Hierarchical Structure, Flat Organizational Structure, Matrix Organizational Structure, Networked Organizational Structure, T Form Organization; Job Roles in Software Development.	3
UNIT II	Overview of Project Management: Project Management – Definitions; Factors Influencing Project Management – Project Management, Project Activities, Stakeholders; Project Communication; Project Development Phases; Project Charter; Statement of Work (SoW); Project Management Associations.	3
UNIT III	Project Planning: Tasks in Project Planning; Work Breakdown Structures (WBS); Planning Methods; Development Life Cycle Models; A Generic Project Model. Estimation and Budgeting of Projects: Software Cost Estimation; COCOMO Model; Budgeting.	3
UNIT IV	Project Scheduling and Monitoring: Scheduling Techniques – Program Evaluation and Review Technique (PERT), Gantt Chart, Critical Path Method (CPM), Automated Tools. Project Monitoring and Controlling: Project Status Reporting; Project Metrics; Earned Value Analysis (EVA); Project Communication Plan & Techniques; Steps for Process Improvement.	4
UNIT V	Team Development and Conflict Management: Basic Concepts; Organization Types – Centralized-control team organization, Decentralized control team organization, Mixed-control team organization.	2

UNIT VI	Risk Management & Configuration Management : Concepts of Risks and Risk Management; Risk Management Activities; Effective Risk Management; Risk Categories; Aids for Risk Identification; Potential Risk Treatments; Risk Components and Drivers; Risk Prioritization. Configuration Management: Software Configuration Management (SCM) –Baselines, Software Configuration Items (SCI); SCM Process; Identification of Objects in the Software Configuration; Version Control; Change Control; Configuration Audit; Status Reporting; Goals of SCM.	3
UNIT VII	Software Quality Assurance: Software Quality Assurance Activities; Software Qualities; Software Quality Standards – ISO Standards for Software Organization, Capability Maturity Model (CMM), Comparison between ISO 9001 & SEI CMM, Other Standards.	3
UNIT VIII	(CASE) Tools: Aids for Software Engineering; Computer Aided Software Engineering (CASE); CASE Concepts; Classification of CASE Tools; Steps for CASE Tool Implementation; Integrated CASE Environments; Architecture of CASE Environment	3

Section B

At least one Case Study from each UNIT Questions will be case/ inferences/ application based

PRACTICAL COMPONENT

1. Perform case studies on cost estimation models like COCOMO, COCOMO II.
2. Implement a Work Breakdown Structures (WBS) for a given specific software application.
3. Comparative analysis on Process Vs Product metrics.
4. Perform Case studies on Project Scheduling.
5. Implement an efficient management strategy for a business scenario.
6. Perform Case studies on Risk Management.

BOOKS RECOMMENDED

1. Bob Hughes, Mike Cotterell and Rajib Mall "Software Project Management", 6th Edition, McGraw Hill Edition, 2017.
2. Pankaj Jalote, "Software Project Management in practice", 5th Edition, Pearson Education, 2017.
3. Dr. P. Rizwan Ahmed, "Software Project Management", 1st Edition, Margham Publications, 2016
4. Walker Royce, "Software Project Management, A Unified Framework", 1st Edition, 2006.
5. Joel Henry, "Software Project Management", 1st Edition, Pearson Education, 2006.
6. Pradeep Pai, "Project Management", First Edition, Pearson, 2019

LIST OF JOURNALS/PERIODICALS/MAGAZINES/NEWSPAPERS

1. Journal Of Software Project Management And Quality Assurance, Serial Publications
2. International Journal of Project Management, Elsevier
3. Indian Journal of Software Engineering & Project Management, Lattice Science Publication
4. International Journal of Information Technology Project Management, IGI Global

M-451 MANAGING DIGITAL INNOVATIONANDTRANSFORMATION

OBJECTIVES
1. To help the learners understand how digital innovation and transformation changethebusinessprocessanddecision making.
2. To provide understandingofanalyzingtechnologicalinnovations that bring change in strategicmanagement.
3. To enable comprehensionof theimpactoftechnology enablers in transforming the Businessmodelindifferentsectors.

LEARNING OUTCOMES
1. Understand of the changeinbusinessprocessanddecision making due to digital innovation andtransformation.
2. Able to analyze impactoftechnologicalinnovation on strategic management.
3. Understand the effect oftechnologyenablersintransforming business model.
4. Enhanced understanding of role of technological innovation and transformation on differentsectors.

Section A

UNIT	COURSEDESCRIPTION	SESSIONS
UNIT I	Understanding Digital Innovation: Digital Innovation, Different perspectiveofDigitization,StrategicChallengesof Digital Innovation andTransformation,reapingValuefrom Digitization, UntappedOpportunities,DigitalPlatforms.	3
UNIT II	Introduction to Transformation: UnderstandingDigital Transformation, TheEssentialsofDigitalTransformations, Business Process Transformations, Stages of Successful Transformation, ChallengesofRealTransformation.	3
UNIT III	Technological EnablersofDigitalTransformations: Digital Disruption, ImpactofArtificialIntelligence,Machine Learning, IoT, Block Chain and Social Computing on Transforming Business andSociety.	3
UNIT IV	Strategic ManagementorTechnologyandInnovation: Technological InnovationandBusinessStrategy,Managing the Disruptive Innovations and Technological Transitions, Technology S-CurveandItsImplicationsonISstrategies Innovation Strategies,andtheirImplementation.	4
UNIT V	Online TechnologyMediatedBusinessModels:Impact of IT on firms, innovation and decision-making within Technology marketing,thecriticalroleoftechnology-based disruptive innovationstoabusiness.	2
UNIT VI	Organizations in the Digital Economy: Challenges in the Digital Economy: Cultural issues – buildingandmanagingavirtualorganization, Management challengesofnetworkedbusiness,Roleof leadership and management.	3
UNIT VII	Managing Transformation: change management, process reengineering, Global competing, governance and communications.	3

UNIT VIII	Application Areas: Application of Digital Transformation in Different Sectors such as Healthcare, Finance Companies, Marketing, Banking/Insurance.	3

Section B

At least one Case Study from each UNIT Questions will be case/ inferences/ application based

PRACTICAL COMPONENT

1. Each participant would develop a business plan for his chosen division or organisation based on the concepts learnt in the classroom.
2. Take one existing business model of your choice and discuss how digital innovation and digital transformation changed its business processes and their impact on business.
3. Take any existing Industry that has undergone digital transformation successfully and generate an analytical report for the same.
4. Discuss any one example of digital transformation failure along with factors responsible for its failure.
5. Consider one Healthcare & one retail industry unit and discuss what value digital transformation brought to each one of these.

BOOKS RECOMMENDED

1. Robert D. Galliers, Dorothy E. Leidner, Boyka Simeonova, Strategic Information Management: Theory and Practise, Routledge, 5th edition, 2020.
2. Joe Peppard, John Ward, The Strategic Management of Information Systems: Building a Digital Strategy, Wiley, 4th edition, 2016.
3. Lindsey Herbert, Digital Transformation: Build your Organization's Future for the Innovation Age, Bloomsbury Business; 1st edition, 2017.
4. Michael Lewrick, Patrick Link, Lary Leifer, The Design Thinking Playbook: Mindful Digital Trasformation of Teams, Product, Services, Businesses and Ecosystems, Wiley, 2018.
5. Andreas Hinterhuber, Tiziano Vescovi, Francesca Checchinato, Managing Digital Transformation: Understanding the Strategic Process, Routledge, 2021
6. Dick Whittington, Digital Innovation and Entrepreneurship, Cambridge University Press, 2018

LIST OF JOURNALS/PERIODICALS/MAGAZINES/NEWSPAPERS

1. International Journal of Advanced Corporate Learning (iJAC), International Association of Online Engineering
2. Journal of Digital Transformation, Institute for Digital Transformation
3. International Journal of Digital Innovation in the Built Environment (IJDIBE), IGI Global.
4. International Journal of Innovation Management, Imperial College Press.

M- 452 ARTIFICIAL INTELLIGENCE FOR MANAGERS

OBJECTIVES
1. Understanding the concepts, theories and application of Artificial Intelligence in Business Management and day to day life.
2. Studying the business situations and applying machine learning and artificial intelligence.
3. Developing the plan for application of AI based solutions for business problems.

LEARNING OUTCOMES
1. Comprehend the Fundamentals, Evolution and Economics of Artificial intelligence.
2. Identify appropriate analytical techniques to solve business scenario problems.
3. Differentiate between various domains of Artificial Intelligence.
4. Identify business constraint and describe, analyze and apply techniques for constraint satisfaction.

Section A

UNIT	COURSE DESCRIPTION	SESSIONS
UNIT I	Introduction: What is Artificial Intelligence, History of AI, Domains of AI, Business Applications of AI, Decision Support Systems and AI, Artificial Intelligence in Economics and Business Research, Rise of big data in business planning, Redefining management using AI.	3
UNIT II	Foundations of AI: Acting Humanly-Turing Test Approach, Thinking Humanly- Cognitive Modeling Approach, Thinking Rationally- laws of thought approach, Acting Rationally- Rational Agent Approach. AI techniques, Expert Systems. Intelligent agents, Search, AI Canvas, 7-step process for framing an AI initiative	4
UNIT III	AI and Business Functions: Big data and supply chain, AI in logistics, Data driven assortment and personalization, Peer to peer product sharing, AI and service operations, Service innovation in digital age, Consumer and object experience in the Internet of things and digital data streams.	3
UNIT IV	AI Powered Business Intelligence: Introduction to Business Intelligence, Advantages, Disadvantages and Trends, Role of AI in Business Intelligence, Components of AI in BI Tools, Adoption of AI in Business, Advantages of AI driven Business Intelligence Solutions, Impact of AI in BI, AI Based BI Applications, Future of AI in BI	3
UNIT V	AI & Machine Learning: Fundamentals of Machine Learning, The AI & ML landscape – tools, techniques and platforms. Machine Learning and Deep Learning with understanding of key players in the AI ecosystem. Difference in AI and ML, Application of ML in business.	3

UNIT VI	AI Applications in Management: Making the business case for the use of AI & ML Deep Learning for AI, Neural networks & deep neural networks, Applications of deep learning in various scenarios, Necessary conditions for Deep Learning Applications, challenges and limitations of deep learning.	3
UNIT VII	Data Science: Data Science, Introduction to Python, Python for Data Science, Data Visualization in Python, Data Analysis Using SQL, Data Analysis in Excel , Analytics Problem Solving – CRISP-DM framework	3
UNIT VIII	Ethics & Future of Work: AI & Ethics, Trolley Problem, Capabilities and Limitations of AI and ML.	2

Section B

At least one Case Study from each UNIT Questions will be case/ inferences/ application based

PRACTICAL COMPONENT

1. Understanding the working of smart personal assistants.
2. Smart email categorization.
3. Understanding implementation/working of AI & ML cloud platforms.
4. Sales and business forecasting.
5. Fraud detection and prevention for online transactions.

BOOKS RECOMMENDED

1. Russell, S., Norvig, P. "Artificial Intelligence: A Modern Approach", Third Edition, Prentice Hall, 2010.
2. Khemani, D, " A First Course in Artificial Intelligence" Paperback Edition, McGraw-Hill, 2013.
3. Agarwal, A., Gans, J. & Goldfarb, A, " Prediction Machines", Harvard Business Review Press, 2018
4. Taulli, T, "Artificial Intelligence Basics", Apress, 2019.
5. Rakesh Dandu, "Artificial Intelligence for Managers: For Individuals Aspiring to Get into the AI", Notion Press, 2020.
6. Kevin Knight and Elaine Rich, "Artificial Intelligence", Third Edition, McGraw-Hill, 2017.

LIST OF JOURNALS/PERIODICALS/MAGAZINES/NEWSPAPERS

1. Applications of Artificial Intelligence in Machine Learning, IJCA.
2. Artificial Intelligence in Theory and Practice IV, Springer Publications.
3. Introduction to Artificial Intelligence, Springer.
4. Journal of Visualization, Springer.

M- 453 EMERGING TECHNOLOGIES IN DATABASE MANAGEMENT

OBJECTIVES
1. To learn and understand the concepts of Data Base Management.
2. To apply the database management principles.
3. To apply advanced database models .

LEARNING OUTCOMES
1. Understand Database Management concepts.
2. Understand Relational databases.
3. Analyze database and understand normalization.
4. Able to apply data models.

Section A

UNIT	COURSE DESCRIPTION	SESSIONS
UNIT I	Introduction to Database Management Database systems, File Systems, Database v/s File Systems, Database Architecture, Introduction to database models.	2
UNIT II	The Relational Database Model A Logical view of data, keys, integrity rules, relational database operators, relationships within the relational database.	3
UNIT III	Entity Relationship Modeling Basic Modeling Concepts, degrees of data abstraction, entity relationship model, Degree and Cardinality of relationships, converting an E-R Model into a database structure.	3
UNIT IV	Normalization Database tables and normalization, normalization and data base design. Normal forms.	3
UNIT V	Structured query language SELECT Statement, distinct clause, handling of null values, ORDER BY clause, WHERE clause, relational operators, logical operators (AND, OR, NOT), SQL Operators (BETWEEN, AND, IN, LIKE), numeric functions, string functions, date functions, conversion functions, GROUP BY clause, group functions, HAVING clause, joining tables, SET Operators (UNION, INTERSECTION, MINUS), Sub queries.	4
UNIT VI	Distributed database management system Distributed processing and distributed databases, DDBMS Components, levels of data and process distribution.	3
UNIT VII	NOSQL Data Management Introduction to NoSQL, aggregate data models, key-value and document data models, relationships, graph databases, schemaless databases, materialized views, distribution models, sharding, master-slave replication, peer-peer replication Consistency: relaxing consistency, version stamps.	3
UNIT VIII	Advanced Data Models Temporal Databases, Spatial Databases, Multimedia Databases, Deductive Databases, Mobile Databases.	3

Section B

At least one Case Study from each UNIT Questions will be case/ inferences/ application based PRACTICAL COMPONENT

PRACTICAL COMPONENT

1. Create an ER model of a business organization.
2. Design a database schema for a university system.
3. Suppose that a bank has account table and want to find the list of account holders who have amount less than minimum balance in order of their city. Create a sample table with fields as (account-no, name, address, city, balance). Write proper query to solve the stated problem.
4. Suppose a hotel want to automate its process. Create an ER model and a database design for the same.
5. Suppose that you have data of examination having fields as (enrollment-no, roll-no, student-name, course, obtained-marks, maximum-marks, session). Write proper SQL query to declare the result and assign grades. Grades (A: 90 and above %, B: between 90 and 80, C: between 80 to 70, D: between 70 to 60 , E: Between 60 to 50, and F: Below 50)
6. Design a case study for a new enterprise online business, find it's entities, design ER model and suggest the database model.

BOOKS RECOMMENDED

1. Elmasri, Navathe, "Fundamentals of Database Systems", Addison Wesley, 7th Edition, 2016.
2. Thomas Connolly and Carolyn Begg, "Database Systems: A Practical Approach to Design, Implementation, and Management, Addison Wesley, 6th Edition, 2014.
3. NoSQL Distilled: A Brief Guide to the Emerging World of Polyglot Persistence, P. J. Sadalage and M. Fowler, Pearson Education, Inc. 2012.
4. Professional NOSQL, Shashank Tiwari, Wrox, September 2011.
5. Korth, Silberschatz, Sudarshan, "Database Concepts", McGraw Hill, 6th Edition, 2010.
6. Ramakrishnan, Gehrke, "Database Management System", McGraw Hill, 3rd Edition, Jan 2007

LIST OF JOURNALS/PERIODICALS/MAGAZINES/NEWSPAPERS

1. International Journal of Database Management Systems, AIRCC
2. Database Systems Journal, Bucharest Academy of Economic Studies Publishing House
3. Data Mining and Knowledge Discovery, Springer-
4. Journal of Database Management, Timely Knowledge

Business Analytics (Group F)

S. No.	Subject Code	Subject Title
IV Semester		
1	M-460	Data Mining for Business Decisions
2	M-461	Data Visualization for Managers
3	M-462	Business Forecasting
4	M-463	Functional Analytics

M-460 DATA MINING FOR BUSINESS DECISIONS

OBJECTIVES
1. To identify the scope and essentiality of Data Warehousing and Mining.
2. To analyze data, choose relevant models and algorithms for respective applications.
3. To study various classification and clustering algorithms

LEARNING OUTCOMES
1. Understand Data Warehouse fundamentals, Data Mining Principles
2. Design data warehouse with dimensional modeling
3. Identify appropriate data mining algorithms to solve real world problems
4. Compare and evaluate different data mining techniques like classification, prediction, clustering and association rule mining

Section A

UNIT	COURSE DESCRIPTION	SESSIONS
UNIT I	Data warehousing: What is OLAP, Dimensional Modelling (facts, dimensions), cube, Schema, defining schema's star schema, snow-flakes schema and fact constellation, ETL process.	3
UNIT II	Data Mining and Knowledge Discovery: The KDD process and methodology, Data preparation for knowledge discovery	2
UNIT III	Data mining and Machine Learning techniques: Overview of tools for Data Analysis, Data Analysis vs. Data Analytics, Types of Data Analytics	2
UNIT IV	Supervised Techniques: Introduction to Classification and Prediction Classifying with Probability Theory; Naïve Bayes, Building Decision Trees	3
UNIT V	Unsupervised Techniques I: Mining Frequent Patterns, Associations and Correlations: Basic Concepts, Efficient and Scalable Frequent Item set Mining Methods, Mining various kinds of Association Rules, Apriori Algorithm, FP Growth Algorithm	4
UNIT VI	Unsupervised Techniques II: Types of Data in Cluster Analysis, A Categorization of Major Clustering Methods, Partitioning Methods, Hierarchical Methods, Density-Based Methods, Introduction to Model-Based Clustering, Introduction to Outlier Analysis, K Medoid Clustering.	
UNIT VII	Predictive Analytics: Regression models, Linear and Non linear Regression, Evaluating predictive models	3
UNIT VIII	Introduction to Soft Computing: Soft computing vs. Hard computing, Introduction to Soft computing Techniques Neural Network and Genetic algorithms and Their utility in Data mining	3

Section B

At least one Case Study from each UNIT Questions will be case/ inferences/ application based

PRACTICAL COMPONENT

1. Perform Case Studies Data Mining Techniques.
2. Explore machine learning tool "WEKA"
3. Perform data preprocessing tasks and Demonstrate performing association rule mining on data
4. Load dataset into Weka and perform Decision tree algorithms
5. Perform Regression using Excel
6. Explore other clustering techniques available in Weka.

BOOKS RECOMMENDED

1. Pieter Adriaans & Dolf Zentinge, "Data Mining", Addison-Wesley, Pearson, 2000.
2. Mohanty, Soumendra, "Data Warehousing: Design, Development and Best Practices", Tata McGraw Hill, 2006
3. Jiawei Han & Micheline Kamber, "Data Mining: Concepts & Techniques", Morgan Kaufmann Publishers, 3rd edition, 2002
4. Daniel T. Larose, "Data Mining Methods & Models", Wiley-India, 2007.
5. Vikram Pudi & P. Radhakrishnan, "Data Mining", Oxford University Press, 2009
6. Alex Berson & Stephen J. Smith, "Data Warehousing, Data Mining & OLAP", Tata McGraw-Hill, 2004
7. Margaret H. Dunham & S. Sridhar, "Data Mining: Introductory and Advanced Topics", Pearson Education, 2008.
8. D Israel, "Data Analysis in Business Research", Sage Publications, 2012

LIST OF JOURNALS/PERIODICALS/MAGAZINES/NEWSPAPERS

1. International Journal of Data Warehousing and Mining (IJDWM), IGI Publication
2. International Journal of Data Warehousing (IJDW), Serial Publication
3. CS&DA - Computational Statistics & Data Analysis, Elsevier, CMStatistics
4. DATAMINE - Data Mining and Knowledge Discovery, Springer
5. TKDD - ACM Transactions on Knowledge Discovery From Data, ACM (Association for Computing Machinery)

M-461 DATA VISUALIZATION FOR MANAGERS

OBJECTIVES
1. To understand how to represent voluminous complex data set.
2. To understand the methodologies used to visualize large data sets
3. To understand the process involved in data visualization and security aspects involved in data visualization

LEARNING OUTCOMES
1. Analyze the concept of data visualization.
2. Explain various visualization options.
3. Design and use various methodologies present in data visualization.
4. Evaluate the process involved and security issues present in data visualization.

Section A

UNIT	COURSE DESCRIPTION	SESSIONS
UNIT I	Introduction: Context of data visualization, Definition, Methodology, Visualization design objectives. Key Factors, Purpose, visualization function and tone,	2
UNIT II	Visualization Design Options: Data representation, Data Presentation, Seven stages of data visualization, widgets, data visualization tools.	2
UNIT III	Visualization Data Methods: Mapping, Time series, Connections and correlations, Scatterplot maps, Trees, Hierarchies and Recursion, Networks and Graphs, Info graphics	3
UNIT IV	Visualizing Data Process: Acquiring data, Where to Find Data, Tools for Acquiring Data from the Internet, Locating Files for Use with Processing, Loading Text Data, Dealing with Files and Folders, Listing Files in a Folder, Asynchronous Image Downloads,	3
UNIT V	Data Visualization using Google Data Studio: Getting started with Google Data Studio, Data story telling with various charts, Making interactive reports with viewer filters and date range controls, Creating product catalogs, video libraries, and other hyperlinked content, Data visualization art. Connecting data sets to various Google Marketing Platform, including Google Ads, Analytics, Display & Video 360, Search Ads 360, Google Cloud Storage, Social media platforms such as Facebook, Reddit, and Twitter, Sharing and collaborate Data Studio file with another editor, working together in real time as a team.	4
UNIT VI	Data Visualization with Tableau: Getting started with Tableau Desktop, Creating the first charts, Filtering and sorting data, Common charts, assembling a dashboard layout, Drilldown between dashboards, Transform the data Creating more advanced chart types Using multiple source tables, Interactions, Advanced visualizations, Creating a data story in Tableau.	3

UNIT VII	Data Visualization with Microsoft Power BI:Introduction to power BI - need, importance, power BI cloud and power BI services, Power BI desktop - installation, usage creating power BI reports, auto filters, report visualizations and properties, chart and map report properties, hierarchies and drilldown reports, data analysis expressions (DAX), publish power BI report, working with my work space group.	4
UNIT VIII	Data Visualization with R: Introduction and Installation of R studio, Packages for data Visualization, Grammar of graphics using ggplot and ggplot2, Basic Visualization using Histogram, Bar / Line Chart, Box plot, Scatter plot. Advanced Visualization using Heat Map, Mosaic Map, Map Visualization, 3D Graphs, Correlogram, Dendrogram, word cloud.	3

Section B

At least one Case Study from each UNIT Questions will be case/ inferences/ application based

PRACTICAL COMPONENT

1. Perform data visualization using tools.
2. Comparative study of data visualization methods.
3. Perform case studies on design of sales dashboard, CIO dashboard, Telesales dashboard, marketing analysis dashboard, HR dashboard etc.
4. Use of advanced web techniques for data visualization.
5. Design a dashboard.
6. Create report for vulnerability assessment and exploitation of system.

BOOKS RECOMMENDED

1. S. Margret Anouncia, Hardik A. Gohel, Subbiah Vairamuthu, "Data Visualization: Trends and Challenges Toward Multidisciplinary Perception", Springer Verlag, Singapore; 1st Edition, 2021
2. Claus O. Wilke , "Fundamentals of Data Visualization: A Primer on Making Informative and Compelling Figures", 1st Edition, O Reilly Media, Inc., 2019
3. Kieran Healy, "Data Viualization: A Practical Introduction", Princeton University Press, 2018
4. Scott Murray, "Interactive data visualization for the web", 2nd Edition, O Reilly Media, Inc., 2017.
5. Steve Wexler, Jeffrey Shaffer, Andy Cotgreave, "The Big Book of Dashboards: Visualizing your data using Real-World Business Scenarios", Willey, 2017
6. Greg Conti, "Security Data Visualization: Graphical Techniques for Network Analysis", No Starch Press Inc, 2007
7. Alexander Loth "Visual analytics with tableau", Willey, 2019
8. Kiran Pandya, "Statistical Analysis In Simple Steps Using R", sage Publications, 2019

LIST OF JOURNALS/PERIODICALS/MAGAZINES/NEWSPAPERS

1. Information Visualization, SAGE Journals
2. Journal of Visualization, Springer
3. Patterns, ScienceDirect, CellPress
4. Journal of Data Science, Statistics, and Visualisation, International Association for Statistical Computing.

M-462 BUSINESSFORECASTING

OBJECTIVES 1. Understand the variousconcepts of the forecasting in the application of business
2. Understand the varioustechniques of the forecasting
3. Explain about the techniques employed in the operations planning

LEARNING OUTCOMES
1. Analyze the techniquesemployed in the operations planning and the types of Forecasts
2. Understand the differenttypes of Data Patterns.
3. Analyze the demand usingthe regression method and the Exponential Smoothing method
4. Understand the different measures of forecast errors.

Section A

UNIT	COURSE DESCRIPTION	SESSIONS
UNIT I	Forecasting: Introduction, Objectives, Features of good forecasting, Nature and uses of forecasts, Forecasting and Decision Making, Types of Forecasts, The Art and Science of Forecasting, Process of Forecasting, Application of forecasting in Business	3
UNIT II	Data: Introduction, Data Patterns: horizontal, trend, seasonal, and cyclical, Data for Forecasting: Data Warehouse and Cleaning, Data Transformations: Data Pattern and Appropriate Transformations, Patterns in Time Series Data	3
UNIT III	Forecasting Techniques: Qualitative and Quantitative Techniques: Qualitative, Technique Selection, Delphi Method, Interpolation and extrapolation	3
UNIT IV	Regression Analysis: Regression Analysis, Simple Regression: Linear Model, Assumptions of the Regression Model, Least Square Method, Multiple Regression, Curvilinear Regression, Binary regression, Logistic regression, Step wise Regression.	2
UNIT V	Smoothing Techniques: Smoothing Techniques: naive, averaging and smoothing, Averaging Models: Simple Average and Moving Average, Exponential Smoothing Models;	4
UNIT VI	Time Series: Time series analysis, Trend Analysis, Linear Trend and Nonlinear Trend	3
UNIT VII	Error: Introduction, Accuracy, Measure, Cumulative sum of Forecast Errors (CFE), Mean Absolute Deviation (MAD)	3
UNIT VIII	Statistical inferences using Hypothesis testing: Point and Interval estimation, Parametric Test, Non Parametric Test, Drawing logical inferences from these results	3

Section B

At least one Case Study from each UNIT Questions will be case/ inferences/ application based

PRACTICAL COMPONENT

1. Study t-test and implement.
2. Implement smoothing techniques.
3. Analyze Forecasting Techniques and regression.
4. Perform a study of Time Series Decomposition.
5. Perform case studies on Forecasting Models.
6. Implement Forecasting with multiple regressions.

BOOKS RECOMMENDED

1. Michael Gilliland, Len Tashman, Udo Sglavo, "Business Forecasting: Practical Problems and Solutions", John Wiley & Sons, 2016
2. Douglas C. Montgomery, Cheryl L. Jennings, Murat Kulahci, "Introduction to Time Series Analysis and Forecasting", John Wiley & Sons, 2015
3. Hanke, John E. Wichern, Dean W.,"Business Forecasting" Pearson, 2014
4. Michael Gilliland, Len Tashman, Udo Sglavo, "Business Forecasting: Practical Problems and Solutions", Wiley, 2010
5. Reza Hoshmand, "Business Forecasting – A Practical Approach", Second Edition, Routledge, Taylor & Francis, New York, 2010
6. Jae K Shim, "Strategic Business Forecasting", Global Professional Publishing, 2009.
7. John T. Mentzer, Mark A. Moon, "Sales Forecasting Management", Sage Publication, 2004

LIST OF JOURNALS/PERIODICALS/MAGAZINES/NEWSPAPERS

1. International Journal of Forecasting, International Institute of Forecasters
2. Journal of Business Forecasting, Institute of Business Forecasting & Planning
3. International Journal of Business Forecasting and Marketing Intelligence, Inderscience Publisher
4. Journal of Business Economics and Management, Vilnius Tech

M-463 FUNCTIONAL ANALYTICS

OBJECTIVES
1. To understand the basic concepts of financial analytics, Marketing analytics and HR Analytics.
2. To learn statistical and analytical techniques that can be deployed to help better decision making.
3. To understand the role and importance of functional analytics.

LEARNING OUTCOMES
1. Gain an overview of advances in marketing analytics, financial analytics and HR analytics.
2. Understand and apply various statistical analysis methods in financial analytics.
3. Apply quantitative and qualitative analysis to understand trends and indicators in human resource data.
4. Use advanced analytical tools to analyze a variety of data collected by marketers.

Section A

UNIT	COURSE DESCRIPTION	SESSIONS
UNIT I	Introduction to Financial Analytics, Statistical concepts: Financial Functions in Excel, Stock charts, Modelling and forecasting of financial statements, Basic statistical concept for Finance, Financial data Visualization tool, Predictive sales analytics, Client profitability analytics, Product profitability analytics, Value-driven analytics.	3
UNIT II	Application of data analytics in capital markets: Downloading and Reading stock market data, Applying technical analysis indicators. Statistics to analyze capital market data.	3
UNIT III	Introduction to Marketing Analytics: Hierarchical segmentation, Selecting the "right" number of segments, Segmentation variables, Recency, frequency, and monetary value, Computing recency, frequency and monetary value with R, Introduction to Customer analytics	3
UNIT IV	Data transformation: Preparing and transforming your data in R, Running a hierarchical segmentation in R, Managerial Segmentation: Limitations of statistical segmentation, Developing a managerial segmentation, Describing segments, Segments and revenue generation.	4
UNIT V	Introduction to HR Analytics: Evolution of HR Analytics, HR information systems and data sources, HR Metric and HR Analytics, Evolution of HR Analytics; HR Metrics and HR Analytics; Intuition versus analytical thinking; HRMS/HRIS and data sources; Analytics frameworks like LAMP, HCM:21(r) Model.	2

UNIT VI	Diversity Analysis: Equality, diversity and inclusion, measuring diversity and inclusion, Testing the impact of diversity, Workforce segmentation and search for critical job roles. Recruitment and Selection Analytics: Evaluating Reliability and validity of selection models, Finding out selection bias, Predicting the performance and turnover.	3
UNIT VII	Performance Analysis: Predicting employee performance, Training requirements, evaluating training and development, Optimizing selection and promotion decisions.	3
UNIT VIII	Monitoring impact of Interventions: Tracking impact interventions, Evaluating stress levels and value-change. Formulating evidence based practices and responsible investment. Evaluation mediation process, moderation and interaction analysis, Introduction to Digital marketing and Web analytics	3

Section B

At least one Case Study from each UNIT Questions will be case/ inferences/ application based

PRACTICAL COMPONENT

1. Simple Linear Models.
2. Cash flow Simulation.
3. Hierarchical Segmentation Using R.
4. Diversity Analysis.
5. Employee attitude surveys- engagement and workforce perception
6. Predicting employee performance.

BOOKS RECOMMENDED

1. Shonna D. Waters, Valerie Streets, Lindsay McFarlane, Rachael Johnson-Murray, " The Practical Guide to HR Analytics: Using Data to Inform, Transform, and Empower HR Decisions", 2018, Society For Human Resource Management.
2. Fermin Diez , Mark Bussin , Venessa Lee , Fundamentals of HR Analytics: A Manual on Becoming HR Analytical, 2019, Emerald Publishing Limited.
3. Dr. Anuradha B, Financial Analytics and Control Paperback, Notion Press; 1st edition, 2021.
4. Mark J. Bennett , Dirk L. Hugen, Financial Analytics with R: Building a Laptop Laboratory for Data, Cambridge University Press; 1st edition, 2016.
5. Stephan Sorger, Marketing Analytics: Strategic Models and Metrics Paperback, Amazon Digital Services; 1st edition, 2013
6. Wayne L. Winston (Author), Marketing Analytics: Data-Driven Techniques with Microsoft Excel, Wiley, 1st edition, 2014.
7. Annmarie Hanlon, "Digital Marketing: Strategic Planning & Integration", Sage Publications, 2019

LIST OF JOURNALS/PERIODICALS/MAGAZINES/NEWSPAPERS

1. Financial Analysts Journal, CFA Institute.
2. The International Journal of Human Resource Management, Taylor & Francis.
3. Journal of Marketing, SAGE Journals.
4. International Journal of Research in Marketing, Elsevier.