

**M.B.A.- Disaster Management (2 years Program)**

**PROGRAM EDUCATIONAL OBJECTIVES**

- *To provide students with the holistic management education for understanding and addressing the issues associated with sustainable development, in the context of both natural and man-made disasters.*
- *To equip graduates with the professional and entrepreneurial skills essential for effective participation in action as individuals and as members of a team in crises situations.*
- *Prepare students to have the activity centred experiential self-discovery needed to assume leadership in responding to the multifaceted demands of sustainable development in emergencies and in normal development tasks and activities.*

<b>INSTITUTE OF MANAGEMENT STUDIES</b>			
<b>M.B.A. (DISASTER MANAGEMENT)</b>			
<b>Semester II</b>			
<b>Subject Name</b>	<b>HUMAN RESOURCE</b>	<b>Subject Code</b>	<b>DM-201C</b>
		<b>Total Credits</b>	<b>03</b>
<b>Subject Nature: GENERIC</b>			
<b>Course Objective:</b>			
<ul style="list-style-type: none"> <li>• To make students aware about different functions of human resource management.</li> <li>• To make an understanding among students about different terms closely associated with HRM.</li> </ul>			
<b>Learning Outcome:</b>			
At the end of the course students should be able to;			
1. Define HRM and understand its importance in managing diverse workforce.			
2. Help students to make themselves skilled in HR function for the present day organisations.			
<b>Examination scheme:</b>			
The faculty member will award internal marks out of 40 based on three assessments of 20 marks each of which best two will be considered. The end semester examination will be worth 60 marks having theory and cases/practical problems.			
<b>Course Contents</b>			<b>Class Room Contact Sessions</b>
<b>UNIT –I</b> The field of HRM	1.1 Introduction- Nature, Scope, Function and Importance of HRM 1.2 Personnel to HRM 1.3 Models of HRM-ASTD, other HRM models 1.4 Formulations and essentials of sound HR policies		<b>10</b>
<b>Unit-2</b> Human Resource Planning	2.1 Concept and Need of HRP, Factors affecting HRP 2.2 HR planning process- Environment scanning, HR demand forecast, HR supply forecast 2.3 Requisites for successful HRP 2.4 Job design and Job analysis- Job Description and Job Specification		<b>08</b>

<b>Unit-3</b> Recruitment and Selection	3.1 Recruitment-Concept, Factors affecting recruitment, Sources of recruitment 3.2 Selection- Concept, Selection Process, Evaluation of Selection Process 3.3 Placement and Induction	<b>06</b>
<b>Unit- 4</b> Training and Development of HR	4.1 Training- Concept, Importance, determine training need, types of training methods 4.2 Development- Concept, Methods, Career development and Succession Planning 4.3 Performance Appraisal- Overview, Need, Appraisal Methods, Potential Appraisal 4.4 Placement Promotion and Transfer	<b>06</b>
<b>Unit -5</b> Maintenance of HR	5.1 Job Evaluation- Concept, Objectives, Techniques 5.2 Compensation Management- Overview, Components of compensation, factors affecting compensation 5.3 Employee Incentives Schemes and Benefits 5.4 Recent trends in compensation management	<b>06</b>
<b>Unit-6</b> Employee Separation and Work Environment	6.1 Separation- Retirement, Layoff, Discharge, VRS 6.2 Grievance handling procedure 6.3 Quality of Work Life	<b>05</b>
<b>Unit – 7</b> Contemporary Issues In HRM	7.1 Basics of balance score card, Six sigma 7.2 Competency mapping and learning organization 7.3 HRIS and KM	<b>04</b>
	<b>TOTAL CLASSROOM CONTACT SESSIONS</b>	<b>45</b>

**Text Reading: Latest Editions**

1. David S. Decenzo and Stephen P. Robbins, “**Personnel/Human Resource Management**”, New Delhi, Prentice Hall..
2. Michael Armstrong, “**A Handbook of Human Resource Practice**”, London, Kogan Page..

**Suggested Readings**

1. William B. Werther Jr. and Keith Davis, “**Human Resources and Personnel Management**”, Singapore, McGraw Hill.
2. P Subba Rao, “**Essentials of Human Resource Management and industrial Relations: Text, Cases and Games**”, Mumbai, Himalaya.
3. Biswajeet Patanayak, “**Human Resource Management**” New Delhi, Prentice Hall India.
4. Holloway J. Ed., “**Performance Measurement and Evaluations**”, New Delhi, Sage Publications.
5. Guy V. & Mattock J., “**The New international Manager**”, London, Kogan Press.

<b>INSTITUTE OF MANAGEMENT STUDIES</b>			
<b>M.B.A. (DISASTER MANAGEMENT)</b>			
<b>Semester II</b>			
<b>Subject Name</b>	<b>DISASTER MANAGEMENT LAW, POLICIES AND REGULATION</b>	<b>Subject Code</b>	<b>DM-202</b>
		<b>Total Credits</b>	<b>03</b>
<b>Subject Nature: CORE</b>			
<b>Course Objective:</b>			
<ul style="list-style-type: none"> <li>• To acquaint student with basic concepts in Disaster Management laws, regulation and policies implemented in various places</li> <li>• To Understand policy making concept for disaster management</li> <li>• To Understand the multidisciplinary approaches of regulation and framework aspect</li> </ul>			
<b>Learning Outcome:</b>			
At the end of the course students should be able to;			
1) Understanding disaster management act 2005			
2) Analyze policy and framework at various level of implementation			
3) Develop Ability to identify Classification of Disasters policy			
<b>Examination scheme:</b>			
The faculty member will award internal marks out of 40 based on three assessments of 20 marks each of which best two will be considered. The end semester examination will be worth 60 marks having theory and cases/practical problems.			
<b>Course Contents</b>			<b>Class Room Contact Sessions</b>
<b>UNIT –I Disaster management act 2005</b>	1.1 Understanding Disaster Management Act, evolution of Act, provisions, sections and chapter of Act		<b>07</b>
<b>Unit-2 Environment protection act 1986, framework and protocol</b>	2.1 Understanding environmental protection act and its provisions 2.2 Hyogo Framework for Action (2005-2015) and Sendai framework for Disaster Risk Reduction (2015-2030) 2.3 Montreal Protocol, Kyoto Protocol (1992) and Cartagena protocol on Biosafety 2.4 Yokohama strategy (1994) and International Decade for Natural Disaster Reduction		<b>08</b>
<b>Unit-3 Business Law</b>	3.1 The Indian Contract Act 1872, 3.2 Corporate Social Responsibilities under the Companies Act 2013		<b>09</b>

	3.3 Law of Intellectual property	
<b>Unit- 4 Disaster Management policy</b>	Study about various district and state disaster management policy and understanding the phenomena of implementation strategy.	<b>07</b>
<b>Unit -5 Case studies and discussion</b>	Assignment, discussion and presentation regarding various issue of policy framework Field visit of various government and non-government organization for understanding Disaster Management Policy and Disaster Risk Response phenomena.	<b>09</b>
	<b>TOTAL CLASSROOM CONTACT SESSIONS</b>	<b>40</b>

**Learning Resources:**

1. Disaster Management Act 2005, <http://www.ndma.gov.in/en/disaster.html>
2. National Disaster Management Policy 2009 and 2016, <http://www.ndma.gov.in/images/policyplan/dmplan/National%20Disaster%20Management%20Plan%20May%202016.pdf>  
<http://www.ndma.gov.in/images/guidelines/national-dm-policy2009.pdf>
3. M.C. Shukla, A Manual of Mercantile Law, New Delhi, S. Chand & Co. Ltd  
<http://www.mpsdma.mp.gov.in/> , <http://ndma.gov.in/images/policyplan/dmpolicy/mp.pdf>,
4. <http://www.mpsdma.mp.gov.in/wp-content/uploads/2015/08/MP-SDMP-2307141.pdf>
5. <http://ndma.gov.in/en/disaster-data-statistics.html>, <http://www.dmibhopal.nic.in/>

**Reference Books:**

1. **Hyogo and Sendai framework:** <http://www.unisdr.org/we/coordinate/hfa-post2015>
2. **United nation convention on disaster management**
3. **International Humanitarian Law, Larry May Bee, Benarjii Chakka**

<b>INSTITUTE OF MANAGEMENT STUDIES</b>			
<b>M.B.A. (DISASTER MANAGEMENT)</b>			
<b>Semester II</b>			
<b>Subject Name</b>	<b>FINANCIAL MANAGEMENT</b>	<b>Subject Code</b>	<b>DM- 203C</b>
		<b>Total Credits</b>	<b>03</b>
<b>Subject Nature: CORE</b>			
<b>Course Objective:</b> The objectives of this course are to help the students learn the concepts, tools and skills of financial analysis and financial management, and application in the efficient conduct of business.			
<b>Learning Outcome:</b> At the end of the course students should be able to: <ol style="list-style-type: none"> <li>1. Understand Concepts of Financial Management and their Application in Financial Analysis and Interpretation.</li> <li>2. Use Financial Management Tools for Managerial Decision Making.</li> </ol>			
<b>Examination Scheme:</b> The faculty member will award internal marks out of 40 based on three assessments of 20 marks each of which best two will be considered. The end semester examination will be worth 60 marks having theory and cases/practical problems.			
<b>Course Contents</b>			<b>Class Room Contact Sessions</b>
<b>Unit – 1 Introduction</b>	<b>1.1.</b> Meaning and Objectives of Financial Management. <b>1.2.</b> Scope and Functions of Financial Management. <b>1.3.</b> Wealth Maximization v/s Profit Maximization. <b>1.4.</b> Short Term and Long Term Sources of Finance in India.		<b>06</b>
<b>Unit – 2 Cost-Volume-Profit Analysis</b>	<b>2.1.</b> Concept, BEP in units, BEP in Rupees, <b>2.2.</b> Multiproduct BEP. <b>2.3.</b> Margin of Safety. <b>2.4.</b> P/V Ratio. <b>2.5.</b> Relationship between Cost, Volume and Profit.		<b>05</b>
<b>Unit – 3 Ratio Analysis</b>	<b>3.1.</b> Liquidity Ratios. <b>3.2.</b> Profitability Ratios. <b>3.3.</b> Leverage Ratios. <b>3.4.</b> Activity Ratios. <b>3.5.</b> Calculation and Interpretation of Ratios.		<b>03</b>
<b>Unit – 4 Investment and Financing Decisions</b>	<b>4.1.</b> Concept of Time Value of Money. <b>4.2.</b> DCF and Non DCF Methods for Evaluating Projects, <b>4.3.</b> Relationship between Investment and Financing Decisions, <b>4.4.</b> Cost of Debt & Bonds, Cost of Preference Share, Cost of		<b>06</b>

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	Equity, Weighted Average Cost of Capital.	
<b>Unit – 5 Leverage Analysis</b>	<b>5.1.</b> Determination of operating leverage, financial leverage and total leverage, <b>5.2.</b> Leverage and Financial Distress.	<b>06</b>
<b>Unit – 6 Statement of Changes in Financial Position</b>	<b>6.1.</b> Funds Flow Statement. <b>6.2.</b> Total Resource Method. <b>6.3.</b> Working Capital Method. <b>6.4.</b> Cash Method. <b>6.5.</b> Cash Flow Analysis.	<b>06</b>
<b>Unit – 7 Capital Structure and Firms Value</b>	<b>7.1.</b> Net Income Approach. <b>7.2.</b> Net Operating Income Approach. <b>7.3.</b> Traditional Approach. <b>7.4.</b> MM Approach. <b>7.5.</b> EBIT --- EPS Analysis. <b>7.6.</b> ROI --- ROE Analysis.	<b>03</b>
<b>Unit – 8 Dividend Decisions</b>	<b>8.1.</b> Dividend Theories. <b>8.2.</b> Factors Affecting the Dividend Policy. <b>8.3.</b> Alternative Forms of Dividend. <b>8.4.</b> Dividend Discount Model.	<b>03</b>
<b>Unit – 9 Working Capital Management</b>	<b>9.1.</b> Cash and Liquidity Management. <b>9.2.</b> Credit Management. <b>9.3.</b> Determination of Working Capital and its Financing. <b>9.4.</b> CMA form for Working Capital.	<b>02</b>
	<b>TOTAL CLASSROOM CONTACT SESSIONS</b>	<b>45</b>
<p><b>Text Reading: Latest Editions</b></p> <ol style="list-style-type: none"> <li>1. Pandey, I.M. financial Management, Vikas Publishing House, New Delhi.</li> <li>2. Khan M.Y. and Jain P.K. Financial Management, Tata McGraw Hill, New Delhi.</li> <li>3. Keown, Arthu J., Martin, John D., Petty, J. William and Scott, David F, Financial Management. Pearson Education.</li> <li>4. Chandra, Prasanna; Financial Management TMH, New Delhi.</li> <li>5. Van Horn, James C., Financial management and Policy, Prentice Hall of India.</li> <li>6. Brigham &amp; Houston, Fundamentals of Financial Management, Thomson Learning, Bombay.</li> <li>7. Kishore, R., Financial Management, Taxmans Publishing House, New Delhi.</li> <li>6. D.N. Elhance, Veena Elhance and B. M. Aggrawal, “<b>Fundamentals of Statistics</b>”, Allahabad: Kitab Mahal.</li> </ol>		

<b>INSTITUTE OF MANAGEMENT STUDIES</b>			
<b>M.B.A. (DISASTER MANAGEMENT)</b>			
<b>Semester II</b>			
<b>Subject Name</b>	<b>DISASTER PREPAREDNESS &amp; PREVENTION</b>	<b>Subject Code</b>	<b>DM-204</b>
		<b>Total Credits</b>	<b>03</b>
<b>Subject Nature: CORE</b>			
<b>Course Objective:</b>			
<ul style="list-style-type: none"> <li>• To acquaint student with basic concepts in Disaster Preparedness and prevention implemented in various places</li> <li>• To Understand policy making concept for disaster preparedness</li> <li>• To Understand the multidisciplinary approaches of regulation and framework aspect</li> </ul>			
<b>Learning Outcome:</b>			
At the end of the course students should be able to;			
1) Understanding disaster management act 2005			
2) Analyze policy and framework at various level of implementation			
3) Develop Ability to identify Classification of Disasters Mitigation and Preparedness			
<b>Examination scheme:</b>			
The faculty member will award internal marks out of 40 based on three assessments of 20 marks each of which best two will be considered. The end semester examination will be worth 60 marks having theory and cases/practical problems.			
<b>Course Contents</b>			<b>Class Room Contact Sessions</b>
<b>UNIT –I Disaster Management:</b>	Concept and Nature. Prevention, Preparedness and mitigation		<b>07</b>
<b>Unit-2 Disaster Preparedness Plan</b>	(a) for people for special needs valuable groups (b) with relevance to housing, infrastructure and live stock		<b>08</b>
<b>Unit-3 Disaster Preparedness</b>	Role and responsibilities of central state, District and Local Administration. Role and responsibility of Armed force, Para Military force, National Service and Scouts.		<b>09</b>
<b>Unit- 4 Disaster Management policy</b>	Role and Responsibilities of International Agencies, Non-Governmental Organizations, Community-based organizations, Community and Media.		<b>07</b>



<b>Unit -5 Disaster Mitigation</b>	Disaster Mitigation strategies, Use and Application of Emerging Technologies in Disaster Preparedness Mitigation Management-I, Mitigation Management-II	<b>09</b>
	<b>TOTAL CLASSROOM CONTACT SESSIONS</b>	<b>40</b>

**Learning Resources:**

1. National Disaster Management Policy 2009 and 2016, Disaster Management Act 2005, <http://www.ndma.gov.in/en/disaster.html>, <http://www.ndma.gov.in/images/policyplan/dmplan/National%20Disaster%20Management%20Plan%20May%202016.pdf>
2. <http://ndmindia.nic.in/Mitigation/mitigationhome.html>
3. <https://www.unisdr.org/2005/mdgs-drr/national-reports/India-report.pdf>
4. <http://www.ndma.gov.in/images/policyplan/dmplan/Draft-NDMP-Part-II.pdf>
5. <http://aidmi.org/>
6. Disaster Management Act 2005, <http://www.ndma.gov.in/en/disaster.html>
7. <http://ignou.ac.in/upload/Disaster%20Preparedness%20and%20Mitigation.pdf>

**Reference Books:**

1. **United nation convention on disaster management**
2. **Training Guidelines, National Disaster Management Authority**

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M.B.A. (DISASTER MANAGEMENT)			
SEMESTER II			
SUBJECT NAME	DATA ANALYTICS	SUBJECT CODE	DM 205
		TOTAL CREDITS	03
<b>SUBJECT NATURE: GENERIC</b>			
<b>Course Objective:</b>			
<ul style="list-style-type: none"> <li>• To familiarize participants with concepts and applications of data analytics.</li> <li>• To acquaint participants with the challenges of data preparation and implementation.</li> <li>• To understand and design data driven models for business decision making.</li> </ul>			
<b>Learning Outcome:</b>			
At the end of the course students should be able to;			
<ul style="list-style-type: none"> <li>• To understand the role of data analytics, data mining and business analytics within an organization.</li> <li>• Compute and analyze data using statistical and data mining techniques</li> <li>• Design and develop process of improving the decision making (relevance and quality).</li> </ul>			
<b>Examination scheme:</b>			
The faculty member will award internal marks out of 40 based on three assessments of 20 marks each of which best two will be considered. The end semester examination will be worth 60 marks having theory and cases/practical problems.			
Course Contents			Sessions
<b>Unit - 1 Introduction to Data Analytics</b>	Understanding need of data analytics for business organization, application of data analytics at different levels of business organization, concept of data, information, knowledge discovery, data quality issues, analytics, data mining, data analytics, applications of data analytics, business analytics and business intelligence.	<b>06</b>	
<b>Unit - 2 Examining Data – Exploration and Transformation</b>	Creating MS- Excel sheet and performing operations on MS- Excel Sheet - Formatting cells, inserting functions (min, max, average, sum, count, countif, etc.), copying functions and text, analysis using if – else, performing descriptive statistics & summary statistics on the data set, data analysis using Pivot charts & graphs, VLOOKUP, What-if Analysis, sorting, filtering. Creating charts/ graphs (histogram, scatter plot, line chart etc.) and Data Visualization using XLMiner for data exploration. Overview of statistical perspective – Understanding mean, median, mode, correlation analysis, normal distribution, standard deviation, variance, histogram, testing of normality, Kurtosis Handling Missing values, detection and handling of Outliers using Box-Whisker method, Data Exploration and Dimension Reduction using Principal Component Analysis (PCA).	<b>12</b>	
<b>Unit - 3 Data Modeling</b>	Supervised and unsupervised learning, inferential and predictive statistics, data types, variables types, data normalization and preparation, partitioning of data into training, validation and test data sets, Data driven modelling, Introduction to regression modeling, model preparation using regression techniques, data modelling using multiple linear regression, tree regression and introduction to Logistic Regression. Decision making using data driven models.	<b>12</b>	

<b>Unit-4 Data Modeling using ANN</b>	Data analytics using non-parametric, Concepts and structure of an Artificial Neural Networks (ANN), Fitting in network to data and understanding various parameters of ANN. Introduction to Support Vector Machine and Evolutionary Techniques for data analytics.	<b>04</b>
<b>Unit – 5 Introduction to Latest Trends</b>	Introduction to the latest trends in Data Analytics for business organizations - Introduction to association rule, Discovering association rules in traditional Datasets, text mining, social network analysis.  Case study, simulations, discussion and applications in various functional areas.	<b>06</b>
	<b>TOTAL CLASSROOM CONTACT SESSIONS</b>	<b>40</b>
<p><b>Learning Resources:</b></p> <ol style="list-style-type: none"> <li>Galit Shmueli, Nitin R. Patel and Peter C. Bruce, “Data Mining for Business Intelligence – Concepts, Techniques and Applications”, Wiley India, 2016 (reprint).</li> <li>Anil Maheshwari, “Data Analytics”, McGraw Hill Education, 2017</li> <li>Software used - MS- Excel and Frontline Solvers XLMiner (Cloud based or student version)</li> </ol> <p><b>Reference Books:</b></p> <ol style="list-style-type: none"> <li>Michael J. Berry and Gordon S. Linoff, Data Mining Techniques: For Marketing, Sales and Customer Relationship Management, Wiley &amp; Sons, 3rd Edition.</li> <li>Joseph F. Hair, William C. Black, Barry J. Babin , Rolph E. Anderson, Multivariate Data Analysis , Pearson Education, 7th Edition, 2010.</li> </ol>		

<b>INSTITUTE OF MANAGEMENT STUDIES</b>			
<b>M.B.A. (DISASTER MANAGEMENT)</b>			
<b>SEMESTER II</b>			
<b>Subject Name</b>	<b>BUSINESS ENVIRONMENT</b>	<b>SUBJECT CODE</b>	<b>DM 206</b>
	<b>TOTAL CREDITS</b>		<b>03</b>
<b>OBJECTIVE :</b> To familiarize the students with the business environment prevailing in India and in the world to help them understand its implications to business			
<b>Examination</b> The faculty member will award internal marks out of 40 based on three assessments of 20 marks each of which best two will be considered. The end semester examination will be worth 60 marks will have two sections A and B. Section A worth 40 marks will have 6 theory questions out of which students will be required to attempt any four questions. Section B carrying 20 marks will contain , cases/practical problems.			
<b>CONTENT</b>			
<b>Unit</b>	<b>Business Environment</b>		<b>12</b>
<b>1</b>	1. Components and Significance of Business Environment, 1.1. Factors effecting environment of Business, 1.2. Economic factors and its Components, 1.3. Cultural factors and its impact on business, 1.4. Social Environment and its impact on Purchasing and Consumption, 1.5. Political Stability, 1.6. Sovereignty and its impact on the returns of Business, 1.7. Technological and its impact on internationalizing the business activities, Legal environment, 1.8. Dimensions of International Business Environment, Challenges.		
<b>2</b>	<b>Economic Planning &amp; Development</b> 2.1 Indian Economic Systems-Economic planning with special reference to last three plans, 2.2 public, private joint and cooperative sectors – 2.3 Industrial Policy of the Government Latest Industrial Policy, 2.4 Foreign Trade Policy, 2.5 Fiscal Policy and Tax System in India, 2.6 Monetary Policy and Banks Reforms in India, 2.7 Challenges of Indian Economy, Rural Development Efforts, 2.8 India as one of the most prominently emerging economies of world,		<b>11</b>
<b>3</b>	3.1 Balance of Payments, 3.2 Concepts, Disequilibrium in BOP: 3.3 Methods of Correction, 3.4 Tread Barriers and Tread Strategy, 3.5 Free Trade vs. Protection, 3.6 World Financial Environment: 3.7 Foreign Exchange Market Mechanism, 3.8 Exchange Rate Determination and Euro Currency		11
<b>4</b>	<b>4.1 Strategies for going Global</b> 4.2 International Economic Integration,		<b>11</b>

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	4.3 Country Evaluation and Selection, 4.4 Foreign Market Entry Method, 4.5 International Trading Blocks, Their Objectives, 4.6 WTO Origin, Objectives, 4.7 Organization Structure and Functioning, 4.8 WTO and India.	
	<b>Total</b>	<b>45</b>
<b>Text Readings:</b> 1. Shaikh Salim, <b>Business Environment</b> , Pearson Education, 2010 2. Mark Hirschey, <b>Economics for Managers</b> , Cengage, 2006 3. Palwar, <b>Economic Environment of Business</b> , PHI, New Delhi, 2009 4. D.N. Dwivedi, <b>Managerial Economics</b> , Vikas Publishing House, 2009.		

<b>INSTITUTE OF MANAGEMENT STUDIES</b>			
<b>M.B.A. (DISASTER MANAGEMENT)</b>			
<b>Semester II</b>			
<b>Subject Name</b>	<b>OPERATIONS RESEARCH</b>	<b>Subject Code</b>	<b>DM-207C</b>
		<b>Total Credits</b>	<b>03</b>
<b>Subject Nature: GENERIC</b>			
<b>Course Objective:</b>			
<ul style="list-style-type: none"> <li>• The objectives of this course are to help the students acquire quantitative tools.</li> <li>• The use of these tools for the analysis and solution of business problems. The emphasis will be on the concepts and application rather than derivations.</li> </ul>			
<b>Learning Outcome:</b>			
At the end of the course students should be able to;			
<ol style="list-style-type: none"> <li>1. Model fitting to get solutions to the problems in the corporate world.</li> <li>2. Develop models as per the requirements of the practicing managers.</li> <li>3. Describe and attain some elementary level of decision science skills for the management processes.</li> </ol>			
<b>Examination scheme:</b>			
The faculty member will award internal marks out of 40 based on three assessments of 20 marks each of which best two will be considered. The end semester examination will be worth 60 marks having theory and cases/practical problems.			
<b>Course Contents</b>			<b>Class Room Contact Sessions</b>
<b>UNIT –I</b> Quantitative Techniques and Operations Research	1.1 Meaning, Scope of Quantitative Techniques and Operations Research in Management 1.2 Modeling in OR 1.3 Advantages and Limitations of Quantitative Techniques/Operation Research.	<b>06</b>	
<b>Unit-2</b> Linear Programming	2.1 Meaning of Linear programming 2.2 General Mathematical Formulation of LPP 2.3 Graphical Analysis 2.4 Simplex Method and Big-M Method. 2.5 Advantage and limitations of LPP.	<b>10</b>	
<b>Unit – 3</b> <b>Non Linear Programming</b>	3.1 Concepts and Applications of Dynamic Programming, Quadratic Programming, Integer Programming and Non linear Programming (Concepts and applications only)	<b>02</b>	

<b>Unit-3</b> Transportation Model and Assignment Problem	3.1 Transportation Problem as a particular case of LPP Mathematical Formulation 3.2 Initial Basic Feasible Solution, Vogel's Approximation Method, Optimization (Minimization and Maximization) using Modified Distribution Method and Stepping Stone Method. 3.3 Assignment Model as a particular case of transportation model, 3.4 Formulation of assignment problems, Solution of assignment problems using Hungarian Method (Minimization and Maximization).	<b>10</b>
<b>Unit- 4</b> Game Theory	4.1 Introduction to Games 4.2 Maximin and Minimax Principles 4.3 Pure and Mixed Strategies 4.4 Rule of dominance 4.5 Solutions of Games using –Algebraic and Graphical Methods 4.6 Game theory and linear programming	<b>05</b>
<b>Unit -5</b> Replacement Models	5.1 Introduction and Scope in Management 5.2 Single Equipment Replacement Model and Group Replacement 5.3 Replacement of items which deteriorate with time and items which fails suddenly.	<b>04</b>
<b>Unit-6</b> Waiting Line Models	6.1 Introduction and Scope in Management Decisions, 6.2 Queuing Models M/M/1 (Infinite and Finite Population), 6.3 Concepts and applications of M/M/C.	<b>06</b>
<b>Unit- 7</b> <b>Simulation</b>	7.1 Concept of Simulation and its applications.	<b>02</b>
<b>TOTAL CLASSROOM CONTACT SESSIONS</b>		<b>45</b>
<b>Text Reading: Latest Editions</b>		
1 Haruly M. Wagner, “ <b>Principles of Operations Research with application to managerial decisions</b> ”, New Delhi: Prentice Hall of India Pvt. Ltd.		
2 Hamdy A. Taha, “ <b>Operations Research: An Introduction</b> ”, New Delhi: Prentice Hall of India Pvt. Ltd.		
3 N. D. Vohra. “ <b>Quantitative Techniques</b> ”, New Delhi: Tata McGraw Hill Publications.		
4 V. K. Kapoor, “ <b>Problems and Solutions in Operations Research</b> ”, New Delhi: Sultan Chand and Sons.		
5 P. K. Gupta and D. S. Hira, “ <b>Operations Research</b> ”, New Delhi: Sultan Chand Publications.		

INSTITUTE OF MANAGEMENT STUDIES			
M.B.A. (DISASTER MANAGEMENT)			
Semester II			
Subject Name	<b>RESEARCH METHODOLOGY</b>	Subject Code	<b>DM-208C</b>
		Total Credits	<b>03</b>
<b>Subject Nature: ABILITY ENHANCEMENT</b>			
<b>Course Objective:</b>			
<ul style="list-style-type: none"> <li>• The objectives of the course are to equip the students with the concept and methods of Business Research.</li> <li>• The students will be able to plan, design and carry out business research using scientific methods and prepare research report(s) / paper(s).</li> </ul>			
<b>Learning Outcome:</b>			
At the end of the course students should be able to;			
<ol style="list-style-type: none"> <li>1. Help to get solutions to the problems in the corporate world through research.</li> <li>2. Develop research papers to understand the intricacies of research.</li> <li>3. Describe and attain some elementary level of data analysis applicable in research.</li> </ol>			
<b>Examination scheme:</b>			
The faculty member will award internal marks out of 40 based on three assessments of 20 marks each of which best two will be considered. The end semester examination will be worth 60 marks having theory and cases/practical problems.			
Course Contents			Class Room Contact Sessions
<b>UNIT –I</b> Introduction to Research Methods	1.1 Role and objectives of business research 1.2 Types of research, 1.3 Research process: Overview 1.4 Problems encountered by researchers in India		<b>08</b>
<b>Unit-2</b> Research Design	2.1 Defining research problem, objectives and Hypothesis development, 2.2 Need for research design, 2.3 Features of a good research design 2.4 Different research designs and types of research design. (exploratory, descriptive, experimental and diagnostic research).		<b>08</b>
<b>Unit-3</b> Sampling Theory and Design of	3.1 Census Vs Sample Enumerations 3.2 Objectives and Principles of Sampling 3.3 Types of Sampling, Sampling and Non-Sampling Errors.		<b>06</b>



Sample Survey		
<b>Unit- 4</b> Measurement and Scaling Concepts	4.1 Measurement in research, 4.2 Measurement scales, 4.3 Sources of errors in measurement, 4.4 Techniques of developing measurement tools, 4.5 Classification and testing (reliability, verification and validity) scales 4.6 Designing questionnaires.	<b>06</b>
<b>Unit -5</b> Data Collection and Analysis	5.1 Collection, Organization and Presentation 5.2 Analysis: Univariate and bivariate Analysis ( Hypothesis testing) 5.3 Multivariate Analysis (Concepts only)	<b>12</b>
<b>Unit-6</b> Report Writing	6.1 Meaning of interpretation 6.2 Techniques of Interpretation 6.3 Precautions in interpretation 6.4 Significance of report writing 6.5 Steps in report writing 6.6 Layout of report 6.7 Precautions in writing research reports.	<b>05</b>
	<b>TOTAL CLASSROOM CONTACT SESSIONS</b>	<b>45</b>
<b>Text Reading: Latest Editions</b>		
<ol style="list-style-type: none"> <li>1 William G. Zikmund, “<b>Business Research Methods</b>”, Orlando: Dryden Press.</li> <li>2 C. William Emory and Cooper R. Donald, “<b>Business Research Methods</b>”, Boston, Irwin.</li> <li>3 Fred N Kerlinger, “<b>Foundations of Behavioural Research</b>”, New Delhi: Surjeet Publications.</li> <li>4 David Nachmias and Chava Nachmias, “<b>Research Methods in the Social Sciences</b>”, New York: St.Marlia’s Press.</li> <li>5 C. R. Kothari, “<b>Research Methodology: Methods and techniques</b>”, New Delhi: Vishwa Prakashan.</li> </ol>		