

**SHRI VISHWAKARMA SKILL UNIVERSITY**  
(Enacted by the Act 25 of 2016, State of Haryana)  
**DUDHOLA, PALWAL**



**MBA (Business Analytics)**  
**NSQF Level 9**  
**Batch 2021-2023 and Onwards**

**MBA (Business Analytics) Scheme and Syllabus - For Academic Session 2021 and Onwards**

**Scheme (Semester I & II)**

Semester 1: (12+18)

Semester 2: (12+18)

Semester 3: (12+18)

Semester 4: (12+18)

**Semester 1**

Code	Subject	Credits			Hours			Theory (Marks)			Practical (Marks)			Total
		T	Tu	To	T	P	To	I	E	To	I	E	To	
MAN801	Data Modelling	2	2	4	30	60	90	30	70	100				100
MAN802	Statistical Analysis	3	1	4	45	30	75	30	70	100				100
MFM805	Accounting and Financial Management	3	1	4	45	30	75	30	70	100				100
MAN803	Managerial Economics	3	1	4	45	30	75	30	70	100				100
AEC801	Viva-Voce	0	2	2							50	50	100	100
<b>SEC Total</b>		<b>12</b>	<b>6</b>	<b>18</b>	<b>165</b>	<b>150</b>	<b>315</b>	<b>120</b>	<b>280</b>	<b>400</b>	<b>50</b>	<b>50</b>	<b>100</b>	<b>500</b>
MGM801	Fundamentals of Management and Organizational Behaviour	3	1	4	45	30	75	30	70	100				100
MGM804	Professional Communication	3	1	4	45	30	75	30	70	100				100
MMK804	Marketing Management	3	1	4	45	30	75	30	70	100				100
<b>GEC Total</b>		<b>9</b>	<b>3</b>	<b>12</b>	<b>135</b>	<b>90</b>	<b>225</b>	<b>90</b>	<b>210</b>	<b>300</b>				<b>300</b>
<b>Total</b>		<b>21</b>	<b>9</b>	<b>30</b>	<b>300</b>	<b>240</b>	<b>540</b>	<b>210</b>	<b>490</b>	<b>700</b>	<b>50</b>	<b>50</b>	<b>100</b>	<b>800</b>

**Semester 2**

Code	Subject	Credits			Hours			Theory (Marks)			Practical (Marks)			Total
		T	Tu	To	T	P	To	I	E	To	I	E	To	
MAN804	Introduction to Data Science	1	2	3	15	60	75	30	70	100				100
MAN805	Business Analytics	1	2	3	15	60	75	30	70	100				100
MAN806	Econometrics	1	2	3	15	60	75	30	70	100				100
AEC802	Industry Project	0	7	7	0	210	210				100	100	200	200
OMS802	Entrepreneurship	2	0	2	30	0	30	30	70	100				100
<b>SEC Total</b>		<b>5</b>	<b>13</b>	<b>18</b>	<b>75</b>	<b>390</b>	<b>465</b>	<b>120</b>	<b>280</b>	<b>400</b>	<b>100</b>	<b>100</b>	<b>200</b>	<b>600</b>
MAN807	Optimization Analytics	2	2	4	30	60	90	30	70	100				100
MGM803	Research Methodology	3	1	4	45	30	75	30	70	100				100
MHR803	Human Resource Management	2	2	4	30	60	90	30	70	100				100
<b>GEC Total</b>		<b>7</b>	<b>5</b>	<b>12</b>	<b>105</b>	<b>150</b>	<b>255</b>	<b>90</b>	<b>210</b>	<b>300</b>				<b>300</b>
<b>Total</b>		<b>12</b>	<b>18</b>	<b>30</b>	<b>180</b>	<b>540</b>	<b>720</b>	<b>210</b>	<b>490</b>	<b>700</b>	<b>100</b>	<b>100</b>	<b>200</b>	<b>900</b>

## Syllabus (Semester I)

### SEMESTER I

#### DATA MODELLING

Course No. MAN801

Course Credit: 04 (2-2-0)

Max. Marks: 100 (30I+70E)

#### Course Objective

The aim of the course is to make students learn and practice about data modelling using the entity relationship and developing database designs.

#### Learning Outcomes

L01: Understand the fundamentals of database systems.

L02: Design and draw ER and EER diagram for the real life problem.

L03: Apply normalization techniques to normalize the database.

L04: Understand the needs of database processing and learn techniques for controlling the consequences of concurrent data access.

L05: Convert conceptual model to relational model and formulate relational algebra queries.

Unit	Topics
I (LO 1, 2)	Data Modelling – meaning and concept – Data modelling objects – data modelling development cycle – Steps to create a data model – Data modeller role – model versioning – modelling standards – Data modelling reports – data modelling relationships – types.
II (LO 2, 3)	The Entity-Relationship Model; Data Modelling As Part of Database Design; Identifying Data Objects; Developing the Basic Schema; Refining the Entity-Relationship Diagram; Primary and Foreign Keys; Adding Attributes to the Model; Generalization Hierarchies; Adding Integrity Rules.
III (LO 3, 4)	Overview of the Relational Model: Data Structure and Terminology; Notation; Properties of Relational Tables; Relationships and Keys; Data Integrity; Relational Data Manipulation; Normalization; Advanced Normalization.
IV (LO 2, 4)	MS-Access Database- Screen Layouts; Creating Tables; Database Records; Table Relationship; Queries; Introduction to expression; Window Control and expression; Time series based functions; Forms; Reports; Importing, Exporting, and Linking.
V (LO 4, 5)	Transforming a logical data model into a physical model, including designing database-specific features and constraints. Explore the process of data modelling on modern development projects, including planning, continuous delivery, test driven development, continuous integration.

#### Recommended Books

1. Michel Berry and Gordon Linoff, Mastering Data mining, John Wiley and Sons Inc 2<sup>nd</sup> Edition, 2011
2. Michel Berry and Gordon Linoff, Data mining techniques for Marketing, Sales and Customer support, John Wiley, 2011
3. G. K. Gupta, Introduction to Data mining with Case Studies, Prentice hall of India, 2011.

## STATISTICAL ANALYSIS

**Course Code: MAN802**

**Course Credit: 04 (3-1-0)**  
**Max. Marks: 100 (30I+70E)**

### Course Objective

The basic aim of this course is to impart knowledge of basic statistical tools & techniques with emphasis on their application in Business decision process and Management

### Learning Outcomes

- L01: To enhance knowledge in probability theory
- L02: To understand normality and its distribution concepts.
- L03: To stress the need for collection of data and its dispersion techniques.
- L04: To draw conclusions over the hypothetical situations.
- L05: To determine the relationship between dependent and independent variables.
- L06: To apply time series analysis in market prediction rates.
- L07: To measure the trend setting factors for projection of sales and demand curves.
- L08: To extract the variance among the factors of study concerned.

Unit	Topics
<b>I</b>  <b>L01</b> <b>L02</b>	Introduction to Statistics - Collection of Data - Measures of Central Tendency & Dispersion in Frequency Distribution; Probability Theory– Addition, Multiplication & Baye’s Theorem. Test for Normality. Skewness & Kurtosis; Clean Data; z-scores, measuring performance
<b>II</b>  <b>L03</b> <b>L04</b>	Distributions and confidence intervals; One sample tests and Bivariate Analysis; Visually represent descriptive statistics; Hypothesis Testing –Test for Single Mean & Two Mean– Chi-Square test, F test – ANOVA
<b>III</b>  <b>L04</b> <b>L05</b> <b>L06</b>	Chi-square test for single sample standard deviation. Chi-square tests for independence of attributes and goodness of fit. Sign test for paired data. Rank sum test. Kolmogorov-Smirnov – test for goodness of fit, comparing two populations. Mann – Whitney U test and Kruskal Wallis test. One sample run test, rank correlation.
<b>IV</b> <b>L06</b> <b>L07</b>	Linear and Logistic Regression; Dummy Variable; Bivariate analysis; Selecting the best model and reporting results; Multivariate analysis
<b>V</b>  <b>L07</b> <b>L08</b>	Time Series Analysis , Components Business Forecasting - Objectives of forecasting in business - Prediction, projection and forecasting - Characteristics of business forecasting - Steps in forecasting , Methods of Business Forecasting.

### Recommended Books

1. R.S.N. Pillai, V. Bagavathi," Statistics", S.Chand Limited, latest Ed,
2. N.D. Vohra, "Business Statistics", Tata McGraw-Hill Education, latest Ed.
3. G. V. Shenoy, Uma K. Srivastava, S. C. Sharma," Business Statistics", New Age International, latest Ed.
4. Beri," Business Statistics" TataMcGraw Hill, latest Ed.
5. Keller. G," Statistics for Management", Cengage Learning, latest Ed.
6. J. K Sharma, "Business Statistics", Pearson, latest Ed.
7. Arora PN &others," Complete Statistical Methods", S. Chand, latest Ed.

## ACCOUNTING AND FINANCIAL MANAGEMENT

**Course Code: MFM805**

**Course Credit: 04 (3-1-0)**  
**Max. Marks: 100 (30I+70E)**

### Course Objectives:

The basic purpose of this course is to develop a strategic and policy perspective with respect to the principles of accounting and utilization of accounting information for general purpose decision making in an organisation. The emphasis is on core ideas and techniques with reinforced understanding using practical examples.

### Learning Outcomes:

L01: Understanding how accounting decisions affect real company practices.

L02: Understand the concepts of Depreciation, Inventory valuation and the methods employed by Indian Companies.

L03: Strengthening the foundations of the analytical approach to Managerial decision-making.

L04: Understanding the production problem and how managers make input purchase decisions.

Unit	Topics
I L01	Accounting Theory: Concept, Importance, Scope of Accounting, Generally Accepted Principles of Accounting, Indian Accounting Standards, IFRS, Preparation of Financial Statements, Corporate Balance Sheet – Terms, Contents, Format and Analysis.
II L02 L03	Presentation and Disclosure of Accounting Information: Presentation of Financial Position. Financial Statements of Companies, Analysis of Accounting Information: Financial Statement Analysis. Interpretation of Accounting information,
III L01 L03 L04	Cash Flow Statement, Preparing a statement of Cash Flows. Responsibility Accounting and Divisional Performance Measurement, Transfer Pricing: Definition, Objectives and Methods of Transfer Pricing, Recent developments in the field of Accounting.
IV L03 L04	Introduction to Financial Management: Meaning & Scope. Long term sources of funds, cost of capital and its computation, leverage, EBIT & EPs Analysis; Capital Structure – Theories & Determinants.

<b>V</b> <b>L03</b> <b>L04</b>	Investment Decisions: Conventional and DLF Methods, Risk Analysis and Capital Budgeting, Introduction to Financial Analysis. Walter Model, Gordon Model, MM Approach. Factors affecting Dividend Policy, Forms of Dividend.
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**Recommended Readings:**

1. Anthony, R.N., Hawkins, F.D., & Merchant, K.A. Accounting: Text and Cases (latest ed.).Tata McGraw Hill.
2. Needles B.E., Powers, M., & Crosson, S.V. Principles of Financial Accounting (12th ed.). South-Western College/West.
3. Hilton, R.W., & Platt, D.E. .Managerial Accounting (latest ed.). **Tata McGraw Hill.**

### MANAGERIAL ECONOMICS

**Course Code: MAN803**

**Course Credit: 4 (3-1-0)**  
**Max. Marks: 100 (30I + 70E)**

**Course Objective:**

The objective of this course is to familiarize the students with the concepts and techniques used in micro-economic theory and to develop managerial capabilities for effective decision-making in a variety of different business situations and market conditions. Managerial Economics provide the students with the basic tools to fundamentally deal with achieving a set of goals in a situation where resources are limited and choices must involve trade-offs, taking into account the external environment. This course provides the foundation for a variety of other courses, like finance, marketing and strategy.

**Learning Outcomes:**

- L01: Strengthening the foundations of the analytical approach to Managerial decision-making.  
L02: Understanding Consumer Behaviour.  
L03: Understanding the production problem and how managers make input purchase Decisions.  
L04: Understanding the various market structure and how supply is determined in each.  
L05: Understanding the external environment, common information problems faced/created by managers.

Unit	Topics
<b>I</b> <b>L01</b> <b>L02</b>	Introduction to Microeconomics. Objectives, Marginal Analysis and its uses in the Business Decision- Making.
<b>II</b> <b>LO</b> <b>L02</b> <b>L03</b>	Theories of Demand: Preference, Utility Function, Indifference Curve, Revealed Preference Approach, Income and Substitution effects, Demand functions, Demand Forecasting; Managerial Applications.
<b>III</b> <b>L03</b> <b>L04</b>	Production and Cost: The Production Function, Returns to Scale, Profit Maximization Constrained Optimization Approach to Developing Optimal Input Combination, Relationships, Input Demand Function.

<b>IV</b> <b>L04</b> <b>L05</b>	Market Structure: Profit Maximization under Different Market Structures, Perfect Competition, Monopoly, Price Discrimination, Other Pricing Strategies of Firms, Monopolistic Competition, Game Theory.
<b>V</b> <b>L04</b> <b>L05</b>	Models of oligopoly, economics of information.

### **Suggested Readings:**

1. Allen, W. B., Doherty N. A., Weigelt, K., & Mansfield E. *Managerial Economics: Theory, Applications and Cases* (latest ed.). W. W. Norton & Company.
2. Bernheim, B. D., Winston, M., & Sen, A. . *Microeconomics*. McGraw Hill Education.
3. Geetika, Ghosh P., & Roy Chowdhury, P. (2017). *Managerial Economics* (latest ed.). McGraw Hill Education.
4. Hirschey, M. . *Managerial Economics: An Integrative Approach*. Cengage Learning.
5. Koutsoyiannis, A. *Modern Microeconomics* (latest ed.). Palgrave, McMillan.
6. Mark, H. (2009). *Fundamentals of Managerial Economics* (latest ed.). Cengage Learning.

### **VIVA-VOCE**

**Course Code: AEC801**

**Course Credit: 02 (0-0-2)**  
**Max. Marks: 100 (50I+50E)**

### **FUNDAMENTALS OF MANAGEMENT AND ORGANIZATIONAL BEHAVIOUR**

**Course Code: MGM801**

**Course Credit: 04 (3-1-0)**  
**Max. Marks: 100 (30I+70E)**

### **Course Objectives:**

The objective of the course is to help students develop an understanding of the basic management concepts and behavioral processes in organizations which are important for them to adapt to the changing corporate environment.

### **Learning Outcomes:**

- L01: Understanding the concept of organizational behavior and developing an understanding of managerial functions, skills and roles.
- L02: Understanding the various organization structures and their usefulness
- L03: Strengthening the foundations of individual behavior with an understanding of human personality, perception, learning and emotions.
- L04: Understanding the basic process of interpersonal relationship and the behavioral approach to Managerial decision-making.
- L05: Understanding how managers can use the models to enhance motivational levels of employees.
- L06: Develop an understanding of leadership and teams building in organizations.

<b>Unit</b>	<b>Topic</b>
<b>I</b> <b>L01</b>	<b>Basics of Management:</b> Concept, nature, process and significance of management; Managerial levels, skills, functions and roles (with special reference to BFSI); Management Vs. Administration; Contingency Management theories by - F. W. Taylor, Henry Fayol and Elton Mayo.
<b>II</b> <b>L01</b> <b>L02</b>	<b>Managerial Skill and Functions:</b> Level of Management- Functions of Management; Centralization – Decentralization; Managerial Planning; Organising and Organization structures - Line & Staff – functions, Leading and Staffing; Controlling – Definition, Nature, Importance, Steps, Techniques
<b>III</b> <b>L03</b> <b>L04</b>	<b>Organisation Behaviour:</b> Definition, Scope, Importance, Concepts of Organisation Behaviour; Values, Attitude and Perception; Perceptual Process, Social perception (stereotyping and halo effect).
<b>IV</b> <b>L04</b> <b>L05</b>	<b>Motivation-</b> Definition, Theories of motivation, Mc Gregor, A.H. Maslow, Herzberg; <b>Learning-</b> Meaning & Theories.
<b>V</b> <b>L05</b> <b>L06</b>	<b>Leadership &amp; Team Building</b> –Definition, Importance, qualities of leaders, types of leaders; Success stories of today’s Global and Indian leaders ; Interpersonal and Group Dynamics; Team Building; <b>Personality-</b> Attributes of personality, Type, Ego state, Johari window.

### **Books Recommended**

#### **Text Books**

1. Management by Stomen and Jane
2. Organisational behaviour by Stephen Robbins

#### **Reference Books**

1. Principles and Practices of management by Shejwalkar
2. Essential of management by Koontz H and Weitrich
3. Principles and Practices of Management by T. N. Chabra
4. Organisational behaviour by Keith & Davis
5. Organisational behaviour by Fred and Luthans
6. Organisational behaviour by K. Ashwatthapa

#### **Web Links**

- <https://www.swayamprabha.gov.in/index.php/program/archive/16>  
<https://www.swayamprabha.gov.in/index.php/program/archive/5>  
<http://cec.nic.in/E-Content/Pages/default.aspx>



## PROFESSIONAL COMMUNICATION

Course Code: MGM804

Course Credit: 04 (3-1-0)  
Max. Marks: 100 (30I+70E)

### Course Objectives:

The aim of the course is to develop skills and competencies in participants to be able to communicate effectively through written, oral and social medium. This course will make students conversant with the basic forms, formats and techniques of business writing so that they would be thoroughly prepared to communicate effectively in all contexts. Sensitivity towards cross-cultural communication will be developed with familiarity with global business etiquette and protocols. The pedagogical focus of the course will be lecture cum workshop-based format with emphasis on practice and skills development.

### Learning Outcomes:

L01: Understanding the role of communication in the organizational and Global Context

L02: Understanding the basics of effective written and verbal communication

L03: Understanding the theoretical models of communication and development in communication research

L04: Analysing one's own communication style in different contexts and mediums

L05: Exposure and training of technical writing, responsibilities of a communicator, Ethical Issues and Legal Issues

Unit	Topics
I L01 L02	<b>Concepts of Communication in Business:</b> Introduction to Business Communication, Components of Communication (7Cs), <b>Listening Skills</b> , Verbal and Non-Verbal Skills and Presentation Skills., Legal issues in Communication
II L02 L03	<b>Formal Communication:</b> Planning and executing different types of messages, writing reports, proposals and Business plans, Improving personal writing skills
III L03 L04	<b>Interpersonal Communication Skills:</b> Communicating in teams, Negotiation Skills, Communication skills during a conflict, Mentoring and Appraisals, Communication in Social Media and Digital Communication
IV L04 L05	<b>Cross Cultural Communication:</b> Theoretical Framework of Cross-Cultural Communication, Communication across cultures through different mediums, Business Etiquettes across cultures
V L04 L05	<b>Communication for career:</b> Resume writing and cover letters, Group Discussions and Interviews, Communication during Exit Interviews, Ethics and Communication

### Recommended Readings:

- Lehman, C. M., Dufrene D. D., & Sinha, M. *BCOM: The South Asian Perspective on Business Communication* (latest ed.). New Delhi: Cengage Learning.
- Murphy, H. A., Hildebrandt, H.W., & Thomas, J.P. *Effective Business Communication* (latest ed.). Boston: McGraw-Hill Companies.
- Bovee, C., & Thill, J.V., & Raina, R.L. . *Business Communication Today* (latest ed.). Pearson

- Mukerjee, H. S. *Business Communication* (latest ed.). New-Delhi: Oxford University Press
- Post Emily. *The Etiquette Advantage in Business* (latest ed.). New York: Collins.
- Sandra, M. O. *Handbook of Corporate Communication and Strategic Public Relations: Pure and Applied*. Routledge.

## MARKETING MANAGEMENT

**Course Code: MMK804**

**Course Credit: 04 (3-1-0)**  
**Max. Marks: 100 (30I+70E)**

**Course Objective:**

To introduce the students to the concepts, strategies and contemporary issues involved in the marketing of products and services.

**Course Learning Outcomes:**

- L01: Understanding the nature and scope of marketing
- L02: Develop an understanding of various marketing philosophies
- L03: Understanding the marketing mix and marketing environment
- L04: Understanding segmentation, targeting and positioning
- L05: Understanding consumer behaviour and its application in marketing
- L06: Develop an understanding of decisions concerning 4 P's – product, price, place and promotion
- L07: Understanding contemporary issues in marketing

Unit	Topics
<b>I</b> <b>L01</b> <b>L02</b> <b>L03</b>	Introduction to Marketing: Nature and Scope of Marketing, Marketing Concepts, Marketing Philosophies, Customer Value, Holistic Marketing, Marketing Environment: Environmental monitoring, Understanding the impact of Macro and Micro environment on Marketing, Global Marketing.
<b>II</b> <b>L03</b> <b>L04</b>	Identifying and Selecting Markets: Consumer Buying Behaviour, Organizational Buying Behaviour, Market Segmentation, Targeting and Positioning, Marketing Research and Market Information, Strategic Marketing Planning Process: Competitor analysis, Marketing Warfare Strategies, Marketing Planning Process
<b>III</b> <b>L04</b> <b>L05</b>	Product Mix Strategies: Product, Planning and Development, Product Life Cycle, New Product development, Brands, Packaging and Labelling, Developing Pricing Strategies: Setting Price, Factors influencing Price Determination
<b>IV</b> <b>L05</b> <b>L06</b>	Channels of Distribution: Designing Distribution Channels, Managing Conflicts and Controls in Channels, Retailing, Wholesaling and Logistics, Marketing Communication: Role of Promotion in Marketing, Integrated Marketing Communication, Determining Promotional Mix, Advertising, Sales Promotion Public Relations, Personal Selling and Sales Management.
<b>V</b> <b>L06</b> <b>L07</b>	Trends in Marketing: Service Marketing, Social Media Marketing, Green Marketing, Customer Relationship Management, Rural marketing, other emerging trends.

### **Recommended Readings:**

- Etzel, M. J., Bruce, J. W., Stanton, W. J., & Pandit, A. *Marketing* (latest ed.). New Delhi: Tata McGraw-Hill.
- Kotler, P. & Armstrong, G. *Principles of Marketing* (latest ed.). Pearson.
- Kotler, P., Keller, K., Koshy, L., & Jha, M. *Marketing Management: A South Asian Perspective* (latest ed.). New Delhi: Pearson.
- Perrault, W.D (Jr.), Cannon, J.P., & McCarthy, E.J. *Basic Marketing*. New Delhi: Tata McGraw-Hill.
- Ramaswamy, V. S. & Namakumari, S. *Marketing Management: Global perspective Indian context* (latest ed). New Delhi: Macmillan.
- Saxena, R. *Marketing Management* (latest ed.). New Delhi: Tata McGraw Hill.