

DEPARTMENT OF MANAGEMENT STUDIES
S.V.U COLLEGE OF CM & CS
SRI VENKATESWARA UNIVERSITY: TIRUPATI



SYLLABUS FOR I & II SEMESTER
MASTER OF BUSINESS ADMINISTRATION (M.B.A)
Choice-Based Credit System (CBCS)
Amended as per NEP – 2020
(W.E.F. the Academic Year 2025-26)

MASTER OF BUSINESS ADMINISTRATION (M.B.A)
UNDER CHOICE BASED CREDIT SYSTEM (CBCS)
REVISED REGULATIONS -2025 - 26

(For Regular students of University and Affiliated Colleges, S.V. University, Tirupati)
(To come into effect from the academic year 2025-26)

Under the National Education Programme (NEP)

This new curriculum is based on the NEP, designed to prepare students for lifelong learning in both offline and online modes. This curriculum incorporates core courses, audit courses, functional courses, electives, project works, skill-oriented papers and online courses. The major aim of this programme is to make the students effective corporate professionals, besides equipping them with the much-needed entrepreneurial skills.

GENERAL INFORMATION

- ‘Credit’ is concerned with the quantum of syllabus and workload assigned to a Particular course.
- One credit = One lecture hour/week

Choice-based credit system provides an opportunity for students to learn different subjects by registering for the desired number of courses to secure a post-graduation degree. It allows the students to experience an interdisciplinary approach to learning.

(i) Programme – Course

- A programme consists of a number of courses
- A course is a part of the programme
- A course may involve Lectures / Tutorials / Lab Work / Seminars / Case Studies / Group Discussions / Role Playing / Projects / Practical Training, etc.
- The effort in the form of tutorials, lab work, seminars, case studies, group discussion, role playing, projects and practical training, covering 100 marks, is assigned with 4 credits.
- A course length is usually 15 lecture weeks
- Each course is given a code

(ii) Classification of courses:

The various courses offered to students are of five types:

(a) Core Course:

Core courses are those courses which is essential for the students. These courses are mandatory. A core course may be a theory or a practical paper.

(b) Skill Course:

These courses are designed to impart the required skills to make the students complete professionals, and these are mandatory, like core courses.

(c) Audit Course:

The purpose of the audit course is to create awareness among students about some of the important topics that will enhance their life skills. There are no credits awarded to these courses.

(d) Online Course (MOOCS):

The concerned department allows students to choose two credit courses under the Swayam platform or any other platform permitted by the university authorities during each semester, to acquire additional knowledge. These credits are to be taken into account for awarding grades or classes. Such courses should be the ones that are not covered in the program or covered inadequately. The grading will be as per the procedure approved for the CBCS. The courses marked as online in the programme structure shall be completed by the students by enrolling in approved online courses, and they shall submit the pass certificate(s) to forward them to the controller of examinations of the University.

(e) Elective:

An elective allows students to gain knowledge in areas where the concerned subject has practical applications. These Internal Electives are given as per the Specialisation in the course structure. The students can opt for one Specialisation or two and pick the required courses in each Specialisation as per their choice.

(iii) Semesters:

An academic year is constituted by two semesters.

- Odd semester covers the period from August to December, fifteen weeks of which are lecture weeks.
- Even semester covers the period from December to April, with fifteen lecture weeks.
- In each semester, there are no preparatory holidays for semester-end examinations; the next semester follows immediately at the end of the previous semester's examinations. Semester-end examinations are on each working day without a gap between two examinations.

2. Eligibility for admission into the Two-Year Degree of Master of Business Administration (M.B.A)

The candidates seeking admission into the MBA Programme should have passed the Bachelor's Degree Examination of a minimum of Three Years duration of this University or an examination recognised by this University as equivalent to, and, besides to have passed in the prescribed entrance examination, and fulfil any other conditions as in vogue for admission into the M.B.A. Degree programme.

3. For passing the MBA Degree examination, the candidate has to fulfil the conditions prescribed hereunder:

- a) The candidate has to complete the study over a period of two academic years, each academic year consisting of two semesters and each semester consisting of 16 weeks duration, including semester-end examinations.

- b) The First Year comprises two semesters, and each semester contains eight common courses. The Second Year also has two semesters, and each semester contains five common courses, including a project-based viva at the end of the 3rd semester and a comprehensive viva at the end of the 4th semester, and three electives to be chosen from one or two specialisations.

4. Industrial Training and Project Work:

- a. Each student must undergo an internship in any one of the corporate establishments for a period, not less than eight weeks but not more than ten weeks between the II and III semesters.
- b. Each student shall do the project work under the supervision of a faculty guide allotted to him/her. In the organisation where the candidate undertakes project work, the student must have a supervising guide to look after the progress of work in the company. The student must maintain a diary during his/her stay in the company, recording the activities that are undertaken and completed. The actual learning from the project also needs to be mentioned.
- c. The candidate must give a joining report in the organisation by producing a letter issued by the Head of the department. On completion of the training, a relieving and training completion certificate has to be obtained from the organisation for submission to the Head of the department.
- d. The internship envisages submission of a dissertation (Code No. 303 of the III semester), which carries a maximum of 100 marks, including 30 marks for sessionals. The dissertation shall be valued for 70 marks by an internal examiner and an external examiner separately. In the III semester, the candidate has to present a seminar on the topic for evaluation by the faculty.
- e. At the end of the third semester, Project VIVA-VOCE for 100 marks will be conducted by a panel of examiners consisting of an internal and external examiner, respectively.

5. Medium of instruction:

The medium of instruction is English only.

6. Scheme of Examination:

There shall be four semester-end examinations spread over two academic years. Each course carries a maximum of 100 marks, including 30 marks for sessionals. The duration of the semester-end examination is 3 hours for each paper of 70 or 100 marks. The sessional marks will be assigned based on tests, quizzes, seminars, carry home assignments, etc., by the concerned teacher.

7. Attendance:

- 7.1 Regular course of study, in a semester, means a minimum average attendance of 75% in all the papers computed by totaling the number of periods of lectures, tutorials, practical's and projects, as the case may be, held in every paper as the denominator and the total number of periods attended by the student in all papers, as the numerator.
- 7.2 However, a student has to put in a minimum attendance of 50% in each subject, in addition to the condition laid down in clause 7.1.

- 7.3 No consideration whatsoever in attendance will be shown to any student for late admission due to any reason.
- 7.4 Condonation of shortage of attendance may be recommended provided a student puts in at least 62.5% attendance, in all the papers put together as calculated in clause 7.1 above, along with a minimum of 50% attendance in each subject as stated in clause 7.2, and provided the Principal is satisfied with the reason for the shortage of attendance.
- 7.5 A student who could not satisfy these requirements of attendance as stated above, in any of the semesters, will have to repeat that semester.
- 7.6 A certificate of satisfactory attendance must be submitted by the student from the organisation where he/she undertake Project Work.
- 7.7 Further, a student is required to complete the course of study satisfying the attendance requirements in all four Semesters, within a period of the first Eight Semesters from the time of admission, failing which he/she shall forfeit the seat.
- 7.8 A student, who has satisfied the minimum attendance requirements in any semester, may repeat that semester after obtaining written permission from the Principal and cancelling the previous record of attendance and sessional marks of that semester. However, this facility may be availed by any student not more than twice during the entire course of study, and the entire course of study shall be within the first Eight Semesters as stipulated in clause 7.7.

8. Promotion:

A candidate who has put in the required minimum attendance as stipulated in Clause No.7 and has registered for the semester-end University examination by paying the required examination fee is eligible for promotion to the next semester. There shall be no detention of failed candidates or candidates who are absent for the semester-end University examination.

9. Evaluation:

There shall be both Internal and External evaluations for the semester-end examinations, including the Project Report.

10. Qualifying Marks for Pass

- a) i) A candidate appearing for the first time for the Examination of any Semester has to register for the whole examination of that Semester. A candidate shall be declared to have passed the whole or a part of the whole examination if he/she secures not less than 40% of marks in each theory paper/practical/project report in the Semester-end University Examination and not less than 40% marks in Internal Assessment and Semester-end Examination put together.
ii) To pass, the candidate has to obtain a minimum of 40 marks out of 100 marks in the Project and Programme end VIVA-VOCE examination.
- b) A candidate who fails to get the required marks for the Project report should submit the revised report along with the next batch of students.
- c) A candidate who fails and wishes to appear for the whole of the theory examination of any semester may do so after cancelling the previous results of the theory

examination of that semester. It is applicable only for the semester-end examination.

- d) There shall be no supplementary examinations. The failed candidate shall be required to appear again for the examinations along with the regular candidates of the next batch.

11. Classification of successful candidates:

The classification will be based on the total grade points obtained by the candidate in all the semesters put together and will be classified as follows:

Marks and Grading:

- (1) Weighted Average Marks:

$$WAM = \frac{\sum n_i m_i}{\sum n_i}$$

n_i : Number of credits for the i^{th} course

m_i : Marks obtained in the i^{th} course.

- (2) Grade point average: $GPA = 10^{-1} WAM$

The percentage of marks obtained by a student in a course will be indicated by a grade point and a letter grade.

Marks	Grade Point	Letter	Class
70-100	7.0 – 10.0	O	Outstanding
65-69	6.5 – 6.9	A+	First
60-64	6.0 - 6.4	A	First
55-59	5.5 - 5.9	B+	Second
50-54	5.0 - 5.4	B	Second
40-49	4.0 - 4.9	C	Third
00-39	0.0 - 3.9	F	Fail

- 3) **Overall Weighted Percentage of Marks (OWPM):**

$$OWPM = \frac{\sum_i \sum_k n_{ik} m_{ik}}{\sum_i \sum_k n_{ik}}$$

m_{ik} = marks obtained in the i^{th} course of the k^{th} semester.

- 4) **Cumulative grade point average (CGPA): $CGPA = 10^{-1} OWPM$**

- A candidate who secures 70% and above in the total aggregate marks will be placed in OUTSTANDING (O).
- A candidate who secures 65% and above but less than 70% of marks in the total aggregate will be placed in FIRST (A^+).

- iii) Candidate who secures 60% and above but less than 65% of the total aggregate will be placed in FIRST (A).
- iv) A candidate who secures 55% and above but less than 60% of the total aggregate will be placed in SECOND (B⁺).
- v) A candidate who secures 50% and above but less than 55% of the total aggregate will be placed in SECOND (B).
- vi) A candidate who secures 40% of marks in each Course with an overall aggregate of 40% or above and above but less than 50% of the total aggregate will be placed in THIRD (C).

Note: Marks and Gradation Certificates shall be issued by the Controller of Examinations as prescribed in these Regulations for each Semester.

12. Award of Ranks:

Candidates who passed the examinations of all Four Semesters for the degree at their first appearance in all Four Semesters shall be ranked in order of merit. The candidates who have taken supplementary examinations shall also be eligible for classification, but they shall not be considered for the award of rank. Ranks shall be awarded for the top three students or 10% of the total strength of the students who appeared for the four-semester end examinations.

13. Improvement:

The candidates are permitted to improve their marks/class by taking Semester-end examinations in one or more papers after two years of their regular study as per the existing regulations and syllabi.

*Note: The candidates shall be permitted to improve their marks within a period of **four years** from the date of admission into the First Semester.*

14. Transitory Provision:

- a) For candidates who studied the M.B.A. Degree Course under previous regulations and syllabus, and who could not pass some or all the courses (papers), shall be permitted to take examinations under the old regulations and syllabus three more times after the last regular examinations of the concerned subject (s).
- b) Candidates who satisfied the minimum attendance requirements in any semester under Old Regulations, but who are yet to pass some papers even after three chances as stated in 14(a), shall appear for the equivalent papers under the Revised Regulations, as specified by the Chairman of the Board of Studies.

- 15. The university shall have the right to amend or modify, or revise any of the above regulations whenever necessary.

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DEPARTMENT OF MANAGEMENT STUDIES, S.V.UNIVERSITY

Revised MBA program structure and syllabus with effect from August 2025

SEMESTER – I

Total Credits: 24

Code No.	Title of the Paper	Core/ Elective	No of Credits	Sessional Marks	Semester End Marks	Exam Duration	Maximum Marks
101	Management and Organizational Behaviour	Core	4	30	70	3Hrs	100
102	Corporate Communication	Skill	4	30	70	3Hrs	100
103	Managerial Economics and Financial Accounting	Core	4	30	70	3Hrs	100
104	Quantitative Analysis for Management Decisions	Core	4	30	70	3 Hrs	100
105	Business Research Methods	Core	4	30	70	3 Hrs	100
106	Fundamentals of Artificial Intelligence	Skill	4	30	70	3 Hrs	100
107	Indian Knowledge System –Part I	Audit	-	-	-	-	-

SEMESTER – II

Total Credits: 26

Code No.	Title of the Paper	Core/ Elective	No of credits	Sessional Marks	Semester End Marks	Exam Duration	Maximum Marks
201	Marketing Management	Core	4	30	70	3 Hrs	100
202	Human Resource Management	Core	4	30	70	3 Hrs	100
203	Financial Management	Core	4	30	70	3 Hrs	100
204	Production & Operations Management	Core	4	30	70	3 Hrs	100
205	Operations Research Through Excel Solver	Skill	4	30	70	3 Hrs	100
206	Business Analytics	Skill	4	30	70	3 Hrs	100
207	Indian Knowledge System –Part II	Audit	-	-	-	-	-
208	MOOCS - I	-	2	-	-	-	-

Summer Project: 8 – 10 Weeks

The summer project starts immediately after completion of the II Semester, and it provides practical insights into day-to-day business operations and an opportunity to apply the management concepts in real-life situations.

SEMESTER – I

101 – Management and Organisational Behaviour

Course Objectives:

1. To provide a foundational understanding of management principles, functions, and evolving practices.
2. To develop knowledge of planning, organising, staffing, and controlling as core managerial functions.
3. To examine key theories and applications of motivation and leadership relevant to managing individuals and teams.
4. To analyse the influence of individual and group behaviour on organisational performance through the lens of organisational behaviour.
5. To explore the dynamics of organisational culture, change, and development in a global business context.

Course Outcomes:

After the completion of the course, students will be able to:

1. Explain and apply fundamental management concepts and decision-making techniques in practical business scenarios.
2. Design effective organisational structures and control mechanisms by utilising appropriate planning, delegation, and decentralisation strategies.
3. Apply motivational and leadership theories to enhance employee performance and team effectiveness.
4. Evaluate the impact of personality, perception, and group dynamics on organisational behaviour and outcomes.
5. Assess and manage organisational change and development initiatives, including cultural transformations and stress management interventions.

UNIT- I

Fundamentals of Management: Introduction to Management – Evolution and Approaches; Principles and Functions of Management; Managerial Roles and Skills; Decision-Making Process and Techniques; Social Responsibility and Ethics in Management; Current Trends in Management Practices.

UNIT- II

Functions of Management: Planning – Process, Types, and Techniques, Organising – Structure, Design, Departmentation, Delegation, Decentralisation, and Span of Control, Staffing - Recruitment, Selection, and Training, Controlling – Process, Types, and Techniques.

UNIT- III

Motivation and Leadership: Motivation Theories (Maslow, Herzberg, McGregor, Vroom, Equity) and Applications, Leadership Theories (Trait, Behavioural, Contingency) and Styles; Managerial Interpersonal Styles (Johari Window & Transactional Analysis); Managing Motivation in Small and Large Organisations

UNIT- IV

Individual and Group Level Behaviour: Personality – Determinants and Impact on Work Behaviour; Perception and Learning Theories; Attitudes and Job Satisfaction – Impact on Performance; Group Dynamics: Types, Stages, Teams vs. Groups; Power, Politics, and Conflict – Resolution Strategies

UNIT- V

Organisational Culture, Change, and Development: Organisational Culture and Climate – Meaning and Functionality; Organisational Ethos and Behaviour in a Global Context; Organisational Change: Process and Resistance Management; Role of Manager as a Change Agent; Organisational Development: Phases and OD Interventions; Stress and Burnout Management

References:

1. Stephen P. Robbins – *Organisational Behaviour*, Pearson.
2. Fred Luthans – *Organisational Behaviour*, Tata McGraw-Hill.
3. Heinz Weihrich, Mark V. Cannice & Harold Koontz – *Management*, Tata McGraw-Hill.
4. K. Aswathappa – *Organisational Behaviour: Text, Cases & Games*, Himalaya Publishing House.
5. Laurie J. Mullins & Gary Rees – *Management and Organisational Behaviour*, Pearson Education.

102 – Corporate Communication

Course Objectives:

1. To introduce the fundamentals of corporate communication, its purpose, significance, and ethical/legal considerations.
2. To develop core communication skills, including verbal, non-verbal, written, and negotiation techniques tailored to various audiences.
3. To explore internal communication strategies and tools for effective employee engagement and organisational messaging.
4. To examine external communication practices, including media relations, public relations, crisis communication, and digital platforms.
5. To understand the role of communication in brand and reputation management, and how to measure communication effectiveness using KPIs.

Course Outcomes:

After the completion of the course, students will be able to:

1. Explain the principles and functions of corporate communication, and apply them to meet organisational objectives ethically and legally.
2. Demonstrate proficiency in professional communication, including negotiation, listening, resume writing, and adapting styles for diverse audiences.
3. Use appropriate internal communication tools and presentation techniques to enhance collaboration and information flow within organisations.
4. Develop and implement external communication strategies, including PR, crisis communication, and digital media engagement.
5. Evaluate and manage corporate reputation and brand image, using metrics and tools for online reputation and communication success.

UNIT - I

Introduction to Corporate Communication: Definition, Significance and Functions - Role of Communication in achieving Business Objectives - Identifying key Stakeholders and their Communication needs - Ethics and Legal aspects of Corporate Communication.

UNIT - II

Communication Fundamentals: 7Cs of Communication–Verbal and Non-Verbal Communication Skills – Communication Styles and adapting to diverse audiences – Listening - Negotiation: 4Ps, Steps for effective Negotiation, Language of Negotiation, Key principles of effective Negotiation - Resume Writing.

UNIT - III

Internal Communication: Strategies for Effective Employee Communication, Channels and tools of Internal Communication: Emails, Reports, Memos, Minutes of Meeting - Presentation Skills: Group Discussions, Team Presentations, Interviews and Public Speaking - Managing Communication during Organisational Change and Building a positive Internal Communication Climate.

UNIT – IV

External Communication: Developing and Maintaining positive relationships with External Stakeholders (media, marketing and advertisements, customers, investors, etc.), Public Relations Strategies and Tactics - Crisis Communication: Planning and Management - Social Media and Digital Communication Strategies.

UNIT – V

Corporate Reputation and Brand Management: Significance of Corporate Reputation, Building and Maintaining a Positive Brand Image, Online Reputation Management and Social Media Monitoring, Key Performance Indicators (KPIs) for Measuring Communication Success.

References:

1. Joep P Cornelissen - *Corporate Communications: Theory and Practice*, Sage Publications Ltd.
2. Sandra O. Liver - *A Handbook of Corporate Communication and Public Relations*, Routledge.
3. Paul A Argenti - *Corporate Communication*, McGraw-Hill Education.
4. Dennis L. Wilcox, Philip H. Ault & Warren K. Agee - *Public Relations Strategies and Tactics*, Longman Pub Group.
5. Jaishri N. Jethwaney - *Corporate Communication: Concepts and Practice*, Amazon India.

103 – Managerial Economics and Financial Accounting

Course Objectives:

1. To introduce the fundamental principles of managerial economics, including demand analysis and forecasting techniques for business decision-making.
2. To explain production and cost analysis, along with various pricing strategies under different market conditions.
3. To provide an understanding of macroeconomic indicators, such as national income, inflation, business cycles, and government economic policies.
4. To develop foundational accounting knowledge, including journal entries, ledger posting, and preparation of final accounts.
5. To introduce budgeting techniques and emerging trends in accounting, such as responsibility accounting, IFRS, and green accounting.

Course Outcomes:

After the completion of the course, students will be able to:

1. Analyse demand behaviour using elasticity concepts and apply appropriate demand forecasting methods in business contexts.
2. Apply production and cost concepts to business decision-making and choose suitable pricing methods under various market structures.
3. Evaluate the impact of macroeconomic factors on business operations, including inflation, GDP trends, and fiscal policies.
4. Prepare and interpret basic financial statements, including trading, profit & loss accounts, and balance sheets.
5. Design and interpret various types of budgets and understand the implications of modern accounting practices like human resource and green accounting.

UNIT - I

Introduction and Demand analysis: Nature, Scope and Significance of Managerial Economics - Objectives of Firm - Theory of Demand and Demand Function – Elasticity of Demand: Price, Income, Cross and Promotion Elasticity of Demand – Sources of Data- Forecasting of Demand: Survey and Statistical Methods. (Problems & Theory).

UNIT – II

Production, Cost Analysis and Pricing Decisions: Production Function – Law of Diminishing Marginal Returns and Law of Returns to Scale - Cobb-Douglas Production Function. Cost: Concepts, Function, Curves- Cost Behaviour: Short and Long term-Break-Even Analysis (Problems & Theory) -Supply Function – Pricing Objectives, Methods - Pricing under Perfect, Monopoly, Oligopoly, and Monopolistic competition – Discriminatory Pricing -Price Control by Government.

UNIT – III

National Income: Estimation and Projection of GDP – Business Cycle – Response of Firms to Business Cycle – Inflation: Types, Causes, Effects, Anti-inflationary Methods - Economic Policy of the Government of India.

UNIT - IV

Accounting Principles: Concepts and Functions - Bookkeeping - Double Entry System- Rules of Posting, Accounting Standards: Functions – Journal – Ledger – Posting - Trail balance - Final Accounts: Trading Account, Profit and Loss Account, Balance Sheet with and without Adjustments. (Simple Problems)

UNIT – V

Budgeting and Emerging Concepts in Accounting: Essentials of Budgetary Control - Classification of Budgets: Production, Sales, Cash, Flexible, and Master Budget. (Simple Problems). Human Resource Accounting – Inflation Accounting – Responsibility Accounting - Government Accounting - IFRS - Green Accounting.

References:

1. G. S. Gupta - *Managerial Economics*, Tata McGraw-Hill.
2. H. Criag Peterson, W. Cris Lewis - *Managerial Economics*, Pearson.
3. P. L. Mehta - *Managerial Economics*, Sultan Chand.
4. R. Narayanaswamy - *Financial Accounting: A Managerial Perspective*, PHI Learning.
5. S. N. Maheswari - *Financial Accounting*, Vikas.
6. Jelsy Joseph Kuppapally - *Accounting for Managers*, PHI.

104 – Quantitative Analysis for Management Decisions

Course Objectives:

1. To introduce the scope and relevance of quantitative techniques in business decision-making.
2. To develop understanding and application of calculus, including differentiation and integration, in solving business problems.
3. To familiarise students with mathematical progressions and financial applications, including annuities and present value calculations.
4. To build foundational knowledge of vectors and matrices, and their use in management and operational contexts.
5. To explain the principles of game theory and strategic decision-making, with an emphasis on business applications.

Course Outcomes:

After the completion of the course, students will be able to:

1. Apply linear, non-linear, and continuous functions to model and solve basic business problems.
2. Use differentiation and integration techniques to analyse optimisation problems and make managerial decisions.
3. Solve problems involving arithmetic, geometric, and harmonic progressions, and compute annuities and present values for financial planning.
4. Perform matrix operations and apply vector concepts to business scenarios such as input-output analysis and resource allocation.
5. Apply game theory concepts and strategies to competitive business environments and decision-making under conflict.

UNIT – I

Introduction to Quantitative Techniques: Meaning and Scope of Quantitative Techniques, Linear and Non-linear Functions and their Applications to Business – Limits of Functions and Continuous Functions.

UNIT – II

Differentiation and Integration: Concept of Derivative –Techniques of Differentiation; Maxima and Minima –Basic Techniques of Integration and the Managerial Application of Differentiation and Integration.

UNIT – III

Progressions: Meaning of Progressions, Arithmetic, Geometric and Harmonic Progressions and their Applications – Annuities and Present Values.

UNIT – IV

Vectors and Matrices: Definition of Vectors and their Applications - Introduction of Matrices; Types of Matrices; Multiplication of Matrices; Inverse of a Matrix, Cramer's Rule for Matrix Inversion – Matrix Applications in Management.

UNIT – V

Game Theory: Meaning, Scope and Significance of Games – Characteristics, Theory and Rules, Game Elements– Two-Person Zero-Sum Games, Methods With and Without Saddle Point – Dominance Rule and Mixed Strategies – Business Applications of Game Theory.

References:

1. M Raghavachari - *Mathematics for Management*. Tata McGraw-Hill.
2. J K. Sharma - *Mathematics for Management and Computer Applications*, Galgotia Publication.
3. C. R. Kothari - *Quantitative Techniques*, Vikas.
4. David R Anderson - *Quantitative Methods for Business*, Thomson learning.
5. N D Vohra - *Quantitative Techniques for Management*, McGraw-Hill.

105 –Business Research Methods

Course Objectives:

1. To introduce the fundamentals and scope of research, including types, processes, and scientific methods used in business and social science research.
2. To develop skills in formulating research problems and hypotheses, and designing appropriate research frameworks using various measurement and scaling techniques.
3. To equip students with knowledge of sampling methods and data collection tools, including questionnaire construction and pilot studies.
4. To train students in the application of statistical tools for data analysis using both parametric and non-parametric tests.
5. To guide students through the process of interpretation and report writing, including formatting, presentation, and referencing techniques.

Course Outcomes:

After the completion of the course, students will be able to:

1. Identify and formulate a valid research problem using appropriate constructs, concepts, and theoretical frameworks.
2. Design research using suitable hypotheses, sampling techniques, and measurement scales to ensure validity and reliability.
3. Collect, process, and analyse primary and secondary data using appropriate tools and techniques, including surveys and coding methods.
4. Apply relevant statistical methods (e.g., t-tests, ANOVA, regression, chi-square) to interpret research data effectively.
5. Prepare a structured research report or thesis, demonstrating clarity in writing, appropriate presentation of data, and adherence to academic norms.

UNIT - I

Fundamentals of Research: Meaning - Scope and Significance - Types of Research - Research Process - Characteristics of Good Research - Scientific Method - Problems in Research - Identifying Research Problem: Concepts, Constructs, and Theoretical Framework.

UNIT - II

Formulation of Hypotheses: Meaning – Types of Hypotheses – Formulation of Hypotheses, Research Design: Types – Features of Good Design - Measurement Errors- Techniques of Measurement - Scaling Techniques: Types of Scales - Scale Construction Techniques.

UNIT - III

Sampling Design: Meaning - Steps in Sampling - Criteria for Good Sample Design - Types of Sample Designs - Probability and Non-probability Samples. Data Collection: Types of Data - Sources - Tools for Data Collection Methods of Data Collection – Constructing Questionnaire - Pilot Study - Data Processing: Coding - Editing - Tabulation of Data - Data Analysis.

UNIT - IV

Statistical tools for Analysis: Measures of Central Tendency – Mean, Median, Mode – Measures of Dispersion– Standard Deviation and Variance -Assumptions about Parametric and Non-Parametric Tests. Parametric Tests: T test, Z test, One-way and Two-way ANOVA, Simple Linear Regression and Correlation. Non-Parametric Tests: U Test, Kruskal-Wallis, Sign test and Chi-square test.

UNIT - V

Interpretation & Report Writing: Meaning – Techniques of Interpretation- Report Writing: Significance –Report Writing: Steps in Report Writing – Layout of Report – Types of Reports - Oral Presentation- Executive Summary - Mechanics of Writing Research Report - Precautions for Writing a report- Norms for using Tables, Charts, and Diagrams - Appendix: norms for using Index and Bibliography.

References:

1. Panneerselvam, R. - *Research Methodology*, Prentice Hall of India.
2. Kothari C. R. - *Research Methodology - Methods and Techniques*, Wiley Eastern Ltd.
3. Sundarapandian P, Muthulakshmi S, Vijayakumar - *Research Methodology & Applications of SPSS in Social Science Research*, Sultan Chand & Sons.
4. S. P. Gupta & M. P. Gupta - *Business Statistics*, Sultan Chand.
5. Beri, G. C. - *Business Statistics*, Tata McGraw-Hill.

106 – Fundamentals of Artificial Intelligence

Course Objectives:

1. To introduce the core concepts, scope, and evolution of Artificial Intelligence (AI) and its significance in modern business environments.
2. To explore various AI techniques and their application in business decision-making, including problem-solving agents and decision support systems.
3. To examine the role of AI in marketing and sales, including customer segmentation, lead generation, forecasting, and the use of generative AI.
4. To understand AI-driven innovations in operations and financial management, such as automation, inventory control, fraud detection, and forecasting.
5. To analyse the integration of AI in HR and organisational decision-making, including talent acquisition, performance evaluation, and business intelligence tools.

Course Outcomes:

After the completion of the course, students will be able to:

1. Describe the fundamentals of AI and evaluate its evolution, techniques, and success criteria in business contexts.
2. Apply AI methods to solve business problems, leveraging decision support systems and intelligent agents for enhanced planning and analysis.
3. Utilise AI tools in marketing and sales functions for customer targeting, sales forecasting, and improving engagement using generative AI.
4. Analyse the impact of AI on operations and financial management, including automation, fraud prevention, and predictive analytics.
5. Assess the use of AI in HRM and decision-making, focusing on recruitment, performance management, and strategic workforce planning.

UNIT-I

Introduction to AI: Meaning and Concept of AI – Need, Significance and Scope of AI – Fundamentals of AI – AI Techniques – The Level of the Model – Criteria for Success – Growth and Evolution of AI.

UNIT II

AI Techniques in Business: Strengths and Weaknesses of Artificial Intelligence – Artificial Intelligence Planning, Learning over Memorising – Decision Support Systems -Problem-Solving Agents - Searching for Solutions.

UNIT III

AI in Marketing and Sales: AI Marketing, Benefits - Types of AI in Sales, Tools, Benefits and Generative AI in Sales- Customer Segmentation and Targeting, Sales Forecasting and Lead Generation - Challenges of AI in Shaping the Future of Work.

UNIT IV

AI Driven Operations and Financial Management: Importance, Benefits and Challenges of AI in Finance- AI Powered Inventory Management and Demand Forecasting, Automation of Repetitive Tasks, Fraud Detection and Prevention – Trading and Financial Forecasting.

UNIT V

AI for Decision Making and HRM: Types, Benefits and Challenges of AI in HRM - AI-Powered Business Intelligence Tools, Recruitment and Talent Acquisition with AI, Performance Evaluation and Work Force Planning.

References:

1. Bahaaeddin A.M. Alareeni, Islam Elgedawy - *Artificial Intelligence and Finance*, Springer.
2. Livia Rainsberger - *AI –The New Intelligence in Sales*, Springer.
3. Raj Venkatesan and Jim Lecinski - *The AI Marketing Canvas*, Stanford Business Books.
4. Doug Rose - *Artificial Intelligence for Business*, Pearson FT Press.
5. Stuart J Russell and Peter Norvig - *Artificial Intelligence – A Modern Approach*, PHI.
6. Elaine Rich and Kelvin Knight - *Artificial Intelligence*, Tata McGraw-Hill Publications.

107 – Indian Knowledge System: I

Course Objectives:

1. To explore the origins, development, and intellectual traditions of Bharatiya civilisation, including its ancient educational institutions, philosophical schools, and civilizational values.
2. To examine Bharatiya contributions to literature, science, mathematics, and the arts, and highlight the work of eminent scholars and thinkers from ancient India.
3. To understand traditional Indian advancements in science, technology, environment, and health, and analyse their relevance to contemporary sustainability and wellness.

Course Outcomes:

After the completion of the course, students will be able to:

1. Describe the civilizational foundations of ancient India, including philosophical traditions, educational systems like Takṣaśilā and Nālandā, and their global influence.
2. Identify key contributions of Indian scholars in various domains such as medicine, astronomy, mathematics, linguistics, and the arts.
3. Analyse traditional Indian scientific and health practices, including Ayurveda, yoga, metallurgy, and ecological harmony, and assess their relevance in modern contexts.

UNIT- I: Origins of Bharatiya Civilisation and Knowledge Systems

Ancient Roots and Civilizational Development: Genesis of the Indian Subcontinent, Antiquity of Bharatiya Civilisation, Saraswati River and the Saraswati - Sindhu Civilisation-Philosophy, Education, and Intellectual Heritage: The Vedas and their significance, Main Schools of Indian Philosophy (6 astika & 3 nastika), Ancient Education System: Takṣasila and Nalanda Universities, Renowned Alumni and the Global Spread of Knowledge.

UNIT- II: Arts, Literature, Science and Eminent Scholars

Bharatiya Art, Music, and Literature: Bharatiya Contributions to Art, Music, and Dance, Naṭaraja as a Symbol of Dynamic Cosmic Energy- Notable Thinkers, Scientists, and Literary Masters: Rishis & Philosophers: Agastya, Lopamudra, Gargi, Maitreyi, Yajñavalkya, Ādi Śaṅkarācārya - Literary Contributors: Vālmiki, Veda Vyāsa, Tīruvalluvar, Pāṇini- Scientific Minds: Cārika, Sūruta, Jīvaka, Nāgarjuna, Kaṇāda, Āryabhaṭa, Varāhamihira, Bhāskarācārya, Mādhavācārya, Bodhayana, Pātaṅjali, Kauṭilya - Scientific and Mathematical Contributions: Matter, Life, and the Universe in Indian Thought, Sage Agastya's Battery Model, Gravity, and Velocity of Light, Vimāna Śāstra (aeronautics), Vedic Cosmology, Indian Timekeeping (Kāla-gaṇana), Kerala School of Mathematics and Astronomy, Concepts of Zero, Pi, Number System, and Vedic Mathematics, Earth's Rotation, Eclipses, and Ancient Astronomy.

UNIT - III: Science, Technology, Environment, and Health in Bharatiya Tradition
Engineering, Technology, and Architecture: Engineering in Vedic and Post-Vedic Eras, Sindhu Valley Civilization: Metallurgy, Glass, Pottery, Marine Tech, Lab Tools, Dyes, Paints, and Early forms of Cement, Iron Pillar of Delhi – a Marvel of Metallurgy- Life Sciences, Health, and Ecology: Life Sciences in Plants, Anatomy, and Physiology, Traditional Agriculture and Environmental Harmony, Ayurveda: Principles and Practices - Integrated Healthcare Approach (Ayurveda, Yoga, Surgery, Microbiology), Yoga as a Holistic Science for Health and Well-Being.

References:

1. Mahadevan, B., Bhat Vinayak Rajat, Nagendra Pavan R N. - *Introduction to Indian Knowledge System: Concepts and Applications*. PHI Learning Private Ltd.
2. Mukul Chandra Bora - *Foundations of Bharatiya Knowledge System*, Khanna Book Publishing.
3. Keshav Dev Verma - *Vedic Physics*, Motilal Banarsidass Publishers.
4. Suresh Soni - *India's Glorious Scientific Tradition*, Ocean Books Pvt. Ltd.
5. D. M. Bose, S. N. Sen and B.V. Subbarayappa - *A Concise History of Science in India*, Universities Press.

SEMESTER-II
201 – Marketing Management

Course Objectives:

1. To introduce the fundamental concepts and importance of marketing, including the marketing mix and environmental analysis.
2. To analyse consumer behaviour and market segmentation, and their role in developing effective marketing strategies.
3. To explore product-related decisions, including product development, branding, and the product life cycle.
4. To understand pricing and distribution strategies, including methods of pricing and types of distribution channels.
5. To examine various promotional tools and strategies, including advertising, personal selling, sales promotion, and digital marketing.

Course Outcomes:

On successful completion of this course, the students will be able to:

1. Explain core marketing concepts, including the marketing mix, marketing environment, and their significance in strategic planning.
2. Analyse consumer behaviour and apply segmentation, targeting, and positioning strategies to design effective marketing plans.
3. Evaluate product strategies, including development, branding, and packaging decisions across the product life cycle.
4. Apply pricing techniques and distribution strategies appropriate to different products and market conditions.
5. Develop integrated promotional strategies, incorporating advertising, sales promotion, digital marketing, and emotional marketing techniques.

UNIT - I

Marketing: Definition, Scope and Importance of Marketing – Marketing Concepts – Marketing Mix- Marketing Environment: Meaning, Significance of Scanning Marketing Environment, Components of Micro Environment and Macro Environment.

UNIT - II

Consumer Behaviour: Meaning- Factors Influencing Buying Behaviour- Consumer Decision Making Process, Segmentation: Need- Benefits - Bases of Segmentation - Target Market -Product Differentiation - Product Positioning. Marketing Research: Concept, Objectives, Types, Process, Merits and Demerits.

UNIT - III

Product: Concept and Classifications- Product Mix- New Product Development - Product Life Cycle – Branding: Essentials of a Good Brand, Types, Brand Decisions - Packaging and Labelling.

UNIT - IV

Price and Place: Objectives - Factors Affecting Pricing Decisions- Pricing Methods- Pricing Strategies for Existing Products and New Products. Channels of Distribution: Definition, Need and Types of Channels - Channel Management Decision.

UNIT - V

Promotional Mix: Concept, Importance – Advertising: Meaning, Objectives, Types of Advertising, Advertising Effectiveness, Sales Promotion: Meaning, Objectives, Techniques, Personal Selling – Marketing – Emotional Marketing – Digital Marketing.

References:

1. Philip Kotler, Kevin Lane Keller - *Marketing Management*, Pearson Education.
2. Rajan Saxena - *Marketing Management*, McGraw-Hill.
3. Mohr Slater - *Marketing of High-Technology Products and Innovations*, Pearson.
4. R. S. N Pillai, Bagavathi - *Marketing Management*, S. Chand.
5. Tapan K Panda - *Marketing Management Text & Cases, Indian Context*, Excel Publisher.

202 – Human Resource Management

Course Objectives:

1. To introduce the fundamental concepts, objectives, and scope of Human Resource Management, including relevant employment laws and codes.
2. To develop an understanding of job analysis and HR planning processes, including recruitment, selection, and induction techniques.
3. To explore the strategies and methods for training, development, performance appraisal, and talent management.
4. To understand employee compensation systems, motivation techniques, and the role of trade unions and conflict resolution in organisations.
5. To examine contemporary issues in HRM, including technology, HR analytics, ethics, work-life balance, and quality management practices.

Course Outcomes:

After successful completion of the course, students will be able to:

1. Explain the principles and functions of Human Resource Management, and interpret employment laws relevant to HR practices.
2. Conduct job analysis and design effective recruitment, selection, and induction processes, including the use of e-recruitment tools.
3. Identify training needs and apply appropriate methods for employee development, performance evaluation, and career planning.
4. Design compensation and benefits strategies, and analyse the impact of motivation, collective bargaining, and conflict management.
5. Assess emerging HRM practices, including HR analytics, ethical considerations, work-life balance, and quality standards in HR.

UNIT - I

Human Resource Management: Introduction, Concept, Significance and Scope – Objectives and Functions – Evolution from Personnel Management to HRM – Legal and Ethical Issues in HR.

UNIT - II

Job Analysis: Job Description – Job Specification – Job Evaluation - Human Resource Planning - Human Resource Information System; Recruitment: Sources of Recruitment - Selection Procedure (including e-recruitment and selection procedure) and Induction.

UNIT - III

Training and Development: Objectives – Training Needs Assessment – Types of Training –Evaluation of Training – Performance Appraisal Methods: Talent Management – Career Planning and Development.

UNIT - IV

Employee Compensation: Factors Affecting Compensation, Equity and Compensation, Variable Compensation; Employee Benefits – Motivation of Employees – Trade Unions; Collective Bargaining – Conflict Management.

UNIT - V

Contemporary Issues in HRM: Knowledge Management –Work Life Balance – Ethics in HRM - Technology and HRM – Human Resource Audit – Quality Management in HRM.

References:

1. T. V. Rao – *Designing and Managing Human Resource Systems*, Oxford & IBH Publishing.
2. Aswathappa. K– *Human Resource Management*, Tata McGraw-Hill.
3. David A. Decenzo and Stephen P. Robbins – *Human Resource Management*, Prentice Hall of India.
4. Flippo, Edwin B - *Personnel Management*, McGraw-Hill Publishing Company.
5. Dr C.B. Gupta - *Human Resource Management*, Sultan and Sons.
6. P. Subba Rao - *Personnel & Human Resource Management*, Himalaya Publishing House.

203 – Financial Management

Course Objectives:

1. To introduce the goals, principles, and functions of financial management, including the time value of money, risk-return trade-off, and the role of financial markets.
2. To develop the ability to analyse financial statements and assess firm performance using ratio analysis, cash flows, and leverage concepts.
3. To understand the concepts of cost of capital and capital structure, and apply valuation techniques for bonds and equity.
4. To equip students with capital budgeting techniques, including risk analysis, real options, leasing, and hire purchase.
5. To examine dividend decisions and working capital management, and understand their impact on firm value and liquidity.

Course Outcomes:

After the completion of the course, students will be able to

1. Explain the fundamental concepts of financial management, including the time value of money and financial decision-making.
2. Analyse and interpret financial statements, and evaluate performance using ratios, cash flows, and leverage measures.
3. Calculate the cost of capital and value financial instruments, and assess capital structure using EBIT-EPS analysis and other metrics.
4. Apply capital budgeting techniques, such as NPV, IRR, and risk-adjusted methods, to evaluate investment decisions.
5. Evaluate dividend policies and working capital components, and manage liquidity through effective cash, inventory, and receivables management.

UNIT – I

Introduction: Goals of Financial Management – Fundamental Principles – Time value of Money – Discounting, Compounding - Risk- Return Trade off- Finance Function- Financial Decisions. Financial Markets - Intermediaries.

UNIT – II

Financial Statement Analysis: Analysis of Balance Sheet, Profit & Loss Account, Ratio Analysis, Common Size Analysis, Cash Flow Statement, Operating, Financial, and Combined Leverage.

UNIT – III

Capital: Cost of Capital - Cost of Debt, Cost of Equity – Dividend Capitalisation, CAPM - Cost of Preference Shares - Weighted Average and Multiple Costs of Capital –

Valuation of Bonds and Shares. Capital Structure Planning – EBIT – EPS analysis (Numerical Problems), Risks of Financial Leverage – Margin of Safety, Interest and Debt service. Long-term sources of Finance: Venture Capital.

UNIT – IV

Capital Budgeting: Traditional and Time-adjusted Discounted Cash Flow Techniques - Risk analysis - Real Options – Leasing – Hire Purchase

UNIT – V

Dividends: Decisions, Influencing Factors, Forms and Special Dividends. Walter, Gordon and MM models (Numerical Problems) Linter's Model Dividend Practices in India. Buy Back of Shares, Taxation of Dividends and Capital Gains. Working Capital Management: Operating Cycle Estimation, Cash, Inventory and Receivables Management.

References:

1. Srivastava R, Anil A - *Financial Management*, Oxford.
2. I. M. Pandey - *Financial Management*, Vikas.
3. Prasanna Chandra - *Financial Management–Theory and Practice*, Tata McGraw-Hill.
4. Pandey & Bhat - *Cases in Financial Management*, Tata McGraw-Hill.
5. Khan & Jain - *Financial Management*, Tata McGraw-Hill.

204 – Production & Operations Management

Course Objectives:

1. To introduce the fundamental concepts and relevance of production management, including productivity, production systems, and work study techniques.
2. To explain plant location and layout planning, process design, maintenance strategies, and replacement policies for efficient operations.
3. To develop an understanding of production planning and control (PPC), including scheduling techniques, quality control tools, and modern quality standards.
4. To equip students with inventory and materials management strategies, including EOQ, MRP, JIT, and waste management practices.
5. To provide knowledge of project management techniques, including PERT, CPM, and cost-time trade-off analysis using network models.

Course Outcomes:

After the completion of the course, students will be able to:

1. Describe the functions and importance of production management, and apply work study methods to improve productivity.
2. Design effective plant layouts and implement appropriate maintenance and replacement strategies to enhance operational efficiency.
3. Develop and manage production schedules and apply quality control techniques, including control charts, Six Sigma, and ISO standards.
4. Apply inventory control techniques and materials management tools, such as EOQ, ABC analysis, and MRP, to optimise resource use.
5. Use project management tools like PERT and CPM to plan, schedule, and evaluate projects, including crashing and cost optimisation.

UNIT – I

Production Management: Role and Relevance of Production Management – Concepts of Productivity – Production Systems – Work Study: Method study and Work Measurement.

UNIT – II

Plant Location: Plant Layout Types – Process Design- Classification and Merits. Plant Maintenance Methods – Breakdown, Preventive and Predictive Maintenance. Replacement Policies – Unit and Group Replacement Policies.

UNIT – III

Production Planning and Control: Processes in PPC, Job Shop and Flow Shop Scheduling, Job Sequence Rules (Simple Problems) - Johnson's Rules – Line Balancing

- Quality Control: Control Charts (X-R chart, NP Chart and C-chart) - ISO 9000 series
- Six Sigma Approach.

UNIT – IV

Materials Management: Concepts – Classification of Inventory – Inventory Control Methods, Stores Management and Deterministic Inventory Models– ABC analysis- Inventory Levels – EOQ – MRP – Just in Time – Simple Problem on EOQ – Waste Management.

UNIT – V

Project Management: Concepts of Project Management, CPM, PERT and Project Network– Crashing and Cost Analysis – Applications of Network Techniques.

References:

1. Muheleman and Sudhir B - *Production/Operations Management*, Pearson Education
2. S. N. Chary - *Production and Operations Management*, Tata McGraw-Hill.
3. R. Panneer Selvam - *Production and Operations Management*, Prentice Hall of India.
4. Adam Ebert - *Production & Operations Management*, Prentice Hall of India.
5. K. Aswathappa, K. Sridhdhan Bhat - *Production and Operations Management*, Himalaya.
6. P K Gupta, D S Hira - *Operations Research*, S. Chand Publishing.

205 – Operations Research Through Excel Solver

Course Objectives:

1. To introduce the fundamentals of Operations Research, including its definition, scope, and application in managerial decision-making.
2. To develop modelling and problem-solving skills using Linear Programming, Transportation, and Assignment models.
3. To explain the concepts and applications of Dynamic Programming and how it is used for solving complex decision-making problems.
4. To introduce Goal Programming as an extension of linear programming, including its formulation and solution using the modified simplex method.
5. To familiarise students with Queuing Theory and Simulation techniques, including their practical applications in business problem-solving.

Course Outcomes:

After the completion of the course, students will be able to:

1. Formulate and solve linear programming problems using graphical and simplex methods, including Excel Solver applications.
2. Solve transportation, transshipment, and assignment problems using optimisation techniques such as the Hungarian method.
3. Apply dynamic programming algorithms to solve resource allocation and linear programming problems.
4. Develop and analyse goal programming models to address multiple and conflicting objectives in decision-making.
5. Apply queuing theory and simulation methods to evaluate and improve service operations and decision processes.

UNIT – I

Introduction to OR: Definition of OR, Managerial Applications of OR, Linear Programming Problem – Model Formulation, Graphical Method, and Simplex Method – Linear Programming Using the Excel Solver.

UNIT – II

Transportation Problem: Balanced Transportation Problem and Degeneracy – Transshipment Model – Assignment Model: Hungarian Method, Salesmanship Model, Maximisation and Minimisation using Transportation Models.

UNIT – III

Dynamic Programming: Features, Structure and Applications; Dynamic Programming Algorithm; Solving LPP using Dynamic Programming.

UNIT –IV

Goal Programming: Meaning and Concept of Goal Programming – Application Areas, Model Formulation. Modified Simplex Method– Advantages – Procedure (Theory).

UNIT – V

Queuing Theory Model: Components, Basic Structure Assumptions – Waiting Lines Decision Problem – Simulation: Simulation Methodology, use of Random Numbers – Applications of Simulations.

References:

1. A. M. Natarajan, Balasubramani, Tamilarasi - *Operations Research*, Pearson.
2. Richard B. Chase - *Operations and supply chain management*, Tata McGraw-Hill.
3. Taha H. A - *Operations Research*, Pearson.
4. Anand Sharma - *Operations Research*, Himalaya.
5. P K Gupta, D S Hira - *Operations Research*, S. Chand Publishing.

206 – Business Analytics

Course Objectives:

1. To introduce the foundational concepts of Business Analytics, including its evolution, types (descriptive, predictive, prescriptive), and roles in the analytics ecosystem.
2. To develop analytical and statistical skills for data visualisation, descriptive statistics, probability distribution, regression, and optimisation modelling.
3. To explore domain-specific applications of analytics, including retail, finance, HR, healthcare, marketing, and supply chain.
4. To examine ethical issues, data governance, and emerging trends in business analytics, including real-time analytics and legal frameworks like GDPR and HIPAA.

Course Outcomes:

After the completion of the course, students will be able to:

1. Apply descriptive, predictive, and prescriptive analytics techniques such as regression, cluster analysis, decision theory, and simulation to real-world problems.
2. Analyse business problems across various functional areas using relevant analytical approaches, tools, and case studies.
3. Develop and implement business analytics strategies that align with organisational goals, and assess the performance of analytics projects.
4. Evaluate the ethical and legal considerations in data usage, and apply data governance principles to ensure accuracy, privacy, and responsible analytics practices.

UNIT – I

Introduction: Meaning and Importance of Business Analytics – Analytics v/s Analysis – Business Analytics v/s Business Intelligence and Data Mining – Applications of Analytics – Different Kinds of Analytics – Types of Analytical Tools – Identifying Problems & Opportunities through Data Analytics – Framing a Business Problem as an Analytical Problem.

UNIT – II

Application of Business Analytics: Retail Analytics - Marketing Analytics - Financial Analytics - HR Analytics - Web and Social Media Analytics, and Supply Chain and Logistics Analytics (Theory) - Healthcare Analytics.

UNIT -III

Descriptive Analytics: Concept of Descriptive Analytics – Meaning, Nature, Importance and Applications – Data Analysis – Data Visualisation – Visualisation Techniques – Tables, Charts, Cross-tabulations, Dashboards - Sampling and Estimation - Probability Distribution for Descriptive Analytics - Analysis of Descriptive Analytics.

UNIT-IV

Predictive and Prescriptive Analytics: Concept of Predictive Analytics: – Linear Regression (Theory and Problems) – Factor Analysis (Theory) – Cluster Analysis (Theory) – Econometrics and Time Series Forecasting (Theory and Problems) – Prescriptive Analytics: Meaning, Nature, Importance and Applications – Decision Tree Analysis – Risk Analytics – Text Analytics – Prescriptive Modelling – Non-Linear Optimization – Simulation, Demonstrating Business Performance Improvement.

UNIT - V

Ethics, Data Governance, and Emerging Trends in Business Analytics: Importance of Ethics in Data Usage – Data Privacy, Data Misuse, and Algorithmic Bias – Introduction to Data Protection Laws: GDPR, HIPAA and their Relevance – Concepts of Data Governance: Data ownership, Roles, and Responsibilities – Significance of Data Accuracy, Integrity and Quality – Real-Time Analytics – Strategic Impact of Emerging Technologies on Business Operations – Adoption of New Analytics Trends in Various Industries.

References:

1. U. Dinesh Kumar - *Business Analytics, The Science of Data-Driven Decision Making*, Wiley.
2. Bhimasankaram Pochiraju, Sridhar Seshadri - *Essentials of Business Analytics: An Introduction to the methodology and its application*, Springer.
3. V.P. Jain and M. N. Ramesh - *Data Analytics*, Cengage Learning India.
4. Marc J. Schniederjans, Dara G. Schniederjans, Christopher M. Starkey - *Business Analytics: Principles, Concepts, and Applications*, Pearson India.
5. Ramesh Sharda, Dursun Delen, Efraim Turban - *Business Intelligence and Analytics*, Pearson India.
6. Shmueli, Patel and Bruce, *Data Mining for Business Intelligence, Concepts, Techniques and Applications*, Wiley.
7. Winston Wayne L., *Microsoft Excel 2013: Data Analysis and Business Modelling*, Microsoft Press, USA.

207 – Indian Knowledge System: II

Course Objectives:

1. To introduce the foundational concepts and scope of Indian Knowledge Systems (IKS) and explore their relevance in ancient and modern contexts, especially in health and wellness.
2. To examine the principles and practices of Ayurveda, herbal medicine, and nutrition, including their applications in modern health systems.
3. To promote understanding of ecological balance, sustainability, and integrated healthcare approaches, combining traditional wisdom and modern science.

Course Outcomes:

After the completion of the course, the students will be able to:

1. Describe the core principles of IKS and daily wellness practices, including Dinacharya, Triguna system, and holistic lifestyle habits rooted in Ayurveda and yoga.
2. Apply Ayurvedic concepts of nutrition, Dosha theory, and herbal medicine to analyse and assess traditional and functional health practices.
3. Evaluate the environmental and ecological perspectives of IKS, and demonstrate an understanding of integrative approaches to health combining traditional and modern systems.

UNIT – I

Foundations of Indian Knowledge Systems (IKS): Introduction to IKS: Definition, Concept, and Scope of Indian Knowledge Systems – IKS - Based Approaches to Knowledge Paradigms - IKS in Ancient and Modern India - Health & Wellness in IKS: Ayurveda: Importance of Sleep and Food, Role of Water in Wellbeing, Yoga and Triguna System (Sattva, Rajas, Tamas) - Daily Wellness Practices (Dinacharya): Detoxification, Exercise, Food, Water, Air, and Sunlight Intake - Work Ergonomics, Rest, and Sleep Hygiene.

UNIT – II

Life Sciences, Herbal Medicine, and Ayurveda in Practice: Life Sciences and Herbal Wisdom: Plant-Based Healing: Herbal Medicines and Preparations, Modern Herbal Medicines, Case Study: Allium Sativum(Garlic) - Nutraceuticals and Functional Foods-Traditional Probiotic Foods and their Importance in Health- Food, Nutrition & Dosha Theory: Ayurvedic Understanding of Nutrition, Rich Sources of Nutrients, Concept of Doshas (Vata, Pitta, Kapha) & their Assessment, Ahara Vidhi Viseṣayatana (8 Factors Determining Food Quality), FSSAI Regulations Related to Ayurvedic Aahara (Food)

UNIT – III

Environment, Ecology, and Integrated Healthcare: Ecology and Environmental Understanding in IKS: Concept and Structure of Ecosystems, Types and Functions of Ecosystems, Ecological Balance and Sustainability in Indian Tradition, Integrated Approach to Health and Medicine: Holistic Healthcare via Ayurveda, Yoga, Surgery - Role of Microbiology and Traditional Medicine in Healing- Synergy of Traditional and Modern Approaches to Health.

References:

1. B Mahadevan, Vinayak Rajat Bhat, Nagendra Pavana R N - *Introduction to Indian Knowledge System- Concepts and applications*, PHI Learning Private Ltd.
2. Kapur K and Singh A. K - *Indian Knowledge Systems*, Central Chinmay Mission Trust.
3. Allium Sativum - *Chemical Constituents, Medicinal Uses and Health Benefits Plant Science Research and Practices*, Nova Science Publishers, Incorporated.
4. D K Chakkrabarty, Makkhan Lal - *History of Ancient India* (Set of 5 Volumes), Aryan Book International Publications.
5. Dr Girish Nath Jha, Dr Umesh Kumar Singh and Diwakar Mishra - *Science and Technology in Ancient Indian Texts*, DK Print World Limited.