**BHAVAN'S VIVEKANANDA COLLEGE**

OF SCIENCE, HUMANITIES & COMMERCE, SATNIKPURI, SECUNDERABAD-500094

Accredited with 'A' Grade by NAAC

Autonomous College

DEPARTMENT OF COMMERCE

B.COM (HONOURS BUSINESS ANALYTICS - CBCS) COURSE w.e.f. 2023-24**B.Com(Hons Business Analytics) Third Year**

Code	Course Title	Course Type	HPW	Credits
(1)	(2)	(3)	(4)	(5)
SEMESTER - V				
ELS3	English (First Language)	ELS5	3	3
HBA55 1	Financial Management	DSC 16	5	5
HBA55 2	Cost Accounting	DSE1	5	5
HBA55 3	Business Law	DSE2	5	5
HBA55 4	Business Forecasting	DSE3	3T + 4P	5
HBA55 5	Optimisation Techniques for Business Analytics	DSE4	4T + 2P	5
	Total		31	28
SEMESTER - VI				
ELS4	English (First Language)	ELS6	3	3
HBA65 1	Project Work and Viva Voce	PR	8R	4
HBA65 2	Cost Control and Management Accounting	DSE5	5	5
HBA65 3	Auditing & Corporate Governance	DSE6	5	5
HBA65 4	Business Intelligence & Data Visualisation	DSE7	3T+4P	5
HBA65 5	Applications of Business Analytics	DSE8	3T + 4P	5
	Total		35	27
	GRAND TOTAL		175/176	160

Prof D Chennappa,
Department of Commerce,
Osmania University,
OU Nominee
Hyderabad-500 007.

Mrs LV Kamala Devi
Chairperson, BOS,
Department of Commerce,
Bhavan's Vivekananda College



BHAVAN'S VIVEKANANDA COLLEGE

OF SCIENCE, HUMANITIES & COMMERCE, SAINIKPURI, SECUNDERABAD-500094

Re-Accredited with 'A' Grade by NAAC

Autonomous College

DEPARTMENT OF COMMERCE

B.COM (HONOURS BUSINESS ANALYTICS - CBCS) COURSE (2023-26 Batch)

SEMESTER V

FINANCIAL MANAGEMENT

PAPER CODE: HBA551

YEAR/SEMESTER: III/V

EXAM HRS: 3 hrs

PPW: 5

NO. OF CREDITS: 5

MARKS: 70T+30I

Course Objective: To procure conceptual knowledge about financial management, evaluation of different capital budgeting techniques, familiarize with capital structure theories, determination of cost of capital and appraising the dividend theories.

UNIT- WISE COURSE OBJECTIVES:

Cob1: To annotate the importance of financial management and its relationship with other management areas. To measure the time value of money

Cob2: To measure the capital budgeting techniques.

Cob3: To determine the cost of capital. To Infer the capital structure theories. To distinguish different leverages

Cob4: Appraising the dividend theories

Cob5: To determine working capital requirements

UNIT-I: INTRODUCTION

Financial Management: Meaning - Nature & Scope – Importance - Objectives - Profit

Maximization - Wealth Maximization – Changing Role of Finance Manager – Relationship with Other Management Areas – Agency Problem – Organization of Finance Function (Theory).

Time Value of Money: Concept - Techniques - Compounding Techniques - Doubling Period - Multiple Compounding Period - Present Value Techniques (Simple Problems).

Rationale – Future Value of Present Cash Flows: Simple Interest -Compound Interest - Present Value of Future Cash Flows: Single Amount – Series of Cash Flows (Simple Problems).

UNIT-II: LONG-TERM INVESTMENT DECISIONS

Capital Budgeting: Meaning – Importance – Classification of Projects – Factors - Process –

Techniques: Traditional (Payback and ARR) – Modern (NPV, IRR, PI) – Capital Rationing (Simple Problems).

UNIT-III: FINANCING DECISIONS

Cost of Capital: Concept – Basic Aspects – Importance – Classification – Computation: Specific Cost of Capital (Debt, Preference, Equity and Retained Earnings) – Weighted Average Cost of Capital (Weights-Book Value, Market Value and Marginal) (Simple Problems).

Capital Structure: Meaning – Importance – Factors – Types – Optimal Capital Structure –

Theories of Capital Structure: Net Income Approach - Net Operating Income Approach -

Traditional Approach - Modigliani and Miller Approach (Simple Problems).

Prof. A Patrick,
Department of Commerce,
Osmania University,
OU Nominee

CHAIRMAN

Board of Studies in Commerce
Osmania University
Hyderabad - 500 007. (T.S.)

Mrs. L V Kamala Devi,
Chairperson, BOS,
Department of Commerce
Bhavan's Vivekananda College



BHAVAN'S VIVEKANANDA COLLEGE
OF SCIENCE, HUMANITIES & COMMERCE, SAINIKPURI, SECUNDERABAD-500094
Re-Accredited with 'A' Grade by NAAC
Autonomous College
DEPARTMENT OF COMMERCE

B.COM (HONOURS BUSINESS ANALYTICS - CBCS) COURSE (2023-26 Batch)

UNIT-IV: DIVIDEND DECISIONS

Leverages: Meaning – Types – Operating – Financial – Combined – EBIT-EPS Analysis (Simple Problems).

Dividend Policy: Meaning – Types – Factors – Forms of Dividends (Theory only)

Dividend Theories: Relevance Theories – Walter's Model – Gordon's Model – Irrelevance Theory – Miller and Modigliani Theory (Simple Problems).

UNIT-V: SHORT-TERM INVESTMENT DECISIONS

Working Capital Management: Concept – Kinds – Components – Objectives – Need – Operating Cycle - Factors – Methods of Estimating Working Capital: Percentage of Sales Method – Regression Analysis Method – Cash Forecasting Method – Operating Cycle Method

SUGGESTED READINGS:

1. Financial Management: I M Pandey, Vikas Publishing House Pvt Ltd.
2. Financial Management: M.Y. Khan & P.K. Jain, Tata McGraw-Hill
3. Financial Management: Shashi K. Gupta & R.K. Sharma, Kalyani Publishers,
4. Financial Management: R.M. Srivastava, Himalaya Publishing House, Hyderabad.
5. Financial Management: Prasanna Chandra, McGraw Hill
6. Financial Management: Rustagi, Taxman Publications.
7. Fundamentals of Financial Management: Sharan, Pearson.
8. Financial Management: Tulsian, S. Chand.
9. Financial Management: Satish B Mathur, Trinity Press.
10. Fundamentals of Financial Management: D. Chandra Bose, PH

COURSE OUTCOMES:

At the end of the course, the students will be able to

HBA551 CO1: Calculate common investment criteria and project cash flows associated with corporate project evaluation.

HBA551 CO2: Apply measures of cost of capital and financial leverage to form long term financial policies for business.

HBA551 CO3: Relate capital investment decisions and financial policies to business valuations

HBA551 CO4: Describe the common factors influencing dividend policy

HBA551 CO5: Assess short term financial requirements of an organization.

Prof. A Patrick,
Department of Commerce,
Osmania University,
OU Nominee

CHAIRMAN
Board of Studies in Commerce
Osmania University
Hyderabad - 500 007. (T.S.)

Mrs. L V Kamala Devi,
Chairperson, BOS,
Department of Commerce
Bhavan's Vivekananda College



BHAVAN'S VIVEKANANDA COLLEGE
OF SCIENCE, HUMANITIES & COMMERCE, SAINIKPURI, SECUNDERABAD-500094
Re-Accredited with 'A' Grade by NAAC
Autonomous College
DEPARTMENT OF COMMERCE

B.COM (HONOURS BUSINESS ANALYTICS - CBCS) COURSE (2023-26 Batch)

COST ACCOUNTING

PAPER CODE: HBA552
YEAR/SEMESTER: III/V
EXAM HRS: 3 hrs

PPW: 5
NO. OF CREDITS: 5
MARKS: 70T+30I

Course Objective: To make the students acquire the knowledge of cost accounting methods.

UNIT- WISE COURSE OBJECTIVES

COB1: To familiarize the concept of Cost Accounting and to gather knowledge on preparation of Cost sheet in its practical point of view.

COB2: To facilitate the idea and meaning of Material Control with its techniques and pricing methods while issuing materials.

COB3: Develop the knowledge about labour remuneration and incentives. To introduce the concept of Overhead Cost and provide knowledge to students on allocation, apportionment and absorption of overheads.

COB4: To analyse and evaluate the Cost information, prepare Tenders, Estimated Cost sheets and Job Cost sheet.

COB5: To Assess the procedures in preparation of Cost Accounts in construction industries applying Contract Costing and production industries applying Process Costing.

UNIT-I: INTRODUCTION

Cost Accounting: Definition – Evolution of Cost Accounting in India- Features – Objectives – Functions – Scope – Advantages and Limitations - Essentials of a good cost accounting system- Difference between Cost Accounting and Financial Accounting – Cost concepts – Cost Classification.

UNIT-II: MATERIAL

Direct and Indirect Material cost – Inventory Control Techniques – Stock Levels – EOQ – ABC Analysis – JIT - VED - FSND - Issue of Materials to Production – Pricing methods: FIFO - LIFO with Base Stock and Simple and Weighted Average methods

UNIT-III: LABOUR AND OVERHEADS

Labour: Direct and Indirect Labour Cost – Methods of Payment of Wages (only Incentive Plans): Halsey, Rowan, Taylor Piece Rate and Merrick Multiple Piece Rate Methods.


Overheads: Classification - Methods of Allocation - Apportionment and Absorption of overheads.

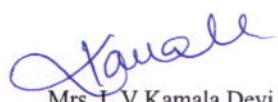
UNIT-IV: UNIT AND JOB COSTING

Unit Costing: Features - Cost Sheet – Tender and Estimated Cost Sheet.

Job Costing: Features - Objectives – Procedure - Preparation of Job Cost Sheet.


Prof. A Patrick,
Department of Commerce,
Osmania University,
OU Nominee

 **CHAIRMAN**
Board of Studies in Commerce
Osmania University
Hyderabad - 500 007. (T.S.)


Mrs. L V Kamala Devi,
Chairperson, BOS,
Department of Commerce
Bhavan's Vivekananda College



BHAVAN'S VIVEKANANDA COLLEGE
OF SCIENCE, HUMANITIES & COMMERCE, SAINIKPURI, SECUNDERABAD-500094
Re-Accredited with 'A' Grade by NAAC
Autonomous College
DEPARTMENT OF COMMERCE

B.COM (HONOURS BUSINESS ANALYTICS - CBCS) COURSE (2023-26 Batch)

UNIT-V: CONTRACT AND PROCESS COSTING

Contract Costing: Features – Advantages - Procedure of Contract Costing-Problems excluding multiple contracts, continuous contracts and trial balance problems

Process Costing: Meaning – Features – Preparation of Process Account – Normal and Abnormal Losses (Problems excluding stock)

SUGGESTED READINGS:

1. Cost Accounting: Jain and Narang, Kalyani
2. Cost Accounting: M.N. Arora, Himalaya
3. Cost and Management Accounting: PrashantaAthma, Himalaya
4. Cost Accounting: Jawaharlal, Tata McGraw Hill
5. Cost Accounting: Theory and Practice: Banerjee, PHI
6. Introduction to Cost Accounting: Tulsian, S.Chand
7. Cost Accounting: Horngren, Pearson
8. Cost Accounting: Ravi M. Kishore, Tax Mann Pulications.

COURSE OUTCOMES:

At the end of the course, the students will be able to

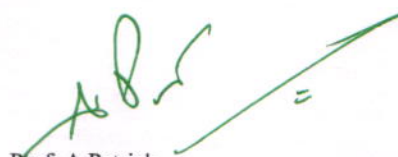
HBA552 CO1: Discuss the basic concepts, principles and procedures involved in Cost Accounting.

HBA552 CO2: understand various material control techniques and accounting for stores record.

HBA552 CO3: demonstrate various wage incentive schemes, wage payment systems and appropriate method of apportionment and absorption of overheads.


HBA552 CO4: analyse the given information and prepare tenders, estimates and job cost sheets.

HBA552 CO5: understand procedure in the preparation of cost accounts related to construction industries and process costing industries.


Prof. A Patrick,
Department of Commerce,
Osmania University,
OU Nominee

CHAIRMAN

Board of Studies in Commerce
Osmania University
Hyderabad - 500 007. (T.S.)


Mrs. L V Kamala Devi,
Chairperson, BOS,
Department of Commerce
Bhavan's Vivekananda College



BHAVAN'S VIVEKANANDA COLLEGE
OF SCIENCE, HUMANITIES & COMMERCE, SAINIKPURI, SECUNDERABAD-500094
Re-Accredited with 'A' Grade by NAAC
Autonomous College
DEPARTMENT OF COMMERCE

B.COM (HONOURS BUSINESS ANALYTICS - CBCS) COURSE (2023-26 Batch)

BUSINESS LAW

PAPER CODE: HBA553
YEAR/SEMESTER: III/V
EXAM HRS: 3 hrs

PPW:5
NO. OF CREDITS: 5
MARKS: 70T+30I

Course Objective: To understand basics of contract act, sales of goods act and legal provisions applicable for establishment, management, meetings and winding up of companies in India

UNIT- WISE COURSE OBJECTIVES

- Cob1:** To develop the ability to identify the essentials of a Contract.
Cob2: To acquire the knowledge Legality of the Object and remedies for breach of contract.
Cob3: To demonstrate the concepts of the Sale of goods and consumer-related challenges
Cob4: To identify the Roles, Rights, and duties of Directors and meetings of Companies.
Cob5: To articulate the provisions of winding-up with the latest amendments and provisions of Information Technology Act

UNIT-I: INDIAN CONTRACT ACT-I

Agreement and contract -Essentials of a valid contract-Types of contracts- Offer and Acceptance - Essentials of valid offer and acceptance - Communication and revocation of offer and acceptance- Consideration definition-Essentials of valid consideration- Doctrine of Stranger to Contract “, “No Consideration No Contract” – Capacity to a Contract – Minor agreements.

UNIT-II: INDIAN CONTRACT ACT-II

Legality of Object and Consideration – agreement opposed to public policy – Discharge of Contract: Modes of Discharge of a contract - Performance of Contracts - Breach of Contract - Remedies for Breach.

UNIT III: SALE OF GOODS ACT AND CONSUMER PROTECTION ACT:

Contract of Sale: Essentials of Valid Sale - Sale and Agreement to Sell – Definition and Types of Goods - Conditions and Warranties - Caveat Emptor - Exceptions - Unpaid Seller - Rights of Unpaid Seller. Consumer Protection Act: Definitions of Consumer – Person – Goods -Service -Consumer Dispute- Consumer Protection Councils-Consumer Dispute Redressal Agencies -Appeals.

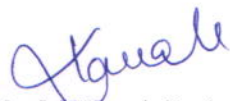
UNIT-IV: MANAGEMENT OF COMPANIES AND MEETINGS:

Director: Qualification - Disqualification - Position - Appointment- Removal – Duties and Liabilities – Remuneration – Meeting: Meaning – Requisites - Notice – Proxy - Agenda – Quorum –Resolutions – Minutes – Kinds – Shareholder Meetings - Annual General Body Meeting –Extraordinary General Body Meeting–Board Meetings.


Prof. A Patrick,
Department of Commerce,
Osmania University,
OU Nominee



CHAIRMAN
Board of Studies in Commerce
Osmania University
Hyderabad - 500 007. (T.S.)


Mrs. L V Kamala Devi,
Chairperson, BOS,
Department of Commerce
Bhavan's Vivekananda College



BHAVAN'S VIVEKANANDA COLLEGE

OF SCIENCE, HUMANITIES & COMMERCE, SAINIKPURI, SECUNDERABAD-500094

Re-Accredited with 'A' Grade by NAAC

Autonomous College

DEPARTMENT OF COMMERCE

B.COM (HONOURS BUSINESS ANALYTICS - CBCS) COURSE (2023-26 Batch)

UNIT-V: WINDING UP & INFORMATION TECHNOLOGY ACT 2000:

Meaning–Modes of Winding Up–Winding Up by tribunal–Voluntary Winding Up–Compulsory Winding Up – Consequences of Winding Up

Information Technology Act 2000

Objectives of Information Technology Act 2000 - Definitions -Digital signatures -E-governance - Offences & Penalties

SUGGESTED READINGS:

1. Company Law: ND Kapoor, Sultan Chand and Co.
2. Company Law: Rajashree. –HPH to -Kavitha Krishna, Himalaya Publishing House
3. Business Laws –Dr. B. K. Hussain, Nagalakshmi -PBP
4. Company Law: Prof. G. Krishna Murthy, G. Kavitha, PBP
5. Company Law and Practice: GK Kapoor& Sanjay Dhamija, Taxmann Publication.
6. Company Law: Revised as per Companies Act-2013: KC Garg et al, Kalyani Publication.
7. Corporate Law: PPS Gogna, S Chand.
8. Business Law: D.S. Vital, S Chand
9. Company Law: Bagriyal AK, Vikas Publishing House.

COURSE OUTCOMES:

At the end of the course, the students will be able to

HBA553 CO1: Elucidate the agreement, its significance to form a contract.

HBA553 CO2: Discuss the types of goods and application of Redressal procedure to a Consumer.

HBA553 CO3: Demonstrate the types of goods and application of Redressal procedure to a consumer.

HBA553 CO4: Discuss the implications of contravening the provisions of companies Act

HBA553 CO5: Highlight the winding up procedure adopted by National Company Law Tribunal and demonstrate provisions of Information Technology Act

Prof. A Patrick,
Department of Commerce,
Osmania University,
OU Nominee



CHAIRMAN
Board of Studies in Commerce
Osmania University
Hyderabad - 500 007. (T.S.)

Mrs. L V Kamala Devi,
Chairperson, BOS,
Department of Commerce
Bhavan's Vivekananda College



BHAVAN'S VIVEKANANDA COLLEGE

OF SCIENCE, HUMANITIES & COMMERCE, SAINIKPURI, SECUNDERABAD-500094

Re-Accredited with 'A' Grade by NAAC

Autonomous College

DEPARTMENT OF COMMERCE

B.COM (HONOURS BUSINESS ANALYTICS - CBCS) COURSE (2023-26 Batch)

BUSINESS FORECASTING

PAPER CODE: HBA554

YEAR/SEMESTER: III/V

EXAM DURATION: 3 Hrs

PPW: 3T+4P

NO. OF CREDITS: 5

MARKS: 50T + 15I + 35P

COURSE OBJECTIVE: To acquire knowledge for application of Business Forecasting techniques and tools in a given business scenario.

UNIT- WISE COURSE OBJECTIVES

COB1: To make pupil understand the purpose of forecasting, methods of forecasting to have good organisational performance by having minimum errors in estimations

COB2: To equip with the knowledge of smoothing techniques which reduce the effect of random variations to see clear trends in the data.

COB3: To enable the students to conduct univariate time series analysis

COB4: To provide the basic knowledge of multiple regression analysis along with diagnostic tests to be satisfied to check the fitness of the model

COB5: To familiarize with the concepts of neural networks

UNIT-I: INTRODUCTION TO BUSINESS FORECASTING:

Business Forecasting, Importance, Business Forecasting Methods, Time Series Analysis, Components of Time Series- Secular Trend, Seasonal Variations, Cyclical Variations, Random Variations, The Additive Model and Multiplicative Model, Measurements of Error in Forecasting (MAD, MAPE, RMSE)

Lab Work: Measurement of Errors using Ms-Excel & Python

UNIT-II: TIME SERIES ANALYSIS:

Smoothing Techniques, Moving Averages Method, Weighted Moving Averages Method, Semi-Averages Method, Exponential Smoothing Method, Double Exponential Smoothing Method (Only Theory), Regression Trend Analysis, Autocorrelation and Auto regression- Numerical Problems

Lab Work: Smoothing Techniques using Ms-Excel & Python

UNIT-III: UNIVARIATE TIME SERIES ANALYSIS:

Univariate Data and Statistics, Stationarity, Augmented Dickey Fuller Test of Stationarity, Time Series Decomposition like Holt Winters Method, ACF & PACF plots, Auto Regressive Integrated Moving Average, Lag Identification, Testing Assumptions of Linear Regression- Fitting Model- Interpretation of Output - Numerical problems on Fitting Simple Linear Regression

Lab Work: Fitting Simple linear Regression using Excel & Python; Testing assumptions using Python

Prof. A Patrick,
Department of Commerce,
Osmania University,
OU Nominee

CHAIRMAN

Board of Studies in Commerce

Osmania University

Hyderabad - 500 007. (T.S.)

Mrs. L V Kamala Devi,
Chairperson, BOS,
Department of Commerce
Bhavan's Vivekananda College



BHAVAN'S VIVEKANANDA COLLEGE
OF SCIENCE, HUMANITIES & COMMERCE, SAINIKPURI, SECUNDERABAD-500094
Re-Accredited with 'A' Grade by NAAC
Autonomous College
DEPARTMENT OF COMMERCE

B.COM (HONOURS BUSINESS ANALYTICS - CBCS) COURSE (2023-26 Batch)

UNIT-IV: MULTIPLE LINEAR REGRESSION:

Regression model with more than one Independent Variable (Multiple Regression), Determination of Coefficient of Multiple Determination (R^2), Adjusted R^2 , Standard Error of Estimate, Testing Assumptions of Multiple Linear Regression- Other Regression Models- Decision Trees

Lab Work: Fitting Multiple Linear Regression using Excel & Python; Testing assumptions using Python

UNIT-V: NEURAL NETWORKS FOR TIME SERIES ANALYSIS:

Neural Networks- Introduction, Activation Functions, Optimization techniques, Building neural networks for Time series data and forecasting.

SUGGESTED READINGS:

1. Basic Econometrics – Damodar N Gujarati
2. Multivariate Data Analysis: Hair, Black, Babin, Anderson, Pearson.
3. Applied Multivariate Statistical Analysis: Richard A. Johnson, Pearson.
4. Statistics for Business and Economics: Anderson, Cengage Learning.
5. Statistics for Management: R. I. Levin, D. S. Rubin, S. Rastogi & M. H. Siddiqui, Pearson.

COURSE OUTCOMES:

At the end of the course, the students will be able to

HBA554 CO1: Apply the various forecasting techniques, which will help organization to improve its performance.

HBA554 CO3: Acquire the knowledge of smoothing techniques

HBA554 CO3: Analyse the data using univariate time series analysis.

HBA554 CO4: Synthesize the data using multiple linear regression analysis

HBA554 CO5: Build neural networks for Time series data and forecasting, etc.

Prof. A Patrick,
Department of Commerce,
Osmania University,
OU Nominee



CHAIRMAN
Board of Studies in Commerce
Osmania University
Hyderabad - 500 007. (T.S.)

Mrs. L.V Kamala Devi,
Chairperson, BOS,

Department of Commerce
Bhavan's Vivekananda College



BHAVAN'S VIVEKANANDA COLLEGE

OF SCIENCE, HUMANITIES & COMMERCE, SAINIKPURI, SECUNDERABAD-500094

Re-Accredited with 'A' Grade by NAAC

Autonomous College

DEPARTMENT OF COMMERCE

B.COM (HONOURS BUSINESS ANALYTICS - CBCS) COURSE (2023-26 Batch)

OPTIMISATION TECHNIQUES FOR BUSINESS ANALYTICS

PAPER CODE: HBA555

YEAR/SEMESTER: III / V

EXAM DURATION: 3 Hrs

PPW: 4T+2P

NO. OF CREDITS: 5

MARKS: 70T + 10I + 20P

Course Objective: To familiarize the learners with the Concepts of Optimization and associate business Optimization using Analytics.

UNIT-WISE COURSE OBJECTIVES

COB1: To provide with the concepts and tools of Operations Research. Also to familiarise with the fundamentals of Linear Programming and link with the Mathematical Modelling to Formulate LPP To apply the operations techniques to market scenario for Decision Making Purpose.

COB2: To find out the Optimum Solution using Simplex Method a given LPP using Big M method, Two Phase method and Special cases.

COB3: Formulation of Transportation Model and apply the same to obtain the optimum solution using transportation problem.

COB4: To make the learners familiar with the theoretical concepts and apply the same to solve Assignment problems.

COB5: To obtain and analyse the possible outcomes for a situation in developing the business strategies such as price fixing, decisions in games etc.

UNIT-I: INTRODUCTION TO OPERATIONS RESEARCH AND LINEAR PROGRAMMING PROBLEM

Introduction: History of Operations Research, Scope of OR, Managerial applications of Operations Research, Linear Programming Problem: Meaning, Mathematical formulation of LPP, Graphical Solution of LPP

UNIT-II: SOLVING LPP USING SIMPLEX METHOD

Canonical and Standard Forms of LPP, solving LPP by Simplex Method. Degeneracy in LPP, Big M Method- Two Phase Method

UNIT-III: TRANSPORTATION PROBLEM

Transportation Problem- Introduction, procedures of finding basic feasible and optimal solution – NW corner rule, minimum cost method, Vogel's Approximation, Optimum Solution using MODI method and stepping Stone Method, Concept of Transshipment Problem (Theory Only)

Prof. A Patrick,
Department of Commerce,
Osmania University,
OU Nominee



CHAIRMAN
Board of Studies in Commerce
Osmania University
Hyderabad - 500 007. (T.S.)

Mrs. L.V. Kamala Devi,
Chairperson, BOS,
Department of Commerce
Bhavan's Vivekananda College



BHAVAN'S VIVEKANANDA COLLEGE

OF SCIENCE, HUMANITIES & COMMERCE, SAINIKPURI, SECUNDERABAD-500094

Re-Accredited with 'A' Grade by NAAC

Autonomous College

DEPARTMENT OF COMMERCE

B.COM (HONOURS BUSINESS ANALYTICS - CBCS) COURSE (2023-26 Batch)

UNIT IV: ASSIGNMENT PROBLEM

Assignment Problem - Introduction, Balanced and unbalanced Assignment Problem, solving of Assignment problem by Hungarian/ Floods Algorithm, Maximisation of Assignment Problem, Travelling Salesman Problem

UNIT-V: GAME THEORY

Game theory: Introduction, Two Person Zero Sum Games, Pure Strategies, Dominance Principle, Graphical; Solving Game by using LPP

SUGGESTED READINGS:

1. Sharma, J.K. (2010), *Operations Research Theory and Applications*, New Delhi: Macmillan India limited.
2. Operations Research: J K Sharma, Macmillan.
3. Operations Research: Hamdy A. Taha, Pearson.
4. Operations Research: Mote and Madhaan, Wiley
5. Quantitative Techniques in Management : N. D. Vohra, Tata McGraw Hill.
6. Quantitative Techniques for Managerial Decisions: U. K. Srivastava, G. V. Shenoy and S. C. Sharma. New Age International Ltd.
7. Sharma, S.D. (2012), *Operations Research*, Meerut: Kedar Nath Ram Nath & Co.
8. Hillier. F.S., & Lieberman, G.L. (2014), *Introduction to Operations Research - Concepts and Cases*, New Delhi: Tata McGraw Hill.

COURSE OUTCOMES:

At the end of the course students will be able to

HBA555 CO1: Apply the concepts of Operations Research and apply to take decisions with LPP mathematical form and solve it graphically.

HBA555 CO2: Explain the relationship between a linear problem, including Big M, Two Phase and special cases.

HBA555 CO3: Formulate transportation problems and obtain their optimal solution.

HBA555 CO4: Formulate assignment problems and find their optimal solution.

HBA555 CO5: Derive the best business strategy using game theory concepts.

Prof. A Patrick,
Department of Commerce,
Osmania University
OU Nominee

CHAIRMAN
Board of Studies in Commerce
Osmania University
Hyderabad - 500 007. (I.S.)

Mrs. L.V. Kamala Devi,
Chairperson, BOS,
Department of Commerce
Bhavan's Vivekananda College



BHAVAN'S VIVEKANANDA COLLEGE

OF SCIENCE, HUMANITIES & COMMERCE, SAINIKPURI, SECUNDERABAD-500094

Re-Accredited with 'A' Grade by NAAC

Autonomous College

DEPARTMENT OF COMMERCE

B.COM (HONOURS BUSINESS ANALYTICS - CBCS) COURSE (2023-26 Batch)

SEMESTER VI

PROJECT REPORT

PAPER CODE: HBA 651

YEAR/SEMESTER: III/VI

PPW: 8

NO. OF CREDITS: 4

Course Objective: This Course aims at perceiving practical problems / phenomenon / situation by undertaking the Project work.. To provide an opportunity to identify, define and analyse problems and issues and integrate knowledge in arriving at the solutions/suggestions in a business context.

ORGANISATION OF PROJECT REPORT

1) Project report should be presented in the following sequence:

i) Title page; ii) Student's declaration; iii) Supervisor's certificate; iv) Internship certificate; v) Abstract; vi) Acknowledgements; vii) Table of contents; viii) List of tables; ix) List of figures; x) List of appendices.

2) Chapter Design should be as follows:

Chapter-I: Introduction: this chapter includes the research problem, need for study/significance of the project, objectives, methodology (hypotheses, statistical tools, data source, scope, sample, chapter design).

Chapter-II: Company Profile: this chapter should contain a brief historical retrospect about the entity of your study.

Chapter-III: Data Analysis and interpretation: this chapter should present the data analysis and inferences.

Chapter-IV: Summary and Conclusions: This Chapter should give an overview of the project, conclusions, implications, recommendations and scope for further research.

Bibliography: lists the books, articles, and websites that are referred and used for research on the topic of the specific project. Follow Harvard style of referencing.

Appendices: the data, used to prepare the tables for analysis, may not be feasible to incorporate as part of chapters, may given as appendices.

TECHNICAL SPECIFICATIONS OF THE PROJECT

1) Project should be typed on A4 white paper and be 1.5 spaced.

2) All pages should be numbered, and numbers should be placed at the centre of the bottom of the page.

3) All tables, figures and appendices should be consecutively numbered or lettered and suitably labelled.

4) 3 bound copies & a soft copy should be handed in to the principal/director of your college/institute at the time of submission.

Prof. A Patrick,
Department of Commerce,
Osmania University,
OU Nominee

CHAIRMAN

Board of Studies in Commerce
Osmania University
Hyderabad - 500 007. (T.S.)

Mrs. L.V. Kamala Devi,
Chairperson, BOS,
Department of Commerce
Bhavan's Vivekananda College



BHAVAN'S VIVEKANANDA COLLEGE

OF SCIENCE, HUMANITIES & COMMERCE, SAINIKPURI, SECUNDERABAD-500094

Re-Accredited with 'A' Grade by NAAC

Autonomous College

DEPARTMENT OF COMMERCE

B.COM (HONOURS BUSINESS ANALYTICS - CBCS) COURSE (2023-26 Batch)

5) Bibliography and referencing: Referencing is necessary to avoid plagiarism, to verify quotations and to enable readers to follow-up and read more fully the cited author's arguments. Reference is given within the text of the project as well as at the end of the project. The basic difference between citation and a reference list (bibliography) is that the latter contains full details of all the in-text citations.

- Citation provides brief details of the author and date of publication for referencing the work in the body of the text.
- Reference list is given at the end of the text and is a list of all references used with additional details provided to help identify each source.

Proper referencing is as crucial aspect of your project. You are therefore strongly advised to talk to your supervisor about this, in order to make sure that your project report follows the appropriate referencing system.

SUGGESTED READINGS:

Organizations Websites, Research Reports, Journals, Official Websites of RBI, SEBI, BSE, NSE, All published sources and unpublished sources.

COURSE OUTCOMES:

At the end of the course, the students will be able to analyse, evaluate and apply the statistical knowledge in the field of research.

Prof. A Patrick,
Department of Commerce,
Osmania University,
OU Nominee

CHAIRMAN

Board of Studies in Commerce
Osmania University
Hyderabad - 500 007. (T.S.)

Mrs. L.V Kamala Devi,
Chairperson, BOS,
Department of Commerce
Bhavan's Vivekananda College



BHAVAN'S VIVEKANANDA COLLEGE

OF SCIENCE, HUMANITIES & COMMERCE, SAINIKPURI, SECUNDERABAD-500094

Re-Accredited with 'A' Grade by NAAC

Autonomous College

DEPARTMENT OF COMMERCE

B.COM (HONOURS BUSINESS ANALYTICS - CBCS) COURSE (2023-26 Batch)

COST CONTROL AND MANAGEMENT ACCOUNTING

PAPER CODE: HBA652

YEAR/SEMESTER: III/VI

EXAM HRS: 3 hrs

PPW: 5

NO. OF CREDITS: 5

MARKS: 70T+30I

Course Objective: To inculcate analytical and computational ability among the students.

UNIT- WISE COURSE OBJECTIVES

COB1: To familiarize the concept of Management Accounting and Techniques of Financial Statements.

COB2: To discuss various Ratios and their application in various concerns.

COB3: To demonstrate Marginal Costing Technique while taking decisions.

COB4: To learn Concepts of Budget and Its preparation along with setting of Standards with knowledge of Variance.

COB5: To articulate the procedure of Cash flow Statements and schedule of working capital changes

UNIT-I: INTRODUCTION TO MANAGEMENT ACCOUNTING & FINANCIAL STATEMENT ANALYSIS

Meaning and Importance of Management Accounting – Financial statement analysis: Meaning-uses-limitations-types and techniques – Comparative and Common Size Statement, Trend Analysis - simple problems

UNIT II: RATIO ANALYSIS

Ratios- Meaning, Objectives and Classification—Computation of Activity, Liquidity, Solvency and Profitability Ratios (including problems)

UNIT III: MARGINAL COSTING

Marginal Cost Equation – Difference between Marginal Costing and Absorption Costing – Application of Marginal Costing – CVP Analysis – Break Even Analysis: Meaning – Assumptions – Importance - Limitations (Problems) Marginal Costing for Decision Making Make or Buy

UNIT-IV: BUDGETARY CONTROL AND STANDARD COSTING

Budget: Meaning – Objectives – Advantages and Limitations – Essentials of Budgets - Budgetary Control - Classification of Budgets - Preparation of Fixed, Flexible and Cash Budgets. (Problems on Cash Budget and Flexible Budget Only)

Standard Costing: Meaning – Importance – Standard Costing and Historical Costing - Steps involved in Standard Costing. Variance Analysis: Material variance - Labour variance

Prof. A Patrick,
Department of Commerce,
Osmania University,
OU Nominee

CHAIRMAN

Board of Studies in Commerce
Osmania University

Hyderabad - 500 007. (T.S.)

Mrs. L V Kamala Devi,
Chairperson, BOS,
Department of Commerce
Bhavan's Vivekananda College



BHAVAN'S VIVEKANANDA COLLEGE

OF SCIENCE, HUMANITIES & COMMERCE, SAINIKPURI, SECUNDERABAD-500094

Re-Accredited with 'A' Grade by NAAC

Autonomous College

DEPARTMENT OF COMMERCE

B.COM (HONOURS BUSINESS ANALYTICS - CBCS) COURSE (2023-26 Batch)

UNIT-V: CASH FLOW ANALYSIS AND FUNDS FLOW STATEMENTS

Meaning – Importance – Differences between Funds Flow and Cash Flow Statements –

Procedure for preparation of Cash Flow Statement. Simple Problems.

Concept of Funds - Meaning and Importance - Limitations - Statement of Changes in Working

Capital - Statement of Sources and Application of Funds- Simple Problems only on Statement of changes in working capital

SUGGESTED READINGS:

1. Management Accounting- Principles & Practice: Sharma RK & Shashi K. Gupta, Kalyani
2. Advanced Managerial Accounting: Srihari Krishna Rao, Himalaya
3. Advanced Managerial Accounting: Dr. Sundaram, PBP
3. Advanced Management Accounting: Robert S. Kaplan & Anthony A. Atkinson, Prentice-Hall
4. Management Accounting: Rustagi R.P, Galgotia
5. Managerial Accounting: Ronald W. Hilton, TMH

COURSE OUTCOMES:

At the end of the course, the students will be able to

HBA652 CO1: implement the practice of Financial Statements.

HBA652 CO2: stimulate the adoption of various Ratios from view of its application.

HBA652 CO3: exemplify the interpretation of decision based on Marginal Costing Techniques.

HBA652 CO4: integrate budgets of concerns and direct the knowledge of Variances.

HBA652 CO5: build Cashflow based on modifications as per the policies of the firm and schedule of working capital changes.

Prof. A Patrick,
Department of Commerce,
Osmania University,
OU Nominee

CHAIRMAN
Board of Studies in Commerce
Osmania University
Hyderabad - 500 007. (T.S.)

Mrs. L V Kamala Devi,
Chairperson, BOS,
Department of Commerce
Bhavan's Vivekananda College



BHAVAN'S VIVEKANANDA COLLEGE

OF SCIENCE, HUMANITIES & COMMERCE, SAINIKPURI, SECUNDERABAD-500094

Re-Accredited with 'A' Grade by NAAC

Autonomous College

DEPARTMENT OF COMMERCE

B.COM (HONOURS BUSINESS ANALYTICS - CBCS) COURSE (2023-26 Batch)

AUDITING AND CORPORATE GOVERNANCE

PAPER CODE: HBA 653

YEAR/SEMESTER: III/VI

EXAM HRS: 3 hrs

PPW: 5

NO. OF CREDITS: 5

MARKS: 70T+30I

Course Objective: To extend knowledge on the concepts of auditing and corporate governance.

UNIT- WISE COURSE OBJECTIVES

COB1: To extend knowledge on the meaning and types of audit and planning and executing an audit

COB2: To define internal control, check & internal audit and facilitating the differences between them.

COB3: To summarise the meaning, steps of vouching, verification and valuation and to categorize Verification and valuation of assets and liabilities

COB4: To highlight company audit and reviewing the provisions of company audit under the companies act 2013.

COB5: To familiarize students with concept of corporate governance.

UNIT-I: INTRODUCTION

Origin of Auditing in India- Meaning – Definition – Evolution – Objectives – Importance – Qualities - Types of Audit – Commencement of Audit – Engagement Letter – Audit Program – Audit Notebook – Audit working papers – Audit Markings.

UNIT-II: INTERNAL CONTROL, INTERNAL CHECK AND INTERNAL AUDIT

Meaning and Objectives of Internal Control – Internal Check and Internal Audit – Internal Check Vs. Internal Audit – Internal Control vs. Internal Audit.

UNIT-III: VOUCHING & VERIFICATION AND VALUATION OF ASSETS

Meaning – Objectives – Types of Vouchers – Vouching of Trading Transactions – Vouching Cash Transaction

Meaning and Definition – Distinction – Verification and Valuation of various Assets and Liabilities

UNIT-IV: COMPANY AUDIT

Qualification and Disqualification – Appointment – Remuneration – Removal – Rights – Duties Civil and Criminal Liabilities of Auditors– Audit Committee – Audit Reports.

UNIT-V: CORPORATE GOVERNANCE

Evolution and Significance: Corporate Governance: Meaning – Definition - Evolution – Historical Perspective of Corporate Governance – Nature and Scope of Corporate Governance – Need for Corporate Governance – Essentials of Corporate Governance – Objectives of Corporate Governance - Benefits and Limitations of Corporate Governance

Prof. A Patrick,
Department of Commerce,
Osmania University,
OU Nominee

CHAIRMAN
Board of Studies in Commerce
Osmania University

Hyderabad - 500 007. (T.S.)

Mrs. L V Kamala Devi,
Chairperson, BOS,
Department of Commerce
Bhavan's Vivekananda College



BHAVAN'S VIVEKANANDA COLLEGE

OF SCIENCE, HUMANITIES & COMMERCE, SAINIKPURI, SECUNDERABAD-500094

Re-Accredited with 'A' Grade by NAAC

Autonomous College

DEPARTMENT OF COMMERCE

B.COM (HONOURS BUSINESS ANALYTICS - CBCS) COURSE (2023-26 Batch)

SUGGESTED READINGS:

1. Principles and Practice of Auditing: RG Saxena, Himalaya Publishing House.
2. Auditing and Assurance for CA Integrated Professional Competence: SK Basu, Pearson.
3. Auditing: Aruna Jha, Taxmann Publications.
4. Auditing Principles, Practices & Problems: Jagdish Prakash, Kalyani Publishers.
5. Auditing and Assurance: Ainapure & Ainapure, PHI Learning.
6. Principles and Practice of Auditing: Dinkar Pagare, Sultan Chand & Sons.
7. Fundamentals of Auditing: Kamal Gupta and Ashok Arora, Tata McGraw-Hill
8. A Handbook of Practical Auditing: B.N. Tandon et al., S. Chand
9. Corporate Governance: H.R Machiraju, Himalaya Publication House.
10. Business Ethics and Corporate Governance, (2017) Pro f. K. Viyyanna Rao, Dr. G. Nagaraju I.K.,
11. International Publishing House Pvt. Ltd,
12. Corporate Governance, (2014), Bholanath Dutta and S.K. Podder - Vision Book house,
13. Business Ethics,(2005)2ND Edition, R.V. Badi N.V. Badi, Vrinda Publication pvt Ltd
14. Business Ethics An Indian Perspective, 2015, A. C. Fernando - Pearson
15. Business Ethics and Corporate Governance, Reprint 2013, C.S.V. Murthy – Himalaya Publication
16. Corporate Governance, (2004) H.R. Machiraju, Himalaya Publication House
17. Business Ethics -Text & Cases 2010, C.S.V. Murthy – Himalaya Publication

COURSE OUTCOMES:

At the end of the course the students will be able to

HBA653 CO1: Outline the basic concepts of audit and audit planning

HBA653 CO2: Identifying the various techniques of Internal control and Internal checks required for audit

HBA653 CO3: Review the importance of vouching in relation to audit procedures and Comparing verification and valuation of assets and liabilities

HBA653 CO4: Relate the various provisions of company audit under the companies act 2013.

HBA653 CO5: Annotating the significance of corporate governance

Prof. A Patrick,
Department of Commerce,
Osmania University,
OU Nominee

CHAIRMAN

Board of Studies in Commerce
Osmania University

Hyderabad - 500 007. (T.S.)

Mrs. L V Kamala Devi,
Chairperson, BOS,
Department of Commerce
Bhavan's Vivekananda College



BHAVAN'S VIVEKANANDA COLLEGE
OF SCIENCE, HUMANITIES & COMMERCE, SAINIKPURI, SECUNDERABAD-500094
Re-Accredited with 'A' Grade by NAAC
Autonomous College
DEPARTMENT OF COMMERCE

B.COM (HONOURS BUSINESS ANALYTICS - CBCS) COURSE (2023-26 Batch)

BUSINESS INTELLIGENCE AND DATA VISUALISATION

PAPER CODE: HBA654
YEAR/SEMESTER: III/VI
EXAM DURATION: 3 Hrs

PPW: 3T+4P
NO. OF CREDITS: 5
MARKS: 50T + 15I + 35P

Course Objective: To Visualise the data using Power Bi and Tableau and utilisation of MySQL

UNIT- WISE COURSE OBJECTIVES

- COB1:** To understand the concepts of business intelligence, data visualisation
COB2: To illustrate data visualisation using Power BI
COB3: To demonstrate various functions to build dashboard using Power BI
COB4: To explain the utilisation of various plots and its functioning, show the table calculations, formatting plots and creating buttons using Tableau
COB5: To understand principles of effective Report Writing

UNIT-I: INTRODUCTION:

Overview of Business Intelligence (BI): Identify business intelligence (BI) concepts and their common applications - Differentiate between the major enterprise BI platforms and when each is appropriate. Concept and importance of data visualization, Choosing appropriate visual encoding Dashboards-Introduction- Essentials for making effective dashboards- KPIs Differentiate between the following graph and chart types and when to use them: Categorical – Continuous - Time series – Bivariate - Distribution

UNIT II- DATA VISUALIZATIONS USING POWER BI -I

Getting started with Power BI desktop, Getting Data - Connecting to data sources, clean data using Query editor, transpose, format, create basic visuals. Query Editor- Transformation- Data combine (append, merge) - Pivot, Unpivot, various column level operations, talk about relationships, Time-based data exploration- Analytics in Power BI, introducing DAX, working with Dates, creating calculated columns. Introducing all different plots in Power BI- when to do what- Create and customize visualizations, combine charts, slicers, Map visualizations. Matrix and tables, scatter charts, gauge chart and various other chart types. Overview of other aesthetics like colour, shape, group interactions of visuals.

UNIT-III: DATA VIUALIZATIONS USING POWER BI -II

Introducing Dimension modelling, managing relationships, creating calculated measures, tables, Hierarchies. drill-downs, Grouping. Introducing M language, exploring various functions, binning- A case study on Dim Modelling and building a dashboard. Introduction to Power BI Service, publish dashboards

Prof. A Patrick,
Department of Commerce,
Osmania University,
OU Nominee



CHAIRMAN
Board of Studies in Commerce
Osmania University
Hyderabad - 500 007. (T.S.)

Kamala Devi

Mrs. L V Kamala Devi,
Chairperson, BOS,
Department of Commerce
Bhavan's Vivekananda College



BHAVAN'S VIVEKANANDA COLLEGE

OF SCIENCE, HUMANITIES & COMMERCE, SAINIKPURI, SECUNDERABAD-500094

Re-Accredited with 'A' Grade by NAAC

Autonomous College

DEPARTMENT OF COMMERCE

B.COM (HONOURS BUSINESS ANALYTICS - CBCS) COURSE (2023-26 Batch)

UNIT-IV: DATA VISUALIZATIONS USING TABLEAU

Understand the Tableau environment and develop first plots in Tableau; showMe functionality for plotting Drag-drop functionality and marks page for multi-attribute plotting, functions in analytics tab Table calculations and implementation of drilldowns, hierarchies; Formatting the plots, using filters Creating buttons.

UNIT V: REPORT WRITING

Characteristics of a Good Report: Compare layout options and identify appropriate presentation choices for maximum effectiveness - Differentiate between good and bad report implementations and the potential impact of poor implementation - Constructing Reports: Distinguish between when to use reporting tools versus analysis tools - Use core tools to build report and dashboard layouts to achieve maximum effectiveness

SUGGESTED READINGS:

1. Excel Dashboards & Reports for Dummies, 2ed (Author - Michael Alexander (Frisco); ISBN: 978-1-118-84242-3
2. Microsoft Data Analytics for Dummies; Jared Decker, Brian Henry, Rob Sickorez; ISBN: 978-1-119-69636-0
3. Tableau for Dummies; Molly Monsey, Paul Sochan; ISBN: 978-1-119-13483-1
4. Data Visualization For Dummies, Mico Yuk, Stephanie Diamond; ISBN: 978-1-118-50292-1
5. Excel Data Analysis: Your visual blueprint for creating and analysing data, charts and PivotTables, 3rd Edition; Denise Etheridge, ISBN: 978-1-118-03623-5
6. Storytelling with Data: A Data Visualization Guide for Business Professionals by Cole Nussbaumer
HYPERLINK
"https://www.amazon.in/s/ref%3Ddr_kindle_ext_aut?_encoding=UTF8&index=books&field-author=Cole%20Nussbaumer%20Knafllic&search-alias=digital-text" Knafllic
7. Storytelling with Data: A Data Visualization Guide for Business Professionals
8. High Impact Data Visualization in Excel with Power View, 3D Maps, Get & Transform and Power BI 2nd ed. Edition by Adam
HYPERLINK "https://www.amazon.com/Adam-Aspin/e/B07DR9VYTK/ref%3Ddp_byline_cont_book_1"
HYPERLINK "https://www.amazon.com/Adam-Aspin/e/B07DR9VYTK/ref%3Ddp_byline_cont_book_1" Aspin
9. Data Visualization & Presentation With Microsoft Office 1st Edition (Paperback) by Valerie M.

COURSE OUTCOMES:

At the end of the course, the students will be able to

HBA654 CO1: Acquaint the students with basic concepts of business intelligence, data visualisation

HBA654 CO2: Adapt Power BI environment to use it for Business Analytics

HBA654 CO3: Identify the requirements of dash boards and to publish dashboards

HBA654 CO4: Utilise Tableau in developing first plots, Appraise the development of dashboards through Tableau and creating buttons

HBA654 CO5: Implement effective report writing from visualisations

Prof. A Patrick,
Department of Commerce,
Osmania University,
OU Nominee



CHAIRMAN
Board of Studies in Commerce
Osmania University
Hyderabad - 500 007. (T.S.)

Mrs. L V Kamala Devi,
Chairperson, BOS,
Department of Commerce
Bhavan's Vivekananda College



BHAVAN'S VIVEKANANDA COLLEGE

OF SCIENCE, HUMANITIES & COMMERCE, SAINIKPURI, SECUNDERABAD-500094

Re-Accredited with 'A' Grade by NAAC

Autonomous College

DEPARTMENT OF COMMERCE

B.COM (HONOURS BUSINESS ANALYTICS - CBCS) COURSE (2023-26 Batch)

APPLICATIONS OF BUSINESS ANALYTICS

PAPER CODE: HBA654

YEAR/SEMESTER: III/VI

EXAM DURATION: 3 Hrs

PPW: 3T+4P

NO. OF CREDITS: 5

MARKS: 50T + 15I + 35P

Course Objective: To apply the concepts of Big Data and AI in various fields of Finance, Marketing & HR

UNIT- WISE COURSE OBJECTIVES

COB1: To understand the concept and implementation of Big Data

COB2: To familiarise the students with the concepts of Artificial Intelligence

COB3: To make use of analytics in the field of Finance

COB4: To apply AI in the field of Marketing

COB5: To enable the students to use AI in the field of Human Resource Management

UNIT-I: IMPLEMENTATION OF BIG DATA

Introduction to Big Data, Evolution of Big Data - Big Data Characteristics - V's of Big Data

Big Data Ecosystems - Storage - HDFS and Cluster implementation

Parallel Processing Systems - Map Reduce, Spark; SQL on Big Data - Hive and Spark SQL, Spark Data frames; Big Data Use cases across different domains

UNIT- II: INTRODUCTION TO AI

Unsupervised Learning: Hierarchical and K means Clustering Distance, similarity metrics, hierarchical clustering- dendograms, k means algorithm, goodness of clustering; Association Rules -why association rules, properties of support confidence and lift in association rules, Apriori algorithm

Supervised Learning: Decision Trees- Linear and Non-Linear classifiers, entropy and gini index hand calculations, CART-classification and regression trees, minimizing overfit- cost complexity parameters, pre-prune and post prune methods

Random Forests - Introduction to ensembling methods- concept of bootstrap aggregation and its advantages, random selection of variables

Introduction to Neural Networks-Introduction to perceptron weights, biases, activation functions, back propagation- a high-level overview

UNIT- III: ANALYTICS IN FINANCE

Types of Analysis- Descriptive, Prescriptive, Predictive

Changing landscape of finance, Role of analytics in Finance; Types of financial data and its source;

Analytics in Finance- Bankruptcy Prediction – Credit default (individual) – Stock price Prediction

Prof. A Patrick,
Department of Commerce,
Osmania University,
OU Nominee



CHAIRMAN
Board of Studies in Commerce
Osmania University
Hyderabad - 500 007. (T.S.)

L. V. Kamala Devi

Mrs. L V Kamala Devi,
Chairperson, BOS,
Department of Commerce
Bhavan's Vivekananda College



BHAVAN'S VIVEKANANDA COLLEGE

OF SCIENCE, HUMANITIES & COMMERCE, SAINIKPURI, SECUNDERABAD-500094

Re-Accredited with 'A' Grade by NAAC

Autonomous College

DEPARTMENT OF COMMERCE

B.COM (HONOURS BUSINESS ANALYTICS - CBCS) COURSE (2023-26 Batch)

UNIT- IV: AI IN MARKETING

Explore the impact of AI in marketing, application of AI in customer journey, Application of AI in media optimization - Use cases -Customer Churn Prediction – Marketing Analysis – Marketing Campaign response Analysis

UNIT-V: AI IN HR

Emerging trends in HR, Business case for analytics in HR, Applications of analytics in HR – recruitment, Learning & Development, measuring employee engagement, compensation management.
Employee Attrition Prediction- employee Termination Prediction – Absenteeism Prediction

Suggested Readings:

1. AI and Analytics: Accelerating Business Decisions; Sameer Dhanrajani; ISBN: 9788126573035
2. Big Data MBA: Driving Business Strategies with Data Science; Bill Schmarzo; ISBN: 978-1-119-18111-8

COURSE OUTCOMES:

At the end of the course, the students will be able to

HBA654 CO1: Acquaint with the concept of Big Data

HBA654 CO2: Annotate the concept of AI and its related aspects

HBA654 CO3: Apply the concepts of AI in Finance

HBA654 CO4: Appraise the use of AI in Marketing

HBA654 CO5: Analyse various aspects of HR such as recruitment, learning and measuring through application of AI

Prof. A Patrick,
Department of Commerce,
Osmania University,
OU Nominee



CHAIRMAN
Board of Studies in Commerce
Osmania University
Hyderabad - 500 007. (T.S.)

Handwritten signature of Mrs. L V Kamala Devi

Mrs. L V Kamala Devi,
Chairperson, BOS,
Department of Commerce
Bhavan's Vivekananda College