

Name of the Program: BACHELOR OF COMMERCE BDA)		
Course Code: B.Com. BDA 6.1		
Name of the Course: FINANCIAL ANALYTICS		
COURSE CREDITS	NO. OF HOURS PER WEEK	TOTAL NO. OF TEACHING HOURS
2 CREDITS	4 HOURS	56 HOURS
Pedagogy: Classroom Lecture, Tutorials, Group discussion, Seminar, Case Studies, Field Work etc.		
Course Outcomes: On successful completion of the course, the students will be able to a) Understand the market forces for global supply chains b) Comprehend the strategies adopted to manage risks in supply chains. c) Gain knowledge on the global Supply chain performance d) Understand the significance of green supply chains		
SYLLABUS:		HOURS
Unit 1: Introduction to Financial Analytics and Data Sources		10
Overview of Financial Analytics: Importance & Applications, Financial Data Sources in India: RBI, NSE, BSE, SEBI, MOSPI , Introduction to Python Libraries for Finance: Pandas, NumPy, yFinance, NSEpy, Extracting Financial Data from NSE, BSE, RBI, and SEBI Lab Sessions Fetching Indian Stock Market Data using yfinance & NSEpy Extracting Inflation & GDP Data from RBI & MOSPI (CSV processing) Loading & Processing Banking & Forex Data from RBI		
Unit 2: Financial Data Processing & Visualization		12
Data Cleaning Techniques for Financial Data, Handling Missing Data & Outliers in Financial Datasets, Key Financial Metrics: ROI, ROE, EPS, P/E Ratio, Market Capitalization , Financial Data Visualization: Candlestick Charts, Moving Averages, Bollinger Bands . Lab Sessions Handling Missing Data in Stock Market Time Series Identifying & Treating Outliers in Indian Market Returns Creating Financial Dashboards using Matplotlib & Seaborn Mini-Project: Stock Market Trend Analysis (NSE/BSE)		
Unit 3: Time Series Analysis for Financial Forecasting		12
Basics of Time Series Analysis in Finance, ARIMA, SARIMA, and Exponential Smoothing Models, Volatility Modeling: GARCH Model, Introduction to Machine Learning for Financial Forecasting Lab Sessions Implementing Moving Average & Exponential Smoothing ARIMA & SARIMA Forecasting on Indian Stock Market Data Volatility Prediction using the GARCH Model Mini-Project: Forecasting Gold & Crude Oil Prices using Indian Market Data		
Unit 4: Risk Analysis and Portfolio Optimization		10

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<p>Introduction to Risk & Return Metrics, Value at Risk (VaR) & Conditional VaR for Indian Stocks, Monte Carlo Simulation for Portfolio Risk Analysis, Modern Portfolio Theory: Efficient Frontier & CAPM</p> <p>Lab Sessions</p> <p>Calculating VaR & CVaR for NSE Stocks</p> <p>Monte Carlo Simulation for Risk Estimation</p> <p>Portfolio Optimization using Python (Markowitz Model)</p> <p>Mini-Project: Constructing an Optimal Investment Portfolio (Indian Market)</p>	
<p>Unit 5: Predictive Analytics in Finance</p>	<p>12</p>
<p>Credit Scoring & Risk Assessment using Logistic Regression, Fraud Detection in Banking using Machine Learning, Sentiment Analysis on Indian Financial News, Algorithmic Trading Strategies using Python.</p> <p>Lab Sessions</p> <p>Predicting Loan Default Risk using Logistic Regression</p> <p>Implementing Fraud Detection in Banking Transactions</p> <p>Sentiment Analysis of Indian Stock Market News & Tweets</p> <p>Backtesting Trading Strategies on NSE Stocks</p> <p>Mini-Project: Developing a Credit Risk Prediction Model</p>	
<p>Skill Developments Activities:</p> <ol style="list-style-type: none">1. Evaluate major financial data sources in India (RBI, NSE, BSE, SEBI, MOSPI) and their importance in financial analysis.2. Assess the significance of Value at Risk (VaR) and Conditional VaR (CVaR) in financial risk analysis.3. Investigate the role of Machine Learning in finance for credit scoring, fraud detection, and algorithmic trading.4. Compare ARIMA, SARIMA, and GARCH models for financial forecasting and assess their practical applications.	

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Name of the Program: BACHELOR OF COMMERCE (BDA) Course Code: B.Com BDA6.2 Name of the Course: MANAGEMENT ACCOUNTING		
COURSE CREDITS	NO. OF HOURS PER WEEK	TOTAL NO. OF TEACHING HOURS
4 CREDITS	4 HOURS	56 HOURS
Pedagogy: Classroom lectures, tutorials, Group discussion, Seminar, Case studies & field work etc.,		
Course Outcomes: On successful completion of the course, the students will be able to a) Demonstrate the significance of management accounting in decision making. b) Analyze and interpret the corporate financial statements by using various techniques. c) Compare the financial performance of corporate through ratio analysis. d) Understand the latest provisions in preparing cash flow statement. e) Understand the concepts of Budgetary Control.		
SYLLABUS:		HOURS
Unit.1:Introduction to Management Accounting		10
Meaning and Definition, Objectives, Nature and Scope; Role of Management Accountant; Relationship between Financial Accounting and Management Accounting, Relationship between Cost Accounting and Management Accounting - Advantages and Limitations of Management Accounting. Management Reporting– Principles of Good Reporting System.		
Unit.2:Analysis of Financial Statements		12
Analysis of Financial Statements: Meaning and Importance of Financial Statement Analysis; Methods of Financial Analysis – Problems on Comparative Statement analysis, Common Size Statement analysis, Trend Analysis and Du-pont Analysis.		
Unit.3: Ratio Analysis		10
Meaning and Definition of Ratios and Ratio Analysis – Uses and Limitations of ratios – Classification of Ratios - Liquidity ratios, Solvency ratios, Turnover ratio and Profitability ratios; Problems on calculation of ratios and construction of Balance Sheet using the ratios.		
Unit.4: Cash flow Analysis		12
Meaning and Definition of Cash Flow Statement, Concept of Cash and Cash Equivalents, Uses of Cash Flow Statement – Limitations of Cash Flow Statement– Provisions of Ind. AS-7. Procedure for preparation of Cash Flow Statement – Cash Flow from Operating Activities – Cash Flow from Investing Activities and Cash Flow from Financing Activities – Preparation of Cash Flow Statement according to Ind. AS-7.		
Unit.5: Budgetary Control		12
Introduction – Meaning & Definition of Budget and Budgetary Control, Objectives of Budgetary Control, Essential requirements of budgetary control, Advantages and disadvantages of budgetary control; Types of budgets- Functional Budgets, Cash budget, sales budget, purchase budget and production budget, Fixed and Flexible budgets - Problems on Flexible budget (Total cost budget only) and Cash budgets.		

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Skill Development Activities:

1. Prepare with imaginary figures a Cash budget.
2. Prepare with imaginary figures comparative statement and analyze the financial position.
3. Prepare with imaginary figures cash flow statement
4. Prepare a Trend analysis statement for three years with imaginary figures.

Books for Ref:

Name of the Program: BACHELOR OF COMMERCE (BDA) Course Code: B.Com BDA6.3 Name of the Course: INCOME TAX-II		
COURSE CREDITS	NO. OF HOURS PER WEEK	TOTAL NO. OF TEACHING HOURS
4 CREDITS	4 HOURS	56 HOURS
Pedagogy: Classroom lectures, tutorials, Group discussion, Seminar, Case studies & field work etc.,		
Course Outcomes: On successful completion of the course, the students will be able to <ol style="list-style-type: none"> Understand the procedure for computation of income from business and other Profession. Understand the provisions for computation of capital gains. Learn to compute the taxable income from other sources. Learn the computation of total income of an Individual. Understand the provisions relating to Set Off and Carry Forward of Losses 		
SYLLABUS:		HOURS
Unit. 1: Profits and Gains of Business and Profession		16
Introduction-Meaning and definition of Business, Profession and Vocation. - Expenses Expressly allowed - Expenses Expressly Disallowed - Allowable losses - Expressly disallowed expenses and losses, Expenses allowed on payment basis. Problems on computation of income from business of a sole trading concern - Problems on computation of income from profession: Medical Practitioners, Advocates and Chartered Accountants only.		
Unit. 2: Capital Gains		12
Introduction - Basis for charge - Capital Assets - Types of capital assets – Transfer - Computation of capital gains – Short term capital gain and Long term capital gain - Exemptions under section 54, 54B, 54EC, 54D and 54F. Problems covering the above sections.		
Unit. 3: Income from other Sources		10
Introduction - Incomes taxable under Head income other sources – Securities - Types of Securities - Rules for Grossing up. Ex-interest and cum-interest securities. Bond Washing Transactions - Computation of Income from other Sources.		
Unit. 4: Set Off and Carry Forward of Losses and Deductions from Gross Total Income.		10
Meaning- Provisions of Set off and Carry Forward of Losses (Theory only) Deductions under Sections 80C, 80CCC, 80CCD, 80CCG, 80D, 80DD, 80DDB, 80E, 80G, 80GG, 80TTA, 80 TTB and 80U as applicable to Individuals.		
Unit. 5: Computation of Total Income and Tax Liability		08
Computation of Total Income and tax liability of an Individual Assessee.		

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Skill Development activities:

1. Mention the procedure involved in the computation of income from profession.
2. List-out the different types of capital assets and identify the procedure involved in the computation of tax for the same.
3. List out the steps involved in the computation of income tax from other sources and critically examine the same.
4. List any 6 deductions available under section 80

Name of the Program: BACHELOR OF COMMERCE BDA)		
Course Code: B.Com. BDA 6.4		
Name of the Course: HR ANALYTICS		
COURSE CREDITS	NO. OF HOURS PER WEEK	TOTAL NO. OF TEACHING HOURS
4 CREDITS	4 HOURS	56 HOURS
Pedagogy: Classroom Lecture, Tutorials, Group discussion, Seminar, Case Studies, Field Work etc.		
Course Outcomes: On successful completion of the course, the students will be able to <ol style="list-style-type: none"> Understand the Fundamentals of HR Analytics Apply Data Collection and Preprocessing Techniques Implement Descriptive and Predictive HR Analytics Analyze Performance and Compensation Data Interpret Emerging Trends in HR Analytics 		
SYLLABUS:		HOURS
Unit No. 1: Introduction to HR Analytics		10
Concept & Evolution of HR Analytics, Role of HR Analytics in Decision Making, HR Metrics & KPIs: Employee Turnover, Retention, Productivity, Compensation Metrics, Data Sources in HR Analytics: Surveys, HRIS, Payroll, Performance Management Systems, Ethical and Legal Considerations in HR Analytics. Lab Session: Introduction to Python for HR Analytics (Google Colab, Pandas basics)		
Unit No. 2: Data Collection & Preprocessing in HR Analytics		12
Data Collection Techniques: Internal vs. External Data, Data Cleaning & Preprocessing: Handling Missing Data, Outliers, Data Transformation, Exploratory Data Analysis (EDA) in HR Lab Session: Importing HR datasets using Pandas Data Cleaning using NumPy, PowerBi & Pandas Visualizing HR Data using Seaborn & Matplotlib		
Unit No. 3: Descriptive & Predictive HR Analytics		12
Descriptive Analytics in HR: Employee Performance, Absenteeism, Salary Trends, Predictive Analytics for HR Decision Making: Attrition Prediction; Performance Forecasting; Recruitment Analytics, Regression & Classification Models in HR Analytics Lab Session: Building Predictive Models using Scikit-Learn (Logistic Regression, Decision Trees) Case Study: Employee Attrition Prediction		
Unit No. 4: Workforce Planning & Sentiment Analysis		10
Workforce Planning and Talent Acquisition Analytics, Diversity & Inclusion Analytics, Employee Sentiment Analysis using Text Mining Lab Session: Sentiment Analysis on Employee Reviews using NLTK & VADER		

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Workforce Planning using Time Series Forecasting (Statsmodels)	
Unit 5: Performance & Compensation Analytics	12
Performance Management Analytics: Measuring Productivity & Effectiveness, Compensation Analytics: Pay Equity & Market Benchmarking, HR Dashboards & Visualization: Reporting Key HR Metrics, Future Trends in HR Analytics. Lab Session: Creating HR Dashboards using Streamlit Case Study: Pay Equity Analysis	
Skill Developments Activities: <ol style="list-style-type: none">1. List out the role of HR Analytics in strategic decision-making. Provide examples of how organizations benefit from HR Analytics.2. Demonstrate Exploratory Data Analysis (EDA) in the context of HR Analytics. How does it help in understanding employee behaviour?3. List the uses of predictive analytics to improve employee performance management in organizations.4. Write a note on importance of Sentiment Analysis in HR practices	

Name of the Program: BACHELOR OF COMMERCE (BDA) Course Code: B.Com BDA6.5 Name of the Course: AUDITING		
COURSE CREDITS	NO. OF HOURS PER WEEK	TOTAL NO. OF TEACHING HOURS
4 CREDITS	4 HOURS	56 HOURS
Pedagogy: Classroom lectures, tutorials, Group discussion, Seminar, Case studies & field work etc.,		
Course Outcomes: On successful completion of the course, the students will be able to a) Understand the conceptual framework of auditing. b) Examine the risk assessment and internal control in auditing c) Comprehend the relevance of IT in audit and audit sampling for testing. d) Examine the company audit and the procedure involved in the audit of different entities. e) Gain knowledge on different aspect of audit reporting and conceptual framework applicable on professional accountants.		
SYLLABUS:		HOURS
Unit.1: Introduction to Auditing		12
Introduction – Meaning and Definition – Objectives– Types of Audit– Benefits and Inherent Limitations of Audit; Preparation before commencement of new audit; Auditor- Meaning and Essential Qualities of an Auditor; Meaning of Assurance Engagements, Difference between Reasonable Assurance Engagement and Limited Assurance Engagement, Meaning and basic purpose of Engagement and Quality Control Standards.		
Unit.2: Risk Assessment and Internal Control		10
Introduction–Audit risk–Assessment of risk. Internal Control: Meaning and objectives–Internal check- Meaning, objectives and fundamental Principles. Internal check with regards to wage payment –Cash sales – and Cash purchases.		
Unit.3: Verification and Valuation of Assets and Liabilities		12
Meaning and objectives of verification and valuation – Position of an auditor as regards the valuation of assets. Verification and Valuation of different items of Assets: Land and Building - Plant and Machinery – Investment - Stock in Trade. Verification and Valuation of different items of Liabilities: Bills payable - Sundry Creditors and Contingent liabilities.		
Unit.4: Company Audit and Audit of other Entities		12
Company Auditor: Appointment – Qualification – Powers -Duties and liabilities - Professional ethics of an auditor. Other Entities: Audit Procedure of NGOs - Charitable Institutions – Educational institutions – Government – Local Bodies – Cooperative societies – Hotels – Hospitals – Clubs & Banks.		
Unit.5: Audit Report & Professional Ethics Recent Trends in Auditing		10
Meaning of Ethics in Auditing, Need for Professional Ethics- Fundamental Principles of Professional Ethics; Independence of Auditors, Threats and Safeguards to Independence of Auditors, Professional Skepticism, SA 210 Agreeing the Terms of Audit Engagement; Basic overview of SQC 1, and SA 220		

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Skill Development Activities:

1. Design and develop an audit plan for a joint stock company
2. List the various documents necessary to be verified in the audit process
3. Record the verification procedure with respect to any one fixed asset.
4. List out Professional Ethics of an Auditor.