**M.Com (Financial Technology)**

**Program Code:**

**Syllabus**

**(With effect from 2025 - 26)**



**DEPARTMENT OF COMMERCE**

**Bharathiar University**

**(A State University, Accredited with “A++” Grade by NAAC |**

**26th Rank among Indian Universities by MoE-NIRF)**

**Coimbatore - 641 046, India**

**BHARATHIAR UNIVERSITY: COIMBATORE 641046**

**DEPARTMENT OF COMMERCE**

**MISSION**

* To impart social consciousness among students
* To Provide value based education for enhancing employability skills in the area of Finance and Accounting.
* To Train the students with innovative leadership qualities
* To impart quality higher education to excel in their life.
* To provide students with better research platform

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| **Program Educational Objectives (PEOs)** | |
| The M.Com (Financial Technology) program describe accomplishments that graduates are expected to attain within five to seven years after graduation | |
| PEO1 | With finance and Technology knowledge graduates will be able to work in the emerging fields of Financial Technology |
| PEO2 | Graduates can enroll for higher studies and pursue career in research |
| PEO3 | IT Giants like TCS, Wipro, Infosys, HCL etc., and BFSI giants are ready to hire graduates with finance and accounting with computer skills. |
| PEO4 | Graduates will take financial advisory service role |
| PEO5 | Graduates will be able to clear Net /SLET which places them in the teaching job |
| PEO6 | Graduates will be able to work in the challenging and demanding work environment of Financial service industry |
| PEO7 | Graduates will be able to pursue advance degrees like Ph.D., with specialization |
| PEO8 | Graduates will be able to provide solutions in the field of Finance and Technology |
| PEO9 | Graduates will be able to get jobs in private, public and Government sectors |
| PEO10 | Graduates are prepared to participate in diverse sectors of the economy |

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| **Program Specific Outcomes (PSOs)** | |
| After the successful completion of M.Com (Financial Technology) program, the students are expected to | |
| PSO1 | Develop Skills to work in the financial supporting services |
| PSO2 | Develop the skills on the application of statistical tools in Business decision-making |
| PSO3 | Develop skills to participate and provide advisory in the capital market |
| PSO4 | Graduates will have proficiency to attend professional exams |
| PSO5 | Students will be able to take up a job in emerging financial technology domain |

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| **Program Outcomes (POs)** | |
| On successful completion of the M.Com (Financial Technology) program | |
| PO1 | To provide a comprehensive domain knowledge of Finance, Accounting and Research |
| PO2 | To develop proficiency in applying technical skill / Modern Technology in Business and Management. |
| PO3 | To apply the acquired knowledge to take appropriate decisions for complex business Problems. |
| PO4 | To work independently and as a team by understanding the Business Ethics and Social Values. |
| PO5 | To create a thrust for continuous learning and updating in the assigned work. |
| PO6 | To train the student to meet the challenges in industry |
| PO7 | To equip the students in the area of financial Technology. |
| PO8 | To take up a research work |
| PO9 | The practical exposure in finance and different technology papers helps the students to take a challenging jobs |
| PO10 | To excel in applying various financial technology models and software’s. |

**ELIGIBILITY FOR ADMISSION TO THE COURSE**

A Graduate in Commerce, B.Com. (Computer Applications), B.Com. (Information Technology), B.Com. (Business Analytics), B.Com. (Cost & Management Accounting), B.Com. (E-Com), B.Com. (Financial System), B.Com. (Finance), B.Com. (Finance and Control) with at least 60% aggregate marks and having studies at least one course in Mathematics / Statistics at the high school or higher level.

**DURATION OF THE COURSE**

### The course shall extend over a period of two years comprising four Semesters, with two Semesters per year. There shall not be less than ninety instructional days for each semester. Examination shall be conducted at the end of each semester for the respective subjects.

**COURSE OF STUDY AND SCHEME OF EXAMINATION**

The course of study and scheme of examination for the M.Com (Financial Technology) course

Shall consist of the following:

## **M.Com (Financial Technology) Curriculum (University Department)**

**(For the Students admitted during the Academic Year 2025 - 26 onwards)**

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| **Course Code** | **Title of the Course** | | Credits | **Hours** | | **Maximum Marks** | | |
| Theory | Practical | CIA | ESE | Total |
| **FIRST SEMESTER** | | | | | | | | |
| 13A | Core-1 | Introduction to Financial Technology | 4 | 4 | - | 25 | 75 | 100 |
| 13B | Core-2 | Financial Statement Analysis | 4 | 4 | - | 25 | 75 | 100 |
| 13C | Core-3 | Quantitative Techniques for Finance | 4 | 4 | - | 25 | 75 | 100 |
| 13D | Core-4 | Python for Finance | 4 | 4 | - | 25 | 75 | 100 |
| 13E | Core-5 | Big Data Analytics | 4 | 4 | - | 25 | 75 | 100 |
| 1EA | E1ective-1 | Oracle & RDBMS | 4 | 4 | - | 25 | 75 | 100 |
| 1EB | Insurance and Risk Management |
|  | Support. | Offered by other Department | 2 | 2 | - | 12 | 38 | 50 |
| 1VA\* | Val. Added | Val. Added Course -1 : Credit Analyst | 4 | 2 | - | 100 | - | 100 |
| **Total** | | | 26 | 26 |  |  |  | **650** |
| **SECOND SEMESTER** | | | | | | | | |
| 23A | Core-6 | Applied Cost Accounting | 4 | 4 | - | 25 | 75 | 100 |
| 23B | Core-7 | Stock Market Operations | 4 | 4 | - | 25 | 75 | 100 |
| 23C | Core-8 | GST and Other Indirect Taxation | 4 | 4 | - | 25 | 75 | 100 |
| 23D | Core-9 | AI / ML for Financial Sector | 4 | 4 | - | 25 | 75 | 100 |
| 23E | Core-10 | Strategic Financial Management | 4 | 4 | - | 25 | 75 | 100 |
| 2EA | E1ect.-2 | Financial Derivatives | 4 | 4 | - | 25 | 75 | 100 |
| 2EB | Fixed Income Securities Markets |
|  | Supportive | Offered by other Department | 2 | 2 | - | 12 | 38 | 50 |
| **Total** | | | 26 | 26 | - |  |  | **650** |
| **THIRD SEMESTER** | | | | | | | | |
| 33A | Core-11 | Soft Skills for Managers | 4 | 4 | - | 25 | 75 | 100 |
| 33B | Core-12 | Data Analysis through SPSS | 4 | 4 | - | 25 | 75 | 100 |
| 33C | Core-13 | Advanced Corporate Accounting | 4 | 4 | - | 25 | 75 | 100 |
| 33D | Core-14 | Block Chain Management | 4 | 4 | - | 25 | 75 | 100 |
| 3EA | E1ect. -3 | Financial Modeling | 4 | 4 | - | 25 | 75 | 100 |
| 3EB | Internet of Things |
| 33P | Pract. 1 | Technical Analysis | 4 | - | 4 | 40 | 60 | 100 |
|  | Supportive | Offered by other Department | 2 | 2 | - | 12 | 38 | 50 |
| 3VA01\* | Val. Added | Val. Added Course -2: Digital Marketing | 4 | 2 | - | 100 | - | 100 |
| 3VA02\* | Val.  Added | Value Added Course – 3 :Health and Wellness | 2 |  |  |  | 50 |  |
| **Total** | | | 26 | 22 | 4 |  |  | **650** |
| **FOURTH SEMESTER** | | | | | | | | |
| 46I | - | Internship & Training | 4 |  |  | 100 | - | 100 |
| 47V | - | Software Development / Project & Viva – Voce | 8 |  |  | 50 | 150 | 200 |
| 4NS\* | Swayam | Professional Certification Course | 1 | 2 |  | - | - | - |
| 4JA\*\* | - | Certificate Course - I (Online Mode) | 4 |  |  |  | 100 | 100 |
| 4JB\*\* | - | Certificate Course - II (Online Mode) | 4 |  |  |  | 100 | 100 |
| **Total** | | | 12 |  |  |  |  | 250 |
| **Grand Total** | | | 90 |  |  |  |  | 2250 |
| **\*Co-Scholastic Courses**  The final grading and ranking will only be based on scholastic courses. However, the award of the degree requires the mandatory completion of co-scholastic courses. | | | | | | | | |

\*\* The Students are encouraged to choose Any Two Certificate Courses from the Swayam Portal in the area of Finance, Accounting, and Computer Applications & Financial Technology. Each Course should carry minimum of 2 Credits and maximum of 4 Credits. Students are encouraged to complete the Online Certificate Courses from the First Semester onwards. He / She should complete the Online Certificate Courses on or before Fourth Semester. Marks will be added in the Fourth Semester Marks Statement.

**Supportive Courses offered to other Departments**

Paper – I Principles of Accounting 2

Paper – II Principles of Modern Banking 2

**Model Question Paper Pattern for Core and Elective Papers**

Time: 3 Hours Maximum Marks: 75 Marks.

Section A – (10 x 1 = 10)

Answer All the questions

Each question carries **One** mark

Q. No.1. – Q. No. 10 - Objective questions with four multiple choices

Section B – (5 x 5 = 25)

Answer All the questions

Each question carries **Five** Marks

Q. No. 11 – Q. No. 15 - Questions with internal choices (either (a) or (b) type

Section C – (5 x 8 = 40)

Answer all the questions

Each question carries **Eight** Marks

Q.No. 16 – Q.No. 20 - Questions with internal choices (either (a) or (b) type)

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**Model Question Paper Pattern for Supportive Paper**

Time: Two Hours Maximum Marks: 38 Marks

Section A – (5 x 1 = 5)

Answer all the questions

Each question carries One Marks

Q. No. 1 – Q. No. 5

Section B – (5 x 3 = 15)

Answer all the questions

Each question carries Three Marks

Q. No. 6 – Q. No. 10 - Questions with internal choices (either (a) or (b) type

Section C – (3 x 6 = 18)

Answer all the questions

Each question carries Six Marks

Q.No. 11 – Q.No. 13 - Questions with internal choices (either (a) or (b) type)

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| **Course code** | | **13A** | | **INTRODUCTION TO FINANCIAL TECHNOLOGY** | **L** | | | | **T** | | **P** | **C** |
| Core -1 | | | | **4** | | | | **-** | | **-** | **4** |
| **Pre-requisite** | | | | Basic Knowledge in Computer Application | Syllabus Version | | | **2025 - 26** | | | | |
| **Course Objectives:** | | | | | | | | | | | | |
| The main objectives of this course are to:   * To learn the basic of Fintech and emerging technologies. * To understand the framework of block chain * To Learn Cypto currency and Block chain technology * To learn various analytics tools used in financial service industry * To learn the basic concepts of machine learning | | | | | | | | | | | | |
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| **Expected Course Outcomes:** | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | |
| 1 | Understand global FinTech landscape and describe the role of banks and financial service providers in shaping and responding to innovation and disruption | | | | | | | | | K2 | | |
| 2 | Apply the concepts of block chain | | | | | | | | | K3 | | |
| 3 | Familiarize with Crypto Currency Mechanism | | | | | | | | | K2 | | |
| 4 | Remember the basics of data analysis | | | | | | | | | K1 | | |
| 5 | Evaluate the applications of machine learning | | | | | | | | | K5 | | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** - Create | | | | | | | | | | | | |
| **Unit I** | | | **Introduction to Fintech** | | | | **10 Hours** | | | | | |
| Overview of Fintech: Meaning - History of Fintech -Scope -Benefits of Fintech- Drawbacks of Fintech -Fintech Hubs. Disruptions in the area of Payments, Wealth Management, Investments, Lending, Reg Tech and Insurance Tech - Blockchain- Wearable’s and Other Emerging Technologies | | | | | | | | | | | | |
| **Unit II** | | | **Block Chain** | | | | **12 Hours** | | | | | |
| History of Ledger and Accounting practices, Decentralized Ledger concepts and Business rules, Basics of block chain technology: Block chain Technology Stack-Blocks-Mining-Consensus-Distributed Databases-Ethereum Smart Con Contracts-Security | | | | | | | | | | | | |
| **Unit III** | | | **Crypto Currency** | | | **12 Hours** | | | | | | |
| Digital Currency-Crypto Currency: Evolution of Crypto currencies-A brief on ICO’s-Block chain Frameworks Block chain Implementation: Block chain as a Financial System-Block chain for Provenance Tracking-Block chain for Interorganisational Record / Asset-keeping-Block chain for Multi-party Aggregation. | | | | | | | | | | | | |
| **Unit IV** | | | **Data Analytics:** | | | **10 Hours** | | | | | | |
| An Introduction to Data Analytics- Role of Analytics in the Modern World-Types of Analytics: Descriptive, Diagnostic, Predictive, Prescriptive-Data Analytics and Ethical Issues, Basics of Statistical Analysis: Descriptive and Inferential Statistics-Mean/Median/Mode-Standard Deviation/Covariance/Correlation, Basics of Python for Data Analysis: Installation of Anaconda-Data Types and Functions-Data Manipulation and Preparation, Data Visualization in Python, Sentiment Analysis. | | | | | | | | | | | | |
| **Unit V** | | | **Introduction to Machine Learning** | | | **14 Hours** | | | | | | |
| An Introduction to Machine Learning-Evolution of ML- Trends in ML-Application of Machine Learning-Best Practices of Machine Learning-Machine Learning in future-Machine Learning Algorithms: Classification-Regression-Forecasting-Clustering, Neural Networks: Perception Learning-Back propagation Learning-Object Recognition, Deep Learning – Keras:-Setting up KERAS-Creating a Neural Network-Training Models and Monitoring-Artificial Neural Networks | | | | | | | | | | | | |

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| **Unit:6** | | | | **Contemporary Issues** | | | | | | | | | **2 Hours** | |
| Webinars – Quiz - Online Assignments | | | | | | | | | | | | | | |
|  | | | | **Total Lecture Hours** | | | | | | | | | **60 Hours** | |
| **Note: Question paper shall cover 100% theory.** | | | | | | | | | | | | | | |
| **Books for Study** | | | | | | | | | | | | | | |
| 1 | Sanjay Phadke (2020), Fintech Future : The Digital DNA of Finance, SAGE Publications | | | | | | | | | | | | | |
| 2 | Seth Swanson, FinTech: For Beginners! Understanding & Utilizing The Power Of Financial Technology, Create space Independent Pub | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| **Books for Reference** | | | | | | | | | | | | | | |
| 1. | | V.Dheenadhayalan & C.Vijai, "FinTech" Vijay Nicole Imprints Private Limited, Chennai, 2024. | | | | | | | | | | | | |
| 2. | | Nakul Shah," Blockchain and DLT: A comprehensive guide to getting started with blockchain and Web3 "BPB Publication, First Edition 2024. | | | | | | | | | | | | |
| 3. | | Imran Bashir," Mastering Blockchain - Fourth Edition: Inner workings of blockchain, from cryptography and decentralized identities, to DeFi, NFTs and Web3", Packt Publishing, 2023. | | | | | | | | | | | | |
| 4 | | Dr. P.S. Ramesh, Prof. Gaikwad Anil Pandurang, Ravi Teja Bhamidipati, Dr. K. Sridharan," Blockchain Technologies Applications And Cryptocurrencies", Book Rivers,2023. | | | | | | | | | | | | |
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| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | | | |
| 1 | | **https://onlinecourses.swayam2.ac.in/aic21\_ge01/announcements** | | | | | | | | | | | | |
| 2 | | [**https://onlinecourses.nptel.ac.in/noc24\_cs51/preview**](https://onlinecourses.nptel.ac.in/noc24_cs51/preview) | | | | | | | | | | | | |
| Course Designed By: Dr.S. Raja Sharmila, Guest Faculty / E-Mail ID: srsharmibalaji@gmail.com | | | | | | | | | | | | | | |
| **Mapping with Programme Outcomes** | | | | | | | | | | | | | | |
| **COs** | | | **PO1** | | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | | **PO10** |
| **CO1** | | | M | | M | M | M | M | M | M | M | M | | M |
| **CO2** | | | M | | M | M | S | S | S | S | S | M | | S |
| **CO3** | | | M | | S | M | S | S | S | S | S | M | | M |
| **CO4** | | | M | | S | S | S | S | S | S | S | S | | S |
| **CO5** | | | M | | S | S | S | S | S | S | S | S | | S |

\*S - Strong; M - Medium; L - Low

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| Course code | | 13B | **FINANCIAL STATEMENT ANALYSIS** | | | L | | | T | | P | C |
| Core -2 | | | 4 | | | - | | - | 4 |
| Pre-requisite | | | Basic Knowledge in Accounting | | | Syllabus Version | | | | 2025 -26 | | |
| Course Objectives: | | | | | | | | | | | | |
| The main objectives of this course are to:  To acquire knowledge in the techniques of Management Accounting.  To understand need for Working Capital.  To lay a base for budgeting and Budgetary Control | | | | | | | | | | | | |
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| Expected Course Outcomes: | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | |
| 1 | Interpret the Financial Statements. | | | | | | | | | | K3 | |
| 2 | Compute Working Capital Requirements | | | | | | | | | | K3 | |
| 3 | Prepare the Fund Flow and Cash Flow Statement | | | | | | | | | | K4 | |
| 4 | Prepare different types of Budget | | | | | | | | | | K5 | |
| 5 | Helps Management in Decision Making | | | | | | | | | | K6 | |
| K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze; K5 - Evaluate; K6 – Create | | | | | | | | | | | | |
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| Unit:1 | | Introduction to Management Accounting | | | | | | 10 Hours | | | | |
| Nature and Scope of Management Accounting – Functions – Financial Accounting Vs Management Accounting – Relationship Between cost and Management Accounting – Tools Techniques of Management Accounting and Financial Statement Analysis. | | | | | | | | | | | | |
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| Unit:2 | | Ratio Analysis | | | | | 12 Hours | | | | | |
| Ratio Analysis – Advantages – Limitations – Classification of Ratios – Working Capital Management - Determinants and Computation of Working capital – Forecast of Working Capital Requirements. | | | | | | | | | | | | |
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| Unit:3 | | Fund Flow and Cash Flow Statement | | | 12 hours | | | | | | | |
| Funds Flow Statement – Concept of Funds and Flow of Funds – Importance of Funds Flow Statements – Limitations – Schedule of Changes in Working Capital – Preparation of Funds Flow Statement – Cash Flow Statement – Funds Flow Statement Vs Cash Flow Statement – Uses of Cash Flow Statement – Limitations – Preparation of Cash Flow Statement. | | | | | | | | | | | | |
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| Unit:4 | | Budgeting and Budgetary Control | | | 12 Hours | | | | | | | |
| Budgeting and Budgetary Control – Objectives of Budgetary Control – Essentials of Budgetary Control – Advantages – Limitations – Classification and Types of Budgets – Sales, Production, Cost of Production, Purchase and Flexible Budgets – Cash Budget. | | | | | | | | | | | | |
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| Unit:5 | | Standard Costing | | 12 Hours | | | | | | | | |
| Standard Costing and Variance Analysis - Advantages and Limitations of Standard Costing – Distinguish between budgetary control and standard costing – Introduction of Standard Costing System – Variance Analysis and Computation of Variances. | | | | | | | | | | | | |
| Unit:6 | | Contemporary Issues | | 2 Hours | | | | | | | | |
| Expert lectures, online seminars – webinars | | | | | | | | | | | | |
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|  | | Total Lecture Hours | | 60 Hours | | | | | | | | |
| Note: Question Paper shall cover 40% Theory and 60% Problems | | | | | | | | | | | | |
| Books for Study | | | | | | | | | | | | |
| 1 | S.N.Maheswari, Suneel K Maheswari, Sharad K Maheswari “Accounting for Management”, Fifth Edition, Vikas Publishing House, New Delhi, 2022 | | | | | | | | | | | |
| 2 | M.Y Khan &P.K.Jain, “Management Accounting and Financial Analysis”, Tata McGraw Hill Publishing Company Limited, New Delhi, 2025 | | | | | | | | | | | |
|  | | | | | | | | | | | | |
| Books for Reference | | | | | | | | | | | | |
| 1 | R.K.Sharma& Shashi K.Gupta, “Management Accounting Principles and Practice”, Kalyani Publishers, New Delhi, 2021 | | | | | | | | | | | |
| 2 | Dr. Manmohan,Dr. S.N. Goyal “Principles of Management Accounting”, Sahitya Bhawan Publishers and Distributors Pvt Ltd, Uttar Pradesh, 2007 | | | | | | | | | | | |
|  | | | | | | | | | | | | |
| Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.] | | | | | | | | | | | | |
| 1 | https://swayam.gov.in/nd1\_noc20\_mg65/preview | | | | | | | | | | | |
| 2 | https://swayam.gov.in/nd2\_imb20\_mg31/preview | | | | | | | | | | | |
|  | | | | | | | | | | | | |
| Course Designed By: Dr. M. Jegadeeshwaran / E-Mail ID: drmjegadeesh@gmail.com | | | | | | | | | | | | |

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| Mapping with Programme Outcomes | | | | | | | | | | |
| COs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
| CO1 | S | S | S | S | S | S | S | M | M | M |
| CO2 | S | S | S | S | S | S | S | M | M | M |
| CO3 | S | S | S | S | S | S | S | M | M | M |
| CO4 | S | S | S | S | S | S | S | M | M | M |
| CO5 | S | S | S | S | S | S | S | M | M | M |

\*S-Strong; M-Medium; L-Low

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| Course Code | | 13C | | QUANTITATIVE TECHNIQUES FOR FINANCE | | | L | | | T | | P | C |
| Core -3 | | | | 4 | | | - | | - | 4 | |
| Pre-requisite | | | | Basic knowledge in Statistics and Operations Research | | | Syllabus Version | | | | 2025 -  26 | | |
| Course Objectives: | | | | | | | | | | | | | |
| The main objectives of this course are:  To understand the various applications used in QT for finance decision  To apply the various Quantitative Techniques to solve business problems  To determine and evaluate the project to minimize the cost and time  To be able to select the best course of action and to improve the professional skills for their  business | | | | | | | | | | | | | |
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| Expected Course Outcomes: | | | | | | | | | | | | | |
| On the successful completion of the course, students will be able to: | | | | | | | | | | | | | |
| 1 | Understand the basic theory of probability and applications of theoretical distribution in finance | | | | | | | | | | | K2 | |
| 2 | Know the role and applications of queuing theory, simulation and time series in business for financial analysis. | | | | | | | | | | | K3 | |
| 3 | Analyze and interpret the various index numbers in business and to know the economic and business index in India. | | | | | | | | | | | K4 | |
| 4 | Determine and evaluate the project to minimize the cost and time through CPM. | | | | | | | | | | | K5 | |
| 5 | Apply the inventory control technique to control the material cost and to identify the optimum profit through game theory that is minimized lose and maximize the profit. | | | | | | | | | | | K6 | |
| K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze; K5 - Evaluate; K6 - Create | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | |
| Unit:1 | | | Probability and Theoretical Distribution | | | | | | 12 Hours | | | | |
| Probability – Definition- Addition and multiplication rules Probability distribution – Theoretical distributions – Binomial poison and normal – Simple problems applied to finance. | | | | | | | | | | | | | |
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| Unit:2 | | | Queuing Theory and Time Series Analysis | | | | | 12 Hours | | | | | |
| Queuing theory – Applications to Business Decisions – Simulation – Monte Carlo Techniques - Time series – Components of time series – Use of time series data for financial analysis. | | | | | | | | | | | | | |
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| Unit:3 | | | Index Number and Its Applications | | | 10 Hours | | | | | | | |
| Index numbers – concepts – simple and weighted index numbers-consumer price index-index numbers of Industrial production – Economic and business index numbers published in India | | | | | | | | | | | | | |
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| Unit:4 | | | Network Analysis | | | 12 Hours | | | | | | | |
| Network Analysis - Managerial Applications - CPM / PERT network components - CPM - Methodology - Critical Path - Total Float, Free Float - Independent Float - Distinction Between PERT and CPM. | | | | | | | | | | | | | |
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| Unit:5 | | | Inventory Management and Game Theory | | 12 Hours | | | | | | | | | |
| Inventory Management - Determinants - Factors affecting Inventory Control - EOQ - inventory models - Types of Inventory models - Game theory - Zero sum Games: Arithmetic and Graphical Method, | | | | | | | | | | | | | | |
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| Unit:6 | | | Contemporary Issues | 2 Hours |
| Expert lectures, online seminars - webinars | | | | |
|  | | | Total Lecture Hours | 60 Hours |
| Note: Question paper shall cover 40% theory and 60% Problems. | | | | |
| Books for Study | | | | |
| 1 | Gupta S.P, Gupta PK “Quantitative Techniques and Operation research”, Sultan Chand & Sons, Publisher (2022) | | | |
| 2 | Kanti Swarup and PK Gupta, Operation Research, Sultan Chand & Sons Publisher, New Delhi (2022) | | | |
| Books for Reference | | | | |
| 1 | **E.A. Parameswara Gupta (2019)** Operations Research & Quantitative Techniques, Himalaya Publishing House Pvt. Ltd, Mumbai. | | | |
| 2 | S.P. Gupta (2021), “Statistical Methods”, S.Chand & Sons Publisher, New Delhi | | | |
| Note: Question Paper shall cover 40% Theory and 60% Problems. | | | | |
| Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.] | | | | |
| 1 | | <https://youtu.be/owLT5KDrqAs> | | |
| 2 | | E-book: P.K. Gupta and DS Hira, Operations Research, S. Chand Publishing, New Delhi | | |
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| Course Designed By: Dr. P. Chellasamy / E-Mail ID: drchellamsamy@gmail.com | | | | |

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| COs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
| CO1 | M | S | M | M | S | S | S | M | S | S |
| CO2 | S | S | S | M | S | S | S | S | S | M |
| CO3 | S | S | S | S | S | S | S | S | S | S |
| CO4 | S | S | S | S | S | S | S | M | S | S |
| CO5 | S | S | S | S | S | S | M | M | M | M |

\*S-Strong; M-Medium; L-Low

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| **Course code** | | **13D** | | **PYTHON FOR FINANCE** | **L** | | | | | **T** | | **P** | **C** |
| Core - 4 | | | | **4** | | | | | **-** | | **-** | **4** |
| **Pre-requisite** | | | | Basic knowledge in computer application | **Syllabus Version** | | | | **2025 - 26** | | | | |
| **Course Objectives:** | | | | | | | | | | | | | |
| The main objectives of this course are to:   * To provide a broad understanding of the principles and techniques of Python coding for finance applications. * To get comfortable with the main elements of Python programming * Write and execute basic Python code to perform advanced calculation, generate outputs, create variables, abstract from data, etc. * To apply financial models and formulae. * To illustrate how data analytics can improve financial decision-making. | | | | | | | | | | | | | |
| **Expected Course Outcomes:** | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | |
| 1 | To perform advanced calculation, generate outputs, create variables, abstract from data using python. | | | | | | | | | | K4 | | |
| 2 | Learn python models and techniques that aid design, analysis and evaluation of financial decision-making. | | | | | | | | | | K2 | | |
| 3 | Learn and implement advanced machine learning models in finance using python | | | | | | | | | | K2 & K3 | | |
| 4 | Create Excel, Web and GUI based design for trading platforms to support analytics | | | | | | | | | | K6 | | |
| 5 | Attain a broad understanding of the principles of quantitative evidence based financial decision making | | | | | | | | | | K2 | | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** - Create | | | | | | | | | | | | | |
| **Unit I** | | | **Python and Finance** | | | | | **10 Hours** | | | | | |
| Python- History of Python- Python Ecosystem- Technology in Finance- Rise of Real-Time Analytics- Finance and Python Syntax- Efficiency and Productivity Through Python- From Prototyping to Production- Python Deployment- Anaconda- IPython- Spyder- Algorithmic Trading- Python for Algorithmic Trading- Machine and Deep Learning. | | | | | | | | | | | | | |
| **Unit II** | | | **Working with Financial Data** | | | | **12 Hours** | | | | | | |
| Reading Financial Data from Different Sources- Working with Open Data Sources- Retrieving Historical Structured Data- Retrieving Historical Unstructured Data- Storing Financial Data Efficiently- The process of algorithmic trading- Moving averages- Technical analysis techniques- Crossovers- Pairs trading- Data Visualization- Two-Dimensional Plotting- One-Dimensional Data Set- Two-Dimensional Data Set- Other Plot Styles- Financial Plots- Financial Data- Regression Analysis. | | | | | | | | | | | | | |
| **Unit III** | | | **Models and Concepts** | | | **14 Hours** | | | | | | | |
| Supervised Learning Models: An Overview- Linear Regression- Ordinary Least Squares- Regularized Regression- Logistic Regression- K-Nearest Neighbors- Linear Discriminant Analysis- Classification and Regression Trees- Ensemble Models- ANN-Based Models- ANN using sklearn- Using ANNs for supervised learning in finance- Model Performance- Over fitting and Under fitting- Cross Validation- Evaluation Metrics- Unsupervised Learning: Dimensionality Reduction- Clustering Techniques- k-means Clustering. | | | | | | | | | | | | | |
| **Unit IV** | | | **Advanced Machine Learning Models in Finance** | | | **12 Hours** | | | | | | | |
| Investigating advanced classifiers- Random Forest- Gradient Boosted Trees- XG Boost- Using stacking for improved performance- Investigating the feature importance- Investigating different approaches to handling imbalanced data- Under sampling- Oversampling- SMOTE- Bayesian hyper parameter optimization. | | | | | | | | | | | | | |

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| **Unit V** | | | | **Financial Analytics and Development** | | | | | | | | **10 Hours** | | |
| Excel Integration- Basic Spreadsheet Interaction- Scripting Excel with Python- Object Orientation and Graphical User Interfaces- Object Orientation- Basics of Python Classes- Simple Short Rate Class- Cash Flow Series Class- Graphical User Interfaces- Short Rate Class with GUI- Updating of Values- Cash Flow Series Class with GUI- Web Integration- Web Basics- Web Plotting- Static Plots- Interactive Plots- Real-Time Plots- Rapid Web Applications- Web Services. | | | | | | | | | | | | | | |
| **Unit:6** | | | | **Contemporary Issues** | | | | | | | | **2 Hours** | | |
| Webinars – Quiz - Online Assignments | | | | | | | | | | | | | | |
|  | | | | **Total Lecture Hours** | | | | | | | | **60 Hours** | | |
| **Note: Question paper shall cover 100% theory.** | | | | | | | | | | | | | | |
| **Books for Study** | | | | | | | | | | | | | | |
| 1 | Lookabaugh, B., Tatsat, H., Puri, S. (2020). Machine Learning and Data Science Blueprints for Finance. China: O'Reilly Media. | | | | | | | | | | | | | |
| 2 | Machine Learning using Python, by U Dinesh Kumar Manaranjan Pradhan, Wiley | | | | | | | | | | | | | |
| 3 | Hilpisch, Y. (2014). Python for Finance: Analyze Big Financial Data. United States: O'Reilly Media. | | | | | | | | | | | | | |
| 4 | Hilpisch, Y. (2020). Python for Algorithmic Trading. United States: O'Reilly Media. | | | | | | | | | | | | | |
| 5 | Fletcher, S., Gardner, C. (2010). Financial Modelling in Python. Germany: Wiley. | | | | | | | | | | | | | |
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| **Books for Reference** | | | | | | | | | | | | | | |
| 1 | | Naik, K. (2019). Hands-On Python for Finance: A Practical Guide to Implementing Financial Analysis Strategies Using Python. United Kingdom: Packt Publishing. | | | | | | | | | | | | |
| 2 | | Molin, S. (2019). Hands-On Data Analysis with Pandas: Efficiently Perform Data Collection, Wrangling, Analysis, and Visualization Using Python. United Kingdom: Packt Publishing. | | | | | | | | | | | | |
| 3. | | Lewinson, E. (2020). Python for Finance Cookbook: Over 50 Recipes for Applying Modern Python Libraries to Financial Data Analysis. United Kingdom: Packt Publishing. | | | | | | | | | | | | |
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| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | | | |
| 1 | | <https://towardsdatascience.com/python-for-finance-the-complete-beginners-guide-764276d74cef> | | | | | | | | | | | | |
| 2 | | <https://pythonforfinance.net/> | | | | | | | | | | | | |
| 3 | | <https://github.com/yhilpisch/py4fi> | | | | | | | | | | | | |
|  | | <https://github.com/wilsonfreitas/awesome-quant> | | | | | | | | | | | | |
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| Course Designed By: / E-Mail ID: | | | | | | | | | | | | | | |
| **Mapping with Programme Outcomes** | | | | | | | | | | | | | | |
| **COs** | | | **PO1** | | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | | **PO9** | **PO10** |
| **CO1** | | | M | | M | S | S | S | S | M | S | | M | S |
| **CO2** | | | M | | L | L | M | M | S | M | S | | M | S |
| **CO3** | | | M | | L | L | L | M | M | M | S | | M | S |
| **CO4** | | | M | | S | S | S | S | S | S | S | | M | M |
| **CO5** | | | M | | M | S | S | S | S | M | S | | M | M |

\*S - Strong; M - Medium; L - Low

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| **Course code** | | | | | **13E** | | | **BIG DATA ANALYTICS** | | | | | | | **L** | | | | | | **T** | | | **P** | **C** |
| **Core - 5** | | | | | | | | **4** | | | | | | **-** | | | **-** | **4** |
| **Pre-requisite** | | | | | | | | Basic Knowledge in Computer Application | | | | | | | **Syllabus Version** | | | | | **2025 - 26** | | | | | |
| **Course Objectives:** | | | | | | | | | | | | | | | | | | | | | | | | | |
| The main objectives of this course are to:   * To equip students with the fundamentals of Big Data and Big Data analytics with specific focus on Big Data ecosystem comprising of Hadoop Distributed File System (HDFS), Hive and Spark. | | | | | | | | | | | | | | | | | | | | | | | | | |
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| **Expected Course Outcomes:** | | | | | | | | | | | | | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | | | Understand theoretical concepts behind Big Data and Big Data analytics | | | | | | | | | | | | | | | | | | | K2 | | | |
| 2 | | | Decide on Big Data models relevant to business needs | | | | | | | | | | | | | | | | | | | K4 | | | |
| 3 | | | Understand and Appreciate algorithms behind predictive models used in Big Data Analytics | | | | | | | | | | | | | | | | | | | K2 | | | |
| 4 | | | Interpret the results of Big Data analytics and present through well-structured reports | | | | | | | | | | | | | | | | | | | K4 | | | |
| 5 | | | Understand the NOSQL and relevant application. | | | | | | | | | | | | | | | | | | | K2 | | | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** - Create | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Unit I** | | | | | | **INTRODUCTION TO BIG DATA** | | | | | | | | | | | | | **10 Hours** | | | | | | |
| Introduction to Big Data, different types of data, introduction to cloud computing, cloud computing concepts, cloud computing applications, cloud systems and infrastructure, Big Data applications in cloud, cloud networking. The components of a Big Data architecture. Extract-transform-load (ETL) layer. File system – HDFS. NoSQL DB. Hive. Hadoop. Kerberos. Pig. Cassandra. Other competing products. | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Unit II** | | | | | | **WORKING WITH HDFS AND HIVE** | | | | | | | | | | | | **12 Hours** | | | | | | | |
| HDFS overview, installation, API. Hive architecture and installation. Comparison with traditional databases. HiveQL – querying data, sorting and aggregating | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Unit III** | | | | | | **WORKING WITH MAP REDUCE AND HBASE** | | | | | | | | | | **12 Hours** | | | | | | | | | |
| Introduction to Map Reduce. Map Reduce scripts, joins and sub queries. HBase concepts, schema design, indexing. Pig. Zookeeper. | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Unit IV** | | | | | | **DATA ANALYSIS WITH SPARK** | | | | | | | | | | **10 Hours** | | | | | | | | | |
| Introduction to Spark. Downloading, installing and getting started with Spark. Programming with Resilient distributed datasets. Machine learning with MLib. | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Unit V** | | | | | | **WORKING WITH NOSQL** | | | | | | | | | **14 Hours** | | | | | | | | | | |
| Introduction to NoSQL. Types of NoSQL databases. Advantages and uses. SQL vs NoSQL. Using NoSQL to develop reports. | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Unit:6** | | | | | | **Contemporary Issues** | | | | | | | | | **2 Hours** | | | | | | | | | | |
| Webinars – Quiz - Online Assignments – Case Study | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | **Total Lecture Hours** | | | | | | | | | **60 Hours** | | | | | | | | | | |
| **Note: Question paper shall cover 100% theory.** | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Books for Study** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Sakti Mishra (2022) " Simplify Big Data Analytics with Amazon EMR", Packt Publishing | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | G. Sudha Sadasivam and R. Thirumahal (2020) “Big Data Analytics”, Oxford University Press | | | | | | | | | | | | | | | | | | | | | | | | |
| **Books for Reference** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | | Raj Kamal and Preeti Saxena (2019)" Big Data Analytics: Introduction to Hadoop, Spark, and Machine-Learning" 1st Edition, McGraw Hill Education | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Course Designed By: Dr. M. Jegadeeshwaran / E-Mail ID: drmjegadeesh@gmail.com | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Mapping with Programme Outcomes** | | | | | | | | | | | | | | | | | | | | | | | | | |
| **COs** | | | | **PO1** | | | **PO2** | | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | | | **PO9** | | | | | | **PO10** | | |
| **CO1** | | | | M | | | M | | M | M | M | M | M | M | | | M | | | | | | M | | |
| **CO2** | | | | M | | | M | | M | S | S | S | S | S | | | M | | | | | | S | | |
| **CO3** | | | | M | | | S | | M | S | S | S | S | S | | | M | | | | | | M | | |
| **CO4** | | | | M | | | S | | S | S | S | S | S | S | | | S | | | | | | S | | |
| **CO5** | | | | M | | | S | | S | S | S | S | S | S | | | S | | | | | | S | | |

\*S - Strong; M - Medium; L - Low

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| **Course code** | | **1EA** | **ORACLE AND RDBMS** | | | **L** | | | **T** | **P** | **C** |
| **Elective** | | | **4** | | | **-** | **-** | **4** |
| **Pre-requisite** | | | Fundamentals of Programming Languages | | | **Syllabus Version** | | | **2025 - 2026** | | |
| **Course Objectives:** | | | | | | | | | | | |
| The main objectives of this course are to:   1. It aims to facilitate the student to understand the various functionalities of oracle and RDBMS, software and perform many operations related to creating, manipulating, maintaining data base for real-world applications and to understand various designing concepts, storage methods, querying and managing the database. | | | | | | | | | | | |
| **Expected Course Outcomes:** | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | |
| 1 | Understand the database concepts and design. | | | | | | | | | K2 | |
| 2 | Applying basic components in oracle 8 for developing a programme. | | | | | | | | | K3 | |
| 3 | Analyse the sub queries and nested queries for developing a programme | | | | | | | | | K4 | |
| 4 | Know the importance of control structures in PL/SQL for developing a database. | | | | | | | | | K5 | |
| 5 | Create the cursors, exceptions, procedures, functions and packages | | | | | | | | | K6 | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** - Create | | | | | | | | | | | |
|  | | | | | | | | | | | |
| **Unit:1** | | **Database Concepts** | | | | | | **10 Hours** | | | |
| Database concepts: A relational Approach – Database Management Systems (DBMS)– Relational Database Model – Integrity rules – Theoretical Relational Languages - Database Design: Data Modeling and Normalization. | | | | | | | | | | | |
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| **Unit:2** | | **Oracle** | | | | | **11 Hours** | | | | |
| Oracle: An overview - Personal Databases – Client / Server Databases – Structured Query Language (SQL) – Oracle Tables: Data types – Constraints – Types of Constraints - Creating an Oracle Table – Displaying Table Information – Altering an Existing Table – Dropping a Table – Renaming a Table – Truncating a Table – Spooling .Working with tables: Data Management and retrieval – Functions and. Grouping. | | | | | | | | | | | |
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| **Unit:3** | | **Multiple Tables and Subquery** | | | **11 Hours** | | | | | | |
| Multiple Tables: Joins and Set Operations: Join – Types of Joins – SET Operators. Sub Queries: Nested Queries – Sub Query - Advanced Features: Objects, Transactions and Data Control – Views – Sequences – Synonyms – Index – Transactions - Controlling Access – Object privileges. | | | | | | | | | | | |
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| **Unit:4** | | **PL / SQL -A Prorgrammng Language** | | | **13 Hours** | | | | | | |
| PL / SQL : A Programming Language: History of PL / SQL – Fundamentals of PL/SQL – Data types – Variable declaration - Control Structures and Embedded SQL: Control Structures – Nested Blocks – Data Manipulation in PL/SQL - Transaction Control Statements. | | | | | | | | | | | |
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| **Unit:5** | | **PL / SQL Cursors and Exceptions** | | **13 Hours** | | | | | | | |
| PL / SQL Cursors and Exceptions: Cursors – Implicit Cursors – Explicit Cursors - Explicit Cursor Attributes – Implicit Cursor Attributes – Cursor for Loops – Exceptions – Types of Exceptions – PL/SQL Named Blocks : Procedure, Function, Packages and Triggers. | | | | | | | | | | | |
| **Unit:6** | | **Contemporary Issues** | | **2 Hours** | | | | | | | |
| Expert lectures, online seminars – webinars | | | | | | | | | | | |
| **Total Lecture Hours** | | | | **60 Hours** | | | | | | | |
| **Books for Study** | | | | | | | | | | | |
| 1 | Nilesh Shah, “Database Systems Using Oracle”, Second Edition, PHI Learning Private Limited, New Delhi, 2004 | | | | | | | | | | |
| 2 | Abraham Silberschatz Henry F.KorthS.Sudarshan, “Database System Concepts”, Tata McGraw Hill Publishing Company Limited, Noida, UP, 2020, 7th Edition | | | | | | | | | | |
| **Books for Reference** | | | | | | | | | | | |
| 1 | Alexis Leon, Mathews Leon, “Essentials of Database Management Systems”, Vijay Nicole Imprints Pvt Ltd, Chennai, 2005 | | | | | | | | | | |
| 2 | R. Elmasri, S.B. Navathe, “Fundamentals of Databse Systems”, 7th Edition, Pearson Education, 2017 | | | | | | | | | | |
| 3 | Rini Chakrabarti, Shilbhadra Dasgupta, “Advanced database Management System”, Dream Tech Press, 2014 | | | | | | | | | | |
| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | |
| 1 | https://swayam.gov.in/nd1\_noc20\_cs60/preview | | | | | | | | | | |
| 2 | https://swayam.gov.in/nd2\_nou20\_lb06/preview | | | | | | | | | | |
| 3 | https://swayam.gov.in/nd2\_aic20\_sp36/preview | | | | | | | | | | |
| Course Designed By: Dr.M.Dhanabhakyam / E-Mail ID: dhana\_giri@rediffmail.com | | | | | | | | | | | |

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| **Mapping with Programme Outcomes** | | | | | | | | | | |
| **COs** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | S | S | S | S | S | S | S | M | M | M |
| **CO2** | S | S | S | S | S | S | S | M | M | M |
| **CO3** | S | S | S | S | S | S | S | M | M | M |
| **CO4** | S | S | S | S | S | S | S | M | M | M |
| CO5 | S | S | S | S | S | S | S | M | M | M |

\*S-Strong; M-Medium; L-Low

| Course code | | | | 1EB | | INSURANCE AND RISK MANAGEMENT | | | L | | | T | | P | C |
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| Elective | | | | | | 4 | | | - | | - | 4 |
| Pre-requisite | | | | | | Broad understanding of Risk and Insurance as a means to manage it. | | | Syllabus  Version | | | | | 2025 - 26 | |
| Course Objectives: | | | | | | | | | | | | | | | |
| The main objectives of this course are to:  Familiarize the basic concept, principles of insurance and role of IT in insurance industry.  Understand reforms of Indian insurance industry, private players to Indian insurance market, IRDA Regulations and licensing of insurance agents.  Develop an understanding of insurance industry and its types.  Lay a foundation of risk, risk management, and steps in risk management process.  Acquire knowledge in methods of risk management, control risk and tools for controlling Risk. | | | | | | | | | | | | | | | |
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| Expected Course Outcomes: | | | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | | | |
| 1 | | | Explain the principles of insurance and differentiate re-insurance and double insurance | | | | | | | | | | K1&K2 | | |
| 2 | | | Analyze the position of Indian insurance industry, reforms and licensing of insurance agents. | | | | | | | | | | K4 | | |
| 3 | | | Classify the types of insurance policies and have knowledge on procedure for claiming Life. | | | | | | | | | | K2 &K3 | | |
| 4 | | | Analyse the risk, apply risk management techniques to control risk | | | | | | | | | | K4 | | |
| 5 | | | Able to identify, measure and apply relevant method for risk management. | | | | | | | | | | K3 | | |
| K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze; K5 - Evaluate; K6 – Create | | | | | | | | | | | | | | | |
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| Unit:1 | | | | | Introduction to Insurance | | | | | | 10 Hours | | | | |
| Introduction to Insurance: Role of Insurance – Characteristics of Insurance – Fundamental Legal Principles of Insurance –Related concept. Reinsurance: Meaning – Concept – Type of Reinsurance-Function of reinsurance – Double Insurance– Information Technology in Insurance. | | | | | | | | | | | | | | | |
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| Unit:2 | | | | | Indian Insurance Industry | | | | | 12 Hours | | | | | |
| Indian Insurance Industry – Reforms – Private Players to Indian Insurance Market – IRDA Regulations: For Licensing of Insurance Agents – For Protection of Policy Holders Interest. | | | | | | | | | | | | | | | |
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| Unit:3 | | | | | Insurance Contract | | | 14 Hours | | | | | | | |
| Insurance Contract: Life Insurance Contract – Features, Policy Conditions and Products; Non – Life Insurance: Fire and Marine - Features, Policy Conditions and Products. Group insurance: Meaning-features-Advantage- Limitation- Eligible groups. Factors Led in the Growth of group Insurance. Health and Social Insurance – Standard Life Insurance Schemes. Documentation for claim- types of claim-Procedure for Claiming Life and Health Insurance | | | | | | | | | | | | | | | |
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| Unit:4 | | | | | Risk and Uncertainty | | | 12 Hours | | | | | | | |
| Introduction to Risk and Uncertainty: Risk vs Uncertainty - Concept of Risk – Types of Risk – Principles of Risk Management – Risk Management Process – Objectives of Risk Management – Steps in Risk Management Process. | | | | | | | | | | | | | | | |
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| Unit:5 | | | | | Risk Management and Control | | 10 Hours | | | | | | | | |
| Risk Management and Control – Methods of Risk management – Risk Management by Individuals and Corporations – Tools for Controlling Risk. | | | | | | | | | | | | | | | |
| Unit:6 | | | | | Contemporary Issues | | 2 Hours | | | | | | | | |
| Online seminars , online assignments– webinars | | | | | | | | | | | | | | | |
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|  | | | | | Total Lecture Hours | | 60 Hours | | | | | | | | |
| Books for Study | | | | | | | | | | | | | | | |
| 1. | Dr. P.K.Gupta, “Insurance and Risk Management”, Himalaya Publishing House, Mumbai, Edition 2021. | | | | | | | | | | | | | | |
| 2. | Alka Mittal and S.L Gupta, “Principles of Insurance and Risk Management”, S.Chand & Sons Publisher, New Delhi, 1 January 2013. | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | |
| Books for Reference | | | | | | | | | | | | | | | |
| 1. | [P. Periasamy](https://www.vijaynicole.co.in/search?author=p-periasamy), [Dr. S.A. Senthil Kumar](https://www.vijaynicole.co.in/search?author=dr-sa-senthil-kumar),” Insurance and Risk Management”  Vijay Nicole Imprints Private Limited, November, 2024 | | | | | | | | | | | | | | |
| 2. | Dr.A.Murthy, “Insurance and Risk Management”, Margham Publications, First Edition 2024. | | | | | | | | | | | | | | |
| 3. | DR.P.Asha," Insurance and Risk Management", Notion Press, 2022. | | | | | | | | | | | | | | |
| 5. | George E. Rejda & Michael J. McNamara," Principles of Risk Management and Insurance", Published by Pearson, Washington State University,2020. | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | |
| Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.] | | | | | | | | | | | | | | | |
| 1 | | <https://resource.cdn.icai.org/13526Module-%20II.pdf> | | | | | | | | | | | | | |
| 2 | | <https://resource.cdn.icai.org/13525Module-1.pdf> | | | | | | | | | | | | | |
| 3 | | <https://resource.cdn.icai.org/13527Module-III.pdf> | | | | | | | | | | | | | |
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| Course Designed By:. | | | | | | | | | | | | | | | |

| Mapping with Programme Outcomes | | | | | | | | | | |
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| COs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
| CO1 | S | S | M | S | M | S | S | S | S | S |
| CO2 | S | S | M | S | S | S | S | M | S | S |
| CO3 | S | S | M | S | S | M | S | S | S | S |
| CO4 | S | S | M | S | S | S | S | S | S | S |
| CO5 | S | S | M | S | S | S | M | S | S | S |

\*S-Strong; M-Medium; L-Low

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| Course code | | | | | 23A | | | | APPLIED COST ACCOUNTING | | | | | | L | | | | | | | T | | P | | C |
| Core - 6 | | | | | | | | | 4 | | | | | | | - | | - | | 4 |
| Pre-requisite | | | | | | | | | Basic Knowledge in the Cost Accounting | | | | | | Syllabus Version | | | | | | | | | | 2025 -26 | |
| Course Objectives: | | | | | | | | | | | | | | | | | | | | | | | | | | |
| The main objectives of this course are to:  Acquaint students with the principles of cost accounting, difference between financial accounting and cost accounting.  recollect remuneration and incentives and introduce preparation of apportionment of overhead costs, methods of re-apportionment.  Learn process costing, differentiate job costing and process costing; distinguish joint products and by-products costing.  Make the learners to calculate breakeven point and understand applications of marginal costing for business decision making.  Enable the students to understand and apply cost accounting tools. | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Expected Course Outcomes: | | | | | | | | | | | | | | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Recall the Cost Accounting Techniques, cost concepts and preparation of cost sheet. | | | | | | | | | | | | | | | | | | | | | | K1 & K2 | | | |
| 2 | Explain labour remuneration and incentives, classification of overheads, apportionment of overhead costs, methods of re-apportionment in detailed way. | | | | | | | | | | | | | | | | | | | | | | K2 | | | |
| 3 | Gain knowledge of process costing, able to differentiate job costing and process costing, distinguish joint products and by-products costing. | | | | | | | | | | | | | | | | | | | | | | K4 & K3 | | | |
| 4 | Able to calculate breakeven point and applications of marginal costing for business decision making. | | | | | | | | | | | | | | | | | | | | | | K4 & K5 | | | |
| 5 | Able to reconcile cost and financial accounts. | | | | | | | | | | | | | | | | | | | | | | K5 | | | |
| K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze; K5 - Evaluate; K6 – Create | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit:1 | | | | | | Cost Accounting- Introduction | | | | | | | | | | | | | | 10 Hours | | | | | | |
| Cost Accounting: Meaning and Definition – Objectives of cost accounting – Financial Accounting Vs Cost Accounting –Methods of Costing – Elements of Costing – Cost Concepts– Cost Accounting Regulations – Preparation of Cost Sheet Material control: Meaning - need of material control - Essentials of material control - Inventory control -Techniques - Level setting - EOQ- ABC analysis- Inventory Turnover Ratio | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit:2 | | | | | | Labour Cost and Overhead | | | | | | | | | | | | | 14 Hours | | | | | | | |
| Labour Cost: Remuneration and Incentives - Essential features of a good wage system- Systems of wage payment - time wage system- Piece Rate system– Premium and bonus plans.  Overhead: Meaning and Classification of Overheads – Steps in Overhead Accounting Allocation and Apportionment of overhead costs Centres - Bases of Apportionment- Principles of Apportionment of overhead costs – Methods of Re-apportionment. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit:3 | | | | | | Process Costing | | | | | | | | | | | | 12 Hours | | | | | | | | |
| Process Costing : Features - Comparison between Job Costing and Process Costing – Process Losses – Inter Process Profit - Equivalent Production – Joint Products and By-Products Costing | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit:4 | | | | | | Marginal Costing | | | | | | | | | | | | 12 Hours | | | | | | | | |
| Marginal Costing : Salient Features – Advantages – Limitations –– Cost Volume Profit Analysis (Break-Even Analysis) – Applications of Marginal Costing for Business Decision making | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit:5 | | | | | | Reconciliation of Cost and Financial Accounts | | | | | | | | | | | 10 Hours | | | | | | | | | |
| Reconciliation of Cost and Financial Accounts: Need for Reconciliation – Reasons for Disagreement in Profit – Methods of Reconciliation – Circumstances in which reconciliation can be avoided. Activity Based Costing (ABC) : Feature -Key term used in ABC- concept –Step involved in the process ABC- Benefits of implementing ABC analysis- Cost audit –Cost benefit analysis | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit:6 | | | | | | Contemporary Issues | | | | | | | | | | | 2 Hours | | | | | | | | | |
| Expert lectures, online assignments, online test – webinars | | | | | | | | | | | | | | | | | | | | | | | | | | |
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|  | | | | | | Total Lecture Hours | | | | | | | | | | | 60 Hours | | | | | | | | | |
| Note: Question Paper shall cover 40% Theory and 60% Problems | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Books for Study | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | | S.PJain and K.L.Narang, “ Cost Accounting”, Kalyani Publication, New Delhi, 2024. | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | | Prof. M.L. Agrawal, Dr. K.L. Gupta "Advanced Cost Accounting Paperback" January 2018. | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | | T.S.Reddy&Y.HariPrasadReddy,"CostAccounting",Margham Publication ",Chennai,2023 | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Books for Reference | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | | Dr. S.N. Maheshwari Dr. S.N. Mittal, "Cost Accounting - Theory & Problems Paperback – 1, 2015 | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | | Horngren, “Cost Accounting with Managerial Emphasis”, Prentice Hall India, New Delhi, November 2017. | | | | | | | | | | | | | | | | | | | | | | | | |
| Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.] | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | | | <https://www.accountingtools.com/articles/2017/5/7/applied-cost> | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | | | <http://www.businessdictionary.com/definition/applied-cost.html> | | | | | | | | | | | | | | | | | | | | | | | |
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| Course Designed By: Dr. N.Vijayalakshmi / E-Mail ID: [nvijiphd@gmail.com](mailto:nvijiphd@gmail.com) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mapping with Programme Outcomes | | | | | | | | | | | | | | | | | | | | | | | | | | |
| COs | | | | PO1 | | | PO2 | PO3 | | PO4 | PO5 | PO6 | PO7 | PO8 | | PO9 | | | | | PO10 | | | | | |
| CO1 | | | | S | | | S | M | | S | S | S | S | M | | S | | | | | S | | | | | |
| CO2 | | | | S | | | S | M | | S | S | S | S | S | | S | | | | | S | | | | | |
| CO3 | | | | S | | | S | S | | S | S | M | S | S | | S | | | | | S | | | | | |
| CO4 | | | | S | | | S | M | | S | S | S | S | S | | M | | | | | S | | | | | |
| CO5 | | | | S | | | S | M | | S | S | S | M | S | | S | | | | | S | | | | | |

\*S - Strong; M - Medium; L - Low

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| **Course code** | | **23B** | | **STOCK MARKET OPERATIONS** | **L** | | **T** | | **P** | **C** |
| Core -7 | | | | **4** | | **-** | | **-** | **4** |
| **Pre-requisite** | | | | Basic Knowledge in Financial market | Syllabus Version | **2025 - 26** | | | | |
| **Course Objectives:** | | | | | | | | | | |
| The main objectives of this course are to:   1. Make the Students acquainted with how equity shares are issued and traded in the Stock Market. 2. Students are able to learn about the Trading, Clearing and Settlement Process. 3. Gain knowledge on Mutual Fund Investment. 4. Helps the students to understand the international stock indices and Invest in the International Market. 5. Learn the new dimensions in the Financial Market. | | | | | | | | | | |
| **Expected Course Outcomes:** | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | |
| 1 | Remember the Functions of Primary and Secondary markets | | | | | | | K1 | | |
| 2 | Understand the Trading Mechanism and how the funds and shares are settled in the market. Comprehend the knowledge on International Indices and try to make the investment in the International Market. | | | | | | | K2 | | |
| 3 | Evaluate and Invest in Mutual Fund. | | | | | | | K5 | | |
| 4 | Comprehend the knowledge on International Indices and try to make the investment in the International Market. | | | | | | | K2 | | |
| 5 | Remember the New Paradigm in the Market. | | | | | | | K1 | | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** - Create | | | | | | | | | | |
| **Unit I** | | | **Overview on Stock Market** | | | | | | **12 Hours** | |
| Primary Market: Meaning - Methods of New Issue - Primary Market Participants - Pricing of New Issues - IPO Application Process - ASBA - Underwriting - Allotment of Shares - Recent Trends in Primary Market - SEBI Guidelines on Primary Market. Mainboard listing- Listing of MSME -Delisting  Secondary Market: Role of Secondary Market - Difference between Primary and Secondary Market - Market Segment and Products - Secondary Market Participant: Stock Exchange - Stock Brokers. Depositories. - Key Indicators of Securities Market: Index - Market Capitalization - Market Capitalization Ratio- Turnover - Turnover Ratio - Reforms in Indian Securities Markets. | | | | | | | | | | |
| **Unit II** | | | Trading and Settlement | | | | | | **12 Hours** | |
| Trading, Clearing, Settlement and Risk Management: Trading mechanism – screen based system – Advantages of the Screen-Based Trading System - Market Types - Normal Market - Auction Market - Odd Lot Market - Retail Debt Market - Market Phases - Opening - Pre-open:- Normal Market Open Phase - Market Close - Post-Close Market - Surveillance and Control (Surcon) - Insider trading - Take-over’s – Internet based trading - Procedure for opening Trading and DEMAT accounts - Clearing and Settlement - Introduction - Key Terminology - Transaction Cycle - Settlement Agencies - Clearing and Settlement Process - Settlement Cycle - Securities and Fund Settlement - Shortage Handling - Risk in Settlement - Risk Management. Corporate Action. | | | | | | | | | | |
| **Unit III** | | | **Mutual Fund** | | | | | | **10 Hours** | |
| Mutual Funds: Introduction - Structure in India - New Fund Offer - Mutual Fund Schemes: Equity - Debt and Liquid Funds - Exchange Traded Fund (ETFs): Equity ETF -Gold ETF - REIT - Infrastructure Investment Trust (InvITs) – International ETF | | | | | | | | | | |

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| **Unit IV** | | | | **International Market** | | | | | | | | | | **13 Hours** |
| Depository Receipts - Feeder Fund - International Stock Indices : S&P 500 Index (SPX), Dow Jones Industrial Average (INDU), NASDAQ Composite Index (CCMP), EURO STOXX 50 Price Eur (SX5E), FTSE 100 (UKX), Deutsche Borse AG German Stock Index DAX (DAX), Nikkei 225 (NKY, Tokyo Stock Exchange Tokyo Price Index TOPIX (TPX), Hong Kong Hang Seng Index (HSI). | | | | | | | | | | | | | | |
| **Unit V** | | | | **New Paradigms** | | | | | | | | | | **11 Hours** |
| Structured Products - Alternate Investment Funds - Categories of AIF - Benefits of AIF - Algorithmic Trading - Introduction - Evolution of Algorithmic Trading - Benefits of Algorithmic Trading - Qualified Foreign Investors (QFIs) - KYC Registration Agency (KRA). | | | | | | | | | | | | | | |
| **Unit:6** | | | | **Contemporary Issues** | | | | | | | | | | **2 Hours** |
| Webinars – Quiz - Online Assignments | | | | | | | | | | | | | | |
|  | | | | **Total Lecture Hours** | | | | | | | | | | **60 Hours** |
| **Note: Question paper shall cover 100% theory.** | | | | | | | | | | | | | | |
| **Books for Study** | | | | | | | | | | | | | | |
| 1 | VanitaTripathi & NeetiPanwar, "Investing in Stock Markets", Taxmann Publication, New Delhi, 2022. | | | | | | | | | | | | | |
| 2 | **P.S. Balaram, & T. Sri Lakshmi,**" Stock Market Operations", Himalaya Publishing House, Mumbai, 2017. | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| **Books for Reference** | | | | | | | | | | | | | | |
|  | |  | | | | | | | | | | | | |
| 1. | | "NISM-Series-V-B: Mutual Fund Foundation", National Institute of Securities Markets, Mumbai,2021. | | | | | | | | | | | | |
| 2. | | "NISM-Series-VII: Securities Operations and Risk Management", National Institute of Securities Markets, Mumbai,2021. | | | | | | | | | | | | |
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| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | | | |
| 1 | | https://nptel.ac.in/courses/110105121 | | | | | | | | | | | | |
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| Course Designed By: S.Arun Kumar / E-Mail ID: s\_arunkumar@yahoo.com | | | | | | | | | | | | | | |
| **Mapping with Programme Outcomes** | | | | | | | | | | | | | | |
| **COs** | | | **PO1** | | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** | |
| **CO1** | | | S | | M | M | S | S | S | S | S | M | S | |
| **CO2** | | | S | | M | S | S | M | S | S | S | S | M | |
| **CO3** | | | S | | M | S | S | S | S | S | S | S | S | |
| **CO4** | | | M | | M | S | S | S | S | S | S | S | S | |
| **CO5** | | | M | | M | S | S | S | S | M | S | S | S | |

\*S - Strong; M - Medium; L – Low

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| Course Code | | | | 23C | | **GST AND OTHER INDIRECT TAXATION** | L | T | | | P | C | |
| Core -8 | | | | | | 4 | - | | | - | 4 | |
| Pre-requisite | | | | | | Basic Knowledge in GST | Syllabus Version | | | | 2025 - 26 | | |
| Course Objectives: | | | | | | | | | | | | | |
| The main objectives of this course are to:  1.Acquire knowledge on Indian indirect tax system  2. Gain knowledge on place of supply and GST Features.  3. Understand the procedure for GST Registration.  4.learn about the documents and filing of returns  5.Understand the types of customs duty and its provisions | | | | | | | | | | | | | |
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| Expected Course Outcomes: | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | |
| 1 | | | Gain knowledge on Indirect Tax system in India. | | | | | | | K1 & K2 | | | |
| 2 | | | Acquire knowledge on GST in India. | | | | | | | K2 & K5 | | | |
| 3 | | | Explain the GST Registration process | | | | | | | K2 & K6 | | | |
| 4 | | | Illustrate the filing process | | | | | | | K4 & K6 | | | |
| 5 | | | Describe the types of customs duty and licensing procedure | | | | | | | K1 & K2 | | | |
| K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze; K5 - Evaluate; K6 - Create | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | |
| Unit:1 | | | | | Introduction to indirect tax | | 8 Hours | | | | | | |
| TAX: Evolution- Objectives of Taxation- Types of taxes- Direct Tax: Features- Indirect taxes:Features Merits and demerits of direct and indirect taxes- Difference between direct and indirect tax- Indirect Tax Structure-Background and Recent Developments in Indirect Taxes in India | | | | | | | | | | | | | |
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| Unit:2 | | | | | GST:Features and place of supply | | 12 Hours | | | | | | |
| Goods and Services Tax: Genesis - Introduction – Frame work-need- Features – Benefits of GST Act.- Constitutional provision of GST.GST Council: Functions.GST Network: functions. Goods and Service Tax: Important Definitions : Goods- Services- Principal- Consideration- Supplier- Recipient.  Supply under GST: Forms of supply-Consideration-in course of furtherance of business.  Place of Supply: Place of supply of goods other than supply of goods imported into or exported from India .Place of supply of service where location of supplier of service and the location of recipient of service is in India. Goods and services exempted from GST | | | | | | | | | | | | | |
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| Unit:3 | | | | | Time of supply and Registration | | 12 Hours | | | | | | |
| Time of supply: Time of supply of goods under forward charge, reverse charge, Vouchers exchangeable of goods and residual cases. Time of supply of services under forward charge, reverse charge, vouchers exchangeable for services and residual cases.  Input tax credit: meaning- eligibility and conditions to claim input tax credit  Registration: Persons liable for registration-Compulsory registration- persons not liable for registration-procedure for registration-Amendment of registration-cancellation of registration- Revocation of cancellation of registration | | | | | | | | | | | | | |
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| Unit:4 | | | | | Documents and filing of returns | | 14 Hours | | | | | | |
| Tax invoice- debit note- credit note-e-way bill- payment of tax: Electronic cash ledger-Electronic credit Ledger- Electronic Liability Register.- Tax deduction at source- collection of tax at source.  Return procedure-Filing of returns by registered persons- late fee for delayed filing – Showcause notice and reply-functions of GST Practitioner | | | | | | | | | | | | | |
| Unit:5 | | | | | Customs Duty | | | | 12 Hours | | | | |
| Customs Duty– Introduction- Types of Customs Duty – Importation and Exportation of goods – licensing - Demand and Appeal-Refund – duty drawback. | | | | | | | | | | | | | |
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| Unit:6 | | | | | Contemporary Issues | | | | 2 Hours | | | |
| GST - Group Discussion & E- filing of Returns | | | | | | | | | | | | |
| Note: Question Paper shall cover 100% Theory | | | | | | | | | | | | |
|  | | | | | Total Lecture Hours | | | | 60 Hours | | | |
| Books for Study | | | | | | | | | | | | |
| 1. | P C GARG & RITESH GARG ,PCG Good & Services Tax (GST) Manual 6th Edition 2025 | | | | | | | | | | | |
| 2. | Taxmann’s GST and GST Annual Returns and Reconciliation, V.S. Datey, 2024. | | | | | | | | | | | |
|  | | | | | | | | | | | | |
| Books for Reference | | | | | | | | | | | | |
| 1. | CA. Ashok Batra, GST Ready Reckoner, Bharat Law House, 2025 | | | | | | | | | | | |
| 2 | [A Jatin Christopher](https://www.amazon.in/A-Jatin-Christopher/e/B0D5HDD73M/ref=dp_byline_cont_book_1) , Taxmann's How to Deal with GST Show Cause Notices with Pleadings [Finance Act 2025] , 2025 | | | | | | | | | | | |
| 3 | Taxmann’s Student guide to GST & Customs Law, 2024. | | | | | | | | | | | |
| Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.] | | | | | | | | | | | | |
| 1 | | www.gst.gov.in | | | | | | | | | | |
| 2 | | Cbic.gst.gov.in | | | | | | | | | | |
| 3 | | www.gstcouncil.gov.in | | | | | | | | | | |
| 4. | | https://www.icai.org/post/19155 | | | | | | | | | | |
| Course Designed By: Dr.M.Nirmala / E-Mail ID: nirmala@buc.edu.in | | | | | | | | | | | | |

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| Mapping with Programme Outcomes | | | | | | | | | | |
| COs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
| CO1 | S | S | S | S | M | S | S | S | S | M |
| CO2 | S | S | S | S | S | S | S | S | S | M |
| CO3 | S | S | S | S | S | S | S | S | S | S |
| CO4 | S | S | S | M | S | S | S | S | S | S |
| CO5 | S | S | S | S | S | S | S | S | S | S |

\*S-Strong; M-Medium; L-Low

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **Course code** | | | | | **23D** | | | **AI / ML FOR FINANCIAL SECTOR** | | | | | | | **L** | | | | | | **T** | | | **P** | **C** |
| **Core -9** | | | | | | | | **4** | | | | | | **-** | | | **-** | **4** |
| **Pre-requisite** | | | | | | | | Basic knowledge on computer application and financial market | | | | | | | Syllabus Version | | | | | **2025 - 26** | | | | | |
| **Course Objectives:** | | | | | | | | | | | | | | | | | | | | | | | | | |
| The main objectives of this course are to:   * To identify, formulate, and implement a machine learning project. * To explore various applications of machine learning in all business aspects. * To introduce the basic concepts, theories and state-of-the-art techniques of artificial intelligence. * To introduce basic concepts and applications of machine learning. * To help students to learn the application of machine learning /A.I algorithms in the different fields of science, medicine, finance etc. | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Expected Course Outcomes:** | | | | | | | | | | | | | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | | | Understand the basic definition and need for machine learning | | | | | | | | | | | | | | | | | | | K2 | | | |
| 2 | | | Understand the core aspects behind any machine learning project | | | | | | | | | | | | | | | | | | | K2 | | | |
| 3 | | | Ability to implement a machine learning project | | | | | | | | | | | | | | | | | | | K4 | | | |
| 4 | | | Ability to identify potential applications of machine learning in real time | | | | | | | | | | | | | | | | | | | K5 | | | |
| 5 | | | Apply the machine learning concepts in real life problems | | | | | | | | | | | | | | | | | | | K3 | | | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** - Create | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Unit I** | | | | | | **Basics concepts of Machine Learning** | | | | | | | | | | | | | **12 Hours** | | | | | | |
| ML Definition- **Benefits of machine learning**-Various kind of problems tackled using ML- Some standard learning tasks- LearningStages-LearningScenarios-Generalization-Data,ModelsandLearning-ParameterEstimation-Probabilistic Modelling and Inference- Directed Graphical Models- Setting up your working Environment-Supervised vs Unsupervised Learning-Cross Validation-Evaluation metrics. | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Unit II** | | | | | | **Advanced concepts of Machine Learning** | | | | | | | | | | | | **12 Hours** | | | | | | | |
| Fundamentals of statistical learning theory- Convergence and learnability- Kullback-Leibler Information-Modelselectionandthebiasvariancetrade-off-Cross-validation-Regularization-GenerativevsDiscriminativemodels-NeuralNetworks-ThePerceptron-Feed-ForwardNeuralNetworks-Back-propagationandstochasticgradientdescent-Regularizationanddrop-out- **ML Application in Financial**  **Markets.** | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Unit III** | | | | | | **Supervised Learning** | | | | | | | | | | **10 Hours** | | | | | | | | | |
| Linear Regression- Parametric Problems- Decision trees- Random forests- Classifications- K Nearest Neighbors- Support Vector- Naïve Bayes-. | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Unit IV** | | | | | | **Unsupervised Learning** | | | | | | | | | | **12 Hours** | | | | | | | | | |
| Clustering- K-Means clustering- Dimensionality Reduction- Principle Component Analysis- Hierarchical Clustering- DBSCAN- Semi-supervised learning- Reinforcement Learning. | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Unit V** | | | | | | **Advanced Neural Networks** | | | | | | | | | **12 Hours** | | | | | | | | | | |
| Convolutional Neural Networks- Recurrent Neural Networks- Long Short-Term Memory (LSTM)- Autoencoders- Applying Learning to Real problems- Image Classification & Segmentation- Scoring Opinion and Sentiments- Recommending Products and Movies- automation accounting financial sector-RPA (Robotic Process Automation)-Bitcoin Prediction- Predicting from the Limit Order Book. | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Unit:6** | | | | | | **Contemporary Issues** | | | | | | | | | **2 Hours** | | | | | | | | | | |
| Webinars – Quiz - Online Assignments | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | **Total Lecture Hours** | | | | | | | | | **60 Hours** | | | | | | | | | | |
| **Note: Question paper shall cover 100% theory.** | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Books for Study** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Mac Namee, B., D'Arcy, A., Kelleher, J. D. (2015). Fundamentals of Machine Learning for Predictive Data Analytics: Algorithms, Worked Examples, and Case Studies. United Kingdom: MIT Press | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Artificial Intelligence and Intelligent Systems, by N P Padhy, Oxford University Press | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Lopez de Prado, M. (2018). Advances in Financial Machine Learning. Germany: Wiley | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Dixon, M. F., Halperin, I., Bilokon, P. A. (2020). Machine Learning in Finance: From Theory to Practice. Germany: Springer International Publishing | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Mueller, J. P., Massaron, L. (2021). Machine Learning For Dummies. United States: Wiley | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Books for Reference** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. | | **ManikandanPaneerselvam,"An Introduction to Artificial Intelligence and Machine Learning"S Chand and Company Ltd, Edition 2024.** | | | | | | | | | | | | | | | | | | | | | | | |
| 2. | | **Charu C. Aggarwal," Neural Networks and Deep Learning" Springer Cham,2023.** | | | | | | | | | | | | | | | | | | | | | | | |
| 3. | | **Stuart Russell &Peter Norvig"Artifical Intelligence: Modern Approach"PearsonEducation,2022.** | | | | | | | | | | | | | | | | | | | | | | | |
| 4. | | Guido, S., Müller, A. C. (2016). Introduction to Machine Learning with Python: A Guide for Data Scientists. United States: O'Reilly Media | | | | | | | | | | | | | | | | | | | | | | | |
| 5. | | Mueller, J. P., Massaron, L. (2021). Machine Learning For Dummies. United States: Wiley | | | | | | | | | | | | | | | | | | | | | | | |
| 6. | | Cooper, S. (2018). Machine Learning for Beginners: An Introduction for Beginners, Why Machine Learning Matters Today and How Machine Learning Networks, Algorithms, Concepts and Neural Networks Really Work. (n.p.): Steven Cooper | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | | <https://www.kdnuggets.com/2020/03/trends-machine-learning-2020.html> | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | | <https://mobidev.biz/blog/future-ai-machine-learning-trends-to-impact-business> | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | | <https://venturebeat.com/2020/01/02/top-minds-in-machine-learning-predict-where-ai-is-going-in-2020/> | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | **https://onlinecourses.nptel.ac.in/noc24\_cs08/course?** | | | | | | | | | | | | | | | | | | | | | | | |
|  | | **https://onlinecourses.nptel.ac.in/noc24\_cs60/preview** | | | | | | | | | | | | | | | | | | | | | | | |
| Course Designed By: Dr.S. Raja Sharmila, Guest Faculty E-Mail ID: srsharmibalaji@gmail.com | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Mapping with Programme Outcomes** | | | | | | | | | | | | | | | | | | | | | | | | | |
| **COs** | | | | **PO1** | | | **PO2** | | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | | | **PO9** | | | | | | **PO10** | | |
| **CO1** | | | | M | | | M | | M | M | M | M | M | M | | | M | | | | | | M | | |
| **CO2** | | | | L | | | L | | L | M | M | M | M | M | | | M | | | | | | M | | |
| **CO3** | | | | M | | | M | | M | M | M | M | M | M | | | M | | | | | | M | | |
| **CO4** | | | | M | | | S | | M | S | M | M | S | S | | | M | | | | | | M | | |
| **CO5** | | | | M | | | M | | M | M | M | M | M | M | | | M | | | | | | M | | |

\*S - Strong; M - Medium; L - Low

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| Course code | | | | 23E | | STRATEGIC FINANCIAL MANAGEMENT | L | | | | T | | P | | C |
| Core - 10 | | | | | | 4 | | | | - | | - | | 4 |
| Pre-requisite | | | | | | Basic knowledge on Fundamentals of Finance | Syllabus Version | | | | | 2025 - 26 | | | |
| Course Objectives: | | | | | | | | | | | | | | | |
| The main objectives of this course are to:  Familiarize the objectives, role and skills of financial manager required for Industry  Assess the factors affecting investment decisions  Provide an in depth view of financial leverage and theories  understand the dividend Theories  Learn the techniques of working capital Management techniques | | | | | | | | | | | | | | | |
| Expected Course Outcomes: | | | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | | | |
| 1 | | | Relate and classify the objectives and role of financial managers with different industries. | | | | | | | | | | | K1&K2 | |
| 2 | | | Apply, analyse and determine the best investment proposal using capital budgeting technique. | | | | | | | | | | | K3,K4 &K5 | |
| 3 | | | Illustrate the capital structure theories. | | | | | | | | | | | K2 | |
| 4 | | | Choose and Analyse the dividend theories which are applied in Corporates. | | | | | | | | | | | K3&K4 | |
| 5 | | | Adapt working capital management techniques and solve the issues related to working capital. | | | | | | | | | | | K6 | |
| K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze; K5 - Evaluate; K6 - Create | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | |
| Unit:1 | | | | | Introduction to Financial Management | | | | | 10 Hours | | | | | |
| Nature, Scope and objectives of Financial Management –- Functions of Finance Manager – Role of finance manager - Financial Decisions - Relationship between Risk and Return –Time Value of Money. | | | | | | | | | | | | | | | |
| Unit:2 | | | | | Cost of Capital and Capital Budgeting | | | | 10 Hours | | | | | | |
| Cost of Capital – Meaning and Importance – Cost of Debt, Preference, Equity and Retained Earnings – Weighted Average Cost of Capital – Capital Budgeting – Techniques – Payback Period method- NPV Method, IRR and Profitability Index. | | | | | | | | | | | | | | | |
| Unit:3 | | | | | Capital Structure | | | 12 Hours | | | | | | | |
| Financial Leverage - EBITDA- EBIT- EPS Analysis-– Operating Leverage- combined leverage Theories of Capital Structure – Traditional Approach- Net Income Approach – Net Operating Income Approach-MM Approach– Determinants of Capital Structure. | | | | | | | | | | | | | | | |
| Unit:4 | | | | | Dividend Theories | | | 14 Hours | | | | | | | |
| Dividend Theories – Walter's Model – Gordon and MM‟s Models – Dividend Policy – Forms of Dividend – Determinants of Dividend Policy- Lintner’s Model on corporate dividend behaviour. | | | | | | | | | | | | | | | |
| Unit:5 | | | | | Working Capital Management | | 12 Hours | | | | | | | | |
| Management of Working Capital – Concept – Importance – Determinants and Computation of Working Capital – Management of Cash, Inventory and Receivables – Regulations of Bank Credit to industry - Credit Monitoring and Assessment (CMA) formats. | | | | | | | | | | | | | | | |
| Unit:6 | | | | | Contemporary Issues | | 2 Hours | | | | | | | | |
| Expert lectures -webinars-quiz-online assignments- case study | | | | | | | | | | | | | | | |
|  | | | | | Total Lecture hours | | 60 Hours | | | | | | | | |
| Note: Question Paper shall cover 60% Theory and 40% Problems | | | | | | | | | | | | | | | |
| Books for Study | | | | | | | | | | | | | | | |
| 1. | I.M. Pandey, “Financial Management”, Pearson Publication, 12th Edition, 2024. | | | | | | | | | | | | | | |
| 2. | Shashi.K.Gupta, R.K.Sharma, Anij Gupta, Management Accounting, Kalyani Publishers, 2024 | | | | | | | | | | | | | | |
| 3. | S.N.Maheswari, “Financial Management”, S.Chand & Sons Publisher, New Delhi, 2019. | | | | | | | | | | | | | | |
| Books for Reference | | | | | | | | | | | | | | | |
| 1 | [Prasanna Chandra](https://www.amazon.in/Prasanna-Chandra/e/B002NS9NPU/ref=dp_byline_cont_book_1) ,“ Financial Management – Theory and Practice”, McGraw Hill, 11 th Edition, 2022 | | | | | | | | | | | | | | |
| 2. | CA G.Sekar and CA B.Saravana Prasad, Students reference on Strategic Financial Management, Commercial Law Publishers 15th Edition, 2021 | | | | | | | | | | | | | | |
| 3. | Khan & Jain, “Financial Management”, Tata McGraw Hill Publishing Company Limited, UP, 2011 | | | | | | | | | | | | | | |
| Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.] | | | | | | | | | | | | | | | |
| 1 | | <https://www.youtube.com/watch?v=RiAalxSm_Ek> | | | | | | | | | | | | | |
| 2 | | <https://www.youtube.com/watch?v=XxyvsB6sxDk> | | | | | | | | | | | | | |
| Course Designed By: Dr.M.Anbukarasi / / E-Mail ID: anbufeb14@yahoo.co.in | | | | | | | | | | | | | | | |

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| Mapping with Programme Outcomes | | | | | | | | | | |
| COs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
| CO1 | S | S | M | S | S | M | S | M | S | S |
| CO2 | S | S | M | S | S | M | S | M | S | S |
| CO3 | S | S | M | S | S | M | S | M | S | S |
| CO4 | S | S | M | S | S | M | S | M | S | S |
| CO5 | S | S | M | S | S | M | S | M | S | S |

\*S-Strong; M-Medium; L-Low

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| Course code | | 2EA | FINANCIAL DERIVATIVES | L | T | | | | P | C |
| Elective | | | 4 | - | | | | - | 4 |
| Pre-requisite | | | Fundamental knowledge in Stock Market | Syllabus Version | | | | 2025 - 26 | | |
| Course Objectives: | | | | | | | | | | |
| The main objectives of this course are to:  Introduce the concept and types of derivatives, as well as the operations of the derivatives market in India.  Learn about forward contract and future contract, its differences and types of future contract.  Students to get extensive understanding in dealing with derivative instruments in the derivative market by familiarizing them with options and options pricing models.  Lay emphasis on swaps and evaluation of swaps.  Gain Knowledge on credit derivatives | | | | | | | | | | |
| Expected Course Outcomes: | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | |
| 1 | Learn and remember the basics of derivative markets and how they work in India. | | | | | K1 | | | | |
| 2 | Enhance the knowledge on forward contract and various future contracts, differentiate forwards and futures and apply hedging positions effectively. | | | | | K2 &K3 | | | | |
| 3 | Understand various option strategies and create the option positions | | | | | K2 & K6 | | | | |
| 4 | Get acquaintance on swaps and evaluation of swaps in derivate markets. | | | | | K1&K5 | | | | |
| 5 | Understand the various types of Credit derivatives available in the market. | | | | | K2 | | | | |
| K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze; K5 - Evaluate; K6 – Create | | | | | | | | | | |
| Unit:1 | | Introduction to Derivatives | | | | | 8 Hours | | | |
| Derivatives: Introduction – Meaning – History of derivatives market – Derivatives products in India - Market participants and their roles in the derivatives markets - Exchange-traded vs. OTC derivatives – Use of derivatives -Risk Involved in derivatives- Recent developments in Derivatives Market in India. | | | | | | | | | | |
| Unit:2 | | Forwards and Future Market | | | | | 12 Hours | | | |
| Forwards: Features of Forward contract - Limitations of forward markets - Future Market - Introduction to futures – Key features of futures contracts - Distinction between futures and forwards contracts - Pay off for futures - Index Futures - Equity stock futures - Commodity Futures -Currency Futures – Interest Rate Futures - Physical settlement vs Cash settlement – Future Pricing - Hedging: Perfect Hedging - Cross Hedging. | | | | | | | | | | |
| Unit:3 | | Options and Option Pricing Model | | | | | 10 Hours | | | |
| Option: Introduction – Option Terminology – Type of Options - Call Option and Put Option – Option Style - American Option and European Option - Moneyness of Option Contract – Concept of Option Premium - Option Greeks – Option Payoff - Black-Scholes option pricing models – Option Strategies – Option Spread – Straddle – Strangle – Covered Call – Protective Put – Option contract in India – Index Option - Stock options - Commodities options - Currency Options – Interest Rate Option. | | | | | | | | | | |
| Unit:4 | | Swaps | | | | | 14 Hours | | | |
| Swaps: Meaning – Features of Swaps – Uses of Swaps – Interest Rate Swaps – Currency Swaps - Commodity Swaps – Equity Swaps –Bond Swaps - Swap Pricing - International Swap Dealers Association (ISDA) - Swaption - Types of Swaption. | | | | | | | | | | |
| Unit:5 | | Credit Derivatives | | | | | 14 Hours | | | |
| Credit Derivatives: Concepts - Credit Default Swaps - Credit Spread Options - Total Return Swaps - Credit Linked Notes - Uses of Credit Derivatives - Pricing of Credit Derivatives - Settlement of Credit Derivatives. | | | | | | | | | | |

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| Unit:6 | | | Contemporary Issues | 2 Hours |
| Expert lectures, online assignment – webinars | | | | |
|  | | | Total Lecture Hours | 60 Hours |
| Note: Question paper shall cover 100% theory. | | | | |
| Books for Study | | | | |
| 1 | Patel, Divyesh., "Bharat’s Financial Derivatives Theory Concepts & Problems", Siliguri, Bharat Law House Pvt. Ltd, 2021 | | | |
| 2 | Gupta S.L, " Financial Derivatives: Theory, Concepts and Problems Hardcover", 2017 | | | |
| 3. | Flavell, R. R. (2012). *Swaps and other derivatives* 2nd Edition. John Wiley & Sons. | | | |
| Books for Reference | | | | |
| 1 | NISM (2019), NISM Series VIIIA Equity Derivative Module, Delhi: Taxman | | | |
| 2 | NCFM – Derivatives Market – Dealers Module, by NSE Academy, Mumbai | | | |
| Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.] | | | | |
| 1 | | https://nptel.ac.in/courses/110/105/110105035 | | |
| 2 | | https://nptel.ac.in/courses/110/105/110105036 | | |
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| Course Designed By: / E-Mail ID: | | | | |

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| Mapping with Programme Outcomes | | | | | | | | | | |
| COs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
| CO1 | S | S | M | S | S | S | S | S | S | S |
| CO2 | S | S | M | S | S | S | S | S | S | S |
| CO3 | S | S | M | S | S | S | S | S | S | S |
| CO4 | S | S | M | S | S | S | S | S | S | S |
| CO5 | S | S | M | S | S | S | S | S | S | S |

\*S-Strong; M-Medium; L-Low

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| **Course code** | | | | | **2EB** | | | **FIXED INCOME SECURITIES MARKETS** | | | | | | **L** | | | | | | **T** | | | **P** | **C** |
| **Elective** | | | | | | | | **4** | | | | | | **-** | | | **-** | **4** |
| **Pre-requisite** | | | | | | | | Basic Knowledge in Instruments | | | | | | Syllabus Version | | | | | **2025 - 26** | | | | | |
| **Course Objectives:** | | | | | | | | | | | | | | | | | | | | | | | | |
| The main objectives of this course are to:   * To understand the fundamental features of debt instruments. * To gain knowledge on bond market. * To understand the concept of money market instruments. * To learn repo rate and bond market indices * To enrich the knowledge on wholesale debt market and sebi regulations. | | | | | | | | | | | | | | | | | | | | | | | | |
| **Expected Course Outcomes:** | | | | | | | | | | | | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | | | Understand the concepts and functions of debt market | | | | | | | | | | | | | | | | | | K2 | | | |
| 2 | | | Evaluate and analyze the bond market | | | | | | | | | | | | | | | | | | K5 & K4 | | | |
| 3 | | | Analyze the different type of money market instruments | | | | | | | | | | | | | | | | | | K4 | | | |
| 4 | | | Understand the repo rate applicability and bond market indices | | | | | | | | | | | | | | | | | | K2 | | | |
| 5 | | | Able to explain the debt market trading mechanism | | | | | | | | | | | | | | | | | | K3 | | | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** - Create | | | | | | | | | | | | | | | | | | | | | | | | |
| **Unit I** | | | | | **Indian Debt Markets** | | | | | | | | | | | | | **10 Hours** | | | | | | |
| Basic concepts of debt instruments - Different types of products and participants - Secondary market for debt instruments. | | | | | | | | | | | | | | | | | | | | | | | | |
| **Unit II** | | | | | **Central and State Government Bonds** | | | | | | | | | | | | **13 Hours** | | | | | | | |
| Primary issuance process; Participants in Government bond markets; Constituent SGL accounts; Concept of Primary dealers, Satellite dealers; Secondary markets for Government bonds; Settlement of trades in G-Secs; Clearing corporation; Negotiated Dealing System; Liquidity Adjustment Facility (LAF). - Gross fiscal deficit of state Governments and its financing; Volume, Coupon rates and ownership pattern of State Government bonds | | | | | | | | | | | | | | | | | | | | | | | | |
| **Unit III** | | | | | **Corporate Debt& Commercial Paper & Certificate of Deposits** | | | | | | | | | | **12 Hours** | | | | | | | | | |
| Call Money Markets: Participants in the call markets; Call rates - Corporate Debt: Bond: Market segments; Issue process; Issue management and Book building; Terms of a Credit rating - Commercial Paper & Certificate of Deposits | | | | | | | | | | | | | | | | | | | | | | | | |
| **Unit IV** | | | | | **Repos &Bond Market Indices and Benchmarks** | | | | | | | | | | **12 Hours** | | | | | | | | | |
| Repos: Repo rate; Calculating settlement amounts in Repo transactions; Advantages of Repos; Recent; Issues in repo market in India; Secondary market transactions in Repos; Repo accounting. - Bond Market Indices and Benchmarks | | | | | | | | | | | | | | | | | | | | | | | | |
| **Unit V** | | | | | **Trading Mechanism in the NSE-WDM & Regulatory** | | | | | | | | | **11 Hours** | | | | | | | | | | |
| Description of the NSE WDM trading system; Order types and conditions; Order entry in negotiated trades market; Order validation and matching; Trade management; Reports; Settlement; Rates of Brokerage - G-Sec Act 2006; SEBI (Issue and Listing of Debt Securities) Regulations 2008 and Market Practices and Procedures | | | | | | | | | | | | | | | | | | | | | | | | |
| **Unit:6** | | | | | **Contemporary Issues** | | | | | | | | | **2 Hours** | | | | | | | | | | |
| Webinars – Quiz - Online Assignments | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | **Total Lecture Hours** | | | | | | | | | **60 Hours** | | | | | | | | | | |
| **Note: Question paper shall cover 100% theory.** | | | | | | | | | | | | | | | | | | | | | | | | |
| **Books for Study** | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | NSE Academy, NCFM -FIMMDA-NSE Debt Market (Basic) Module, Mumbai | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | |
| **Books for Reference** | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | | The Handbook of Fixed Income Securities, by Frank Fabozzi, McGraw-Hill Education; 7th edition | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | |
| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | |  | | | | | | | | | | | | | | | | | | | | | | |
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| Course Designed By: S. Arun Kumar / E-Mail ID: s\_arunkumar@yahoo.com | | | | | | | | | | | | | | | | | | | | | | | | |
| **Mapping with Programme Outcomes** | | | | | | | | | | | | | | | | | | | | | | | | |
| **COs** | | | | **PO1** | | **PO2** | **PO3** | | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | | | **PO9** | | | | | | **PO10** | | |
| **CO1** | | | | M | | M | S | | M | S | M | S | M | | | S | | | | | | S | | |
| **CO2** | | | | S | | S | S | | S | M | S | S | S | | | S | | | | | | S | | |
| **CO3** | | | | M | | M | S | | S | S | S | M | S | | | S | | | | | | S | | |
| **CO4** | | | | S | | S | S | | S | S | S | S | S | | | S | | | | | | S | | |
| **CO5** | | | | S | | S | S | | S | S | S | S | S | | | S | | | | | | S | | |

\*S - Strong; M - Medium; L - Low

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| Course code | | | | 33A | SOFT SKILLS FOR MANAGERS | L | T | | P | | C |
| Core -11 | | | | | 4 | - | | - | | 4 |
| Pre-requisite | | | | | Basic Knowledge in Writing and Speaking | Syllabus Version | | | 2025 - 26 | | |
| Course Objectives: | | | | | | | | | | | |
| The main objectives of this course are to:  Equip the students with competencies to manage themselves in organizations with a scientific outlook towards communication.  Develop career orientation through an understanding of Mock interviews and Group Discussion.  Develop inter personal and intra personal skills of the students and Presentation skills.  Facilitate an insight into the functioning of individuals and groups.  Generate interest among students to face competitions with confidence. | | | | | | | | | | | |
| Expected Course Outcomes: | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | |
| 1 | | Understand the basics of Business Communication System and to know the different elements of communication. | | | | | | | | K2 | |
| 2 | | Enable the students to participate in the campus selection process with special focus on aptitude and Group Discussion. | | | | | | | | K6 | |
| 3 | | Create communication skills that integrate written, verbal and technical  Communication | | | | | | | | K6 | |
| 4 | | Apply the professional behaviour to enter into the professional world. | | | | | | | | K3 | |
| 5 | | Analyze logically and solve the problems in professional life. | | | | | | | | K4 | |
| K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze; K5 - Evaluate; K6 - Create | | | | | | | | | | | |
|  | | | | | | | | | | | |
| Unit:1 | | | | Introduction to Communication | | 10Hours | | | | | |
| Introduction- Role of Communication in Business – Objectives of Communication – The Process of Human Communication – Media of Communication - Written Communication – Oral Communication – Face of Face Communication – Visual Communication – Audio Visual Communication Skills –Understanding Cultural Effects of Communication- Barriers of Communication. | | | | | | | | | | | |
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| Unit:2 | | | | Managing Organization Communication | | 14Hours | | | | | |
| Managing Organization Communication – Formal Communication – Informal Communication – Intra and Inter Personal Communication – Models for Inter Personal Communication – Group Discussion - Exchange Theory, Johari Window and Transactional Analysis. Managing Motivation to Influence Interpersonal Communication – Inter Personal Perception – Role of Emotion in Inter Personal Communication – Communication Styles Gateways to Effective Interpersonal Communication | | | | | | | | | | | |
|  | | | | | | | | | | | |
| Unit:3 | | | | Effective Listening and Speaking | | 12Hours | | | | | |
| Listening - Art of listening – Principles of listening, types of listening, Process of listening - guidelines for effective listening, types of listeners – difference between hearing and listening, qualities for a good listener. Interview, Types of interview; Techniques of interview. Power-point presentations – ways to make presentations effective. Case studies for Interviews and Presentations. | | | | | | | | | | | |
|  | | | | | | | | | | | |
| Unit:4 | | | | Business Correspondence | | 12Hours | | | | | |
| Business Writing Skills – Significance of Business Correspondence, Essentials of Effective Business Correspondence Business Letter – Structure and Forms, Oral Presentations – Stages involved in an effective presentation, selection of topic, content, aids, engaging the audience, Time management, Feedback, Mock Presentations -Meetings, Telephone Communication – Use of Technology in Business Communication, E-mail Messages. Report writing – Process of writing, Types of reports, graphical representation of data and interpretation. | | | | | | | | | | | |
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| Unit:5 | | | | Office and Personal Correspondence | | | 12Hours | | | | |
| Office communication - internal memos, office circulars. Secretarial Correspondence: Board meetings, letters to shareholders and debenture holders, Registrar of Companies, Notice, agenda, minutes of meetings. Personal Correspondence: Preparation of curriculum vitae, job application, appointment letters, interview letters. Corporate Etiquette: Customer Interaction, Office, Meeting. | | | | | | | | | | | |
|  | | | Total Lecture Hours | | | | 60 Hours | | | |
| Books for Study | | | | | | | | | | |
| 1 | | Rentz, K., Lentz, P., & Das, A. (2020). Business Communication: A Problem Solving Approach (First edition). McGraw Hill. | | | | | | | | |
| 2 | | Meenakshi Raman and Professor Sangeeta Sharma.( 2022,) Technical Communication Principles and Practice, Oxford University | | | | | | | | |
| 3 | | Gupta, C. B. (2019). Essential Business Communication. Cengage Learning India Pvt. Ltd. | | | | | | | | |
| 4 | | J. A. Lough (2024)- Effective Leadership Skills for Managers | | | | | | | | |
| 5 | | Reese L.Stone (2023)-Mastering Leadership Skills for Managers. | | | | | | | | |
|  | | | | | | | | | | |
| Books for Reference | | | | | | | | | | |
| 1 | | R.C.Sharma & Krishna Mohan Business Correspondence and Report Writing. Tata Mc Graw Hill Publishing Company Limited. | | | | | | | | |
| 2 | | Bhardwaj, K. (2019). Fundamentals of Business Communication. Dreamtech Press. | | | | | | | | |
| 3 | | C.R. Reddy )Business Communication Dreamtech Press,2019. | | | | | | | | |
| 4 | | Urmila Rai & SM Rai (Business Communication (2022) Himalaya Publishing House, N.D) | | | | | | | | |
| 5 | | Pustak, M. (n.d.). Art and Science of Business Communication 4th Edition. 2022, 4th Edition - Pearson India Books | | | | | | | | |
| 6 | | Jain Kanubha & Gupta Priyanka, Business Communication, 5th Edition, 2023, Kalyani Publishers, Chennai. | | | | | | | | |
| 7 | | R.Kesavan, Rekha Murugan, Tabreez and Tony-Soft Skills for Managers (Bengaluru North University), Himalayan publishing, 2024,1st Edition | | | | | | | | |
| 8 | | Varinder Kumar & Bodh Raj, Business Communication, Reprint 2024, Kalyani Publishers, Chennai. | | | | | | | | |
| Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.] | | | | | | | | | | |
| 1 | | NPTEL[http://nptel.iitm.ac.in](http://nptel.iitm.ac.in/) | | | | | | | | |
| 2 | | <http://www.mindtools.com/page8.html> | | | | | | | | |
| 3 | | https://www.36-hr.com/impactful-presentation-skills-training-singapore-and-malaysia-case-studies/ | | | | | | | | |
| 4 | | <https://igotanoffer.com/blogs/mckinsey-case-interview-blog/case-interview-examples> | | | | | | | | |
| Course Designed By: Dr. M.Sumathy / E-MailID:[sumathivenky2018@gmail.com](mailto:sumathivenky2018@gmail.com) | | | | | | | | | | |

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| Mapping with Programme Outcomes | | | | | | | | | | |
| COs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
| CO1 | S | M | S | S | S | S | S | M | S | S |
| CO2 | S | M | S | S | S | S | S | S | S | S |
| CO3 | S | S | S | S | S | S | M | S | S | S |
| CO4 | S | M | S | S | S | S | S | S | M | S |
| CO5 | S | S | S | S | S | S | S | S | S | S |

\*S-Strong; M-Medium; L-Low

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| **Course code** | | **33B** | **DATA ANALYSIS THROUGH SPSS** | | **L** | | | **T** | | | **P** | **C** |
| **Core - 12** | | | **4** | | | **-** | | | **-** | **4** |
| **Pre-requisite** | | | Basic ideas about Research and Knowledge of Statistics | | Syllabus Version | | | | | 2025 - 26 | | |
| **Course Objectives:** | | | | | | | | | | | | |
| The main objectives of this course are:   1. To develop and understanding of the basic framework of the research process and various research designs and techniques 2. To identify the various sources of information for literature review and data collection 3. To impart knowledge for enabling students to develop data analytics skills and meaningful interpretation to the data sets so as to solve the business/Research problem 4. To write research reports and research proposal. | | | | | | | | | | | | |
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| **Expected Course Outcomes:** | | | | | | | | | | | | |
| On the successful completion of the course, students will be able to: | | | | | | | | | | | | |
| 1 | Apply a range of quantitative and / or qualitative research techniques to business and management problems / issues | | | | | | | | K1 | | | |
| 2 | Demonstrate knowledge and understanding of data analysis and interpretation in relation to the research process | | | | | | | | K2 & K3 | | | |
| 3 | Develop necessary critical thinking skills in order to evaluate different research approaches utilized in the business / Industry | | | | | | | | K4 & K5 | | | |
| 4 | Write the research report and research proposal | | | | | | | | K5 | | | |
| 5 | Identify the overall process of designing a research study from its inception to report. | | | | | | | | K6 | | | |
| **K1** - Remember; **K2** - Undestand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** - Create | | | | | | | | | | | | |
|  | | | | | | | | | | | | |
| **Unit:1** | | **Introduction and Research Design** | | | | | **10 Hours** | | | | | |
| Business Research – Meaning – Scope and Significance – Utility of Business Research – Qualities of good researcher – Types of Research – Research Process – Identification, Selection and formulation of research problems – Hypothesis – Research design. | | | | | | | | | | | | |
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| **Unit:2** | | **Sampling and Tools for Data Collection** | | | | **10 Hours** | | | | | | |
| Sampling – Methods and Techniques – Sample Size – Sampling Error – Fieldwork and Data Collection. Tools for Data Collection – Interview Schedule - Questionnaire – Observation, Interview and Mailed Questionnaire – Pilot Study and final Collection of Data. | | | | | | | | | | | | |
|  | | | | | | | | | | | | |
| **Unit:3** | | **Analyzing and Report Writing** | | | | | **12 Hours** | | | | | |
| Measurement and Scaling Techniques – Reliability and Validity Processing and Analysis of Data – Editing – Coding - Classification – Tabulation – Interpretations. Report Writing – Steps - Types of Reports. | | | | | | | | | | | | |
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| **Unit:4** | | **Measuring the Relationship and Analyse the Impact** | | **14 Hours** | | | | | | | | |
| Measures of Central Tendency – Standard Deviation – Correlation - Simple, Partial and Multiple Correlation – Path Analysis – Auto Correlation – Regression Models – Ordinary Least Square Methods – Multiple Regression. Test of Significance –‘t’Test - Large Sample and ‘f’ Test, Test of Significance for Attributes, Analysis of Variance (ANOVA) – Chi-square Test | | | | | | | | | | | | |

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| **Unit:5** | | **SPSS** | **12 Hours** |
| Calculation of descriptive Statistics, Correlation, Regression and Anova using SPSS | | | |
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| **Unit:6** | | **Contemporary Issues** | **2 Hours** |
| Expert lectures, online seminars – webinars - SPSS | | | |
|  | | | |
|  | | **Total Lecture Hours** | **60 Hours** |
| **Note: Question Paper shall cover 60% Theory and 40% Problems** | | | |
| **Books for Study** | | | |
| 1 | Cooper, “Business Research Method”, Tata McGraw Hill Publishing Company Limited, Noida, UP. 2019 | | |
| 2 | S.P. Gupta, “Statistical Methods”, S.Chand & Sons Publisher, New Delhi, 2023. | | |
| 3 | Pamela.S.Schindler (2024) "Business Research Method' (Mc Graw- Hill Education) | | |
|  | | | |
| **Books for Reference** | | | |
| 1 | J.K.Suchdeva (2020), “Business Research Methodology”, Himalaya Publishing House, Mumbai. | | |
| 2 | R.S.N. Pillai & V. Bagavathi (2020), “Statistics”, S.Chand & Sons Publisher, New Delhi. | | |
| 3 | Barry Babin, Christina Quintan William Zikmund , Jan Can and Mitch Griffin (2024) "Business Research Methods" Cengage Learning EMEA | | |
|  | | | |
| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | |
| 1 | <https://nptel.ac.in/courses/121/106/121106007/> | | |
| 2 | <https://youtu.be/Ivk0SDrD4DM> | | |
| 3 | https://onlinecourses.swayam2.ac.in/cec20\_mg14/preview# | | |
| 4 | https://www.coursera.org/learn/research-methodologies | | |
| 5 | https://www.shiksha.com/online-courses/business-research-methods-course-futul2320 | | |
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| Course Designed By: Dr. M. Nirmala / E-Mail ID: nirmala@buc.edu.in | | | |

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| **COs** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | M | S | M | M | S | S | S | M | S | S |
| **CO2** | S | S | S | M | S | S | S | M | S | M |
| **CO3** | S | S | S | S | S | S | S | M | M | M |
| **CO4** | S | S | S | S | S | S | S | S | M | S |
| CO5 | S | S | S | S | S | S | S | S | M | M |

\*S-Strong; M-Medium; L-Low

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| Course code | | | | 33C | ADVANCED CORPORATE ACCOUNTING | | | L | | | T | | P | C |
| Core -13 | | | | | 4 | | | - | | - | 4 |
| Pre-requisite | | | | | Basic knowledge in Accounting | | | Syllabus Version | | | | 2025 - 26 | | |
| Course Objectives: | | | | | | | | | | | | | | |
| The main objectives of this course are to:  The students get a complete knowledge, concepts and procedures used to prepare the accounts of companies like, manufacturing company, bank, insurance, electricity and Holding Company. | | | | | | | | | | | | | | |
| Expected Course Outcomes: | | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | | |
| 1 | | To get fundamental knowledge about Final Accounts of Companies, Managerial Remuneration and Profits Prior to Incorporation. | | | | | | | | | | | K3 | |
| 2 | | To acquire knowledge in preparation of Holding Company Accounts | | | | | | | | | | | K3 | |
| 3 | | To get familiarity about preparation of Bank and Insurance Company Accounts | | | | | | | | | | | K4 | |
| 4 | | To understand preparation of the final accounts of electricity company accounts and disposal of surplus. | | | | | | | | | | | K5 | |
| 5 | | To get knowledge about inflation accounting and IFRS. | | | | | | | | | | | K6 | |
| K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze; K5 - Evaluate; K6 - Create | | | | | | | | | | | | | | |
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| Unit:1 | | | | Final Accounts of Companies | | | | | | 10 Hours | | | | |
| Final Accounts of Companies (Schedule VI): Preparation of Statement of Profit and Loss – Balance Sheet – Managerial Remuneration. | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| Unit:2 | | | | Holding Company Accounts | | | | | 11 Hours | | | | | |
| Holding Company Accounts: Meaning and definition of Holding Company and Subsidiary Company; Legal requirements relating to presentation of accounts - Consolidated financial statements; Preparation of Consolidated Balance Sheet; Steps involved in preparation of consolidation balance sheet. | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| Unit:3 | | | | Bank Accounts and Insurance Company Accounts | | | 11 Hours | | | | | | | |
| Bank Accounts: Business of banking companies – Legal requirements; Preparation of Profit and Loss Account and Balance Sheet - Insurance Company Accounts (New Format); types of insurance; Life insurance; Revenue account, Profit and loss account and balance sheet - General insurance (Fire and Marine); Revenue account, Profit and loss account and balance sheet. | | | | | | | | | | | | | | |
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| Unit:4 | | | | Amalgamation, Absorption and Reconstruction | | | 13 Hours | | | | | | | |
| Amalgamation: Meaning-In the nature of merger and nature of Purchase-Calculation of Purchase Consideration-Net Payment Method-Net Asset Method-Accounting entries; Absorption: Meaning-Calculation of Goodwill- Calculation of Purchase Consideration- Accounting entries; Reconstruction: Internal-External- Accounting treatment | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| Unit:5 | | | | Inflation Accounting | | 13 Hours | | | | | | | | |
| Inflation Accounting: Methods of inflation accounting; Current purchase power method - Current cost accounting method – Hybrid method - Indian Accounting Standards – IFRS. | | | | | | | | | | | | | | |
| Unit:6 | | | CONTEMPORARY ISSUES | | | 2 Hours | | | | | | | | |
| Expert lectures, online seminars - webinars | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
|  | | | Total Lecture Hours | | | 60 Hours | | | | | | | | |
| Note: Question Paper shall cover 20% Theory and 80% Problems | | | | | | | | | | | | | | |
| Books for Study | | | | | | | | | | | | | | |
| 1 | R.L.Gupta and M.Radhasamy, “Advanced Accountancy”, Sultan Chand & Sons, New Delhi, 2015 | | | | | | | | | | | | | |
| 2 | M.C. Shukla , T.S.Grewal & S.Gupta, “Advanced Accounts”, S. Chand & Sons, New Delhi, 2022 | | | | | | | | | | | | | |
| Books for Reference | | | | | | | | | | | | | | |
| 1 | Arulanandam & Raman, “Advanced Accountancy”, Himalaya Publishing House, Mumbai, 2023 | | | | | | | | | | | | | |
| 2 | SP. Iyangar, “Advanced Accounting”, Sultan Chand & Sons, New Delhi, 2008 | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.] | | | | | | | | | | | | | | |
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| Course Designed By: Dr.M.Jegadeeshwaran / E-Mail ID: drmjegadeesh@gmail.com | | | | | | | | | | | | | | |

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| Mapping with Programme Outcomes | | | | | | | | | | |
| COs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
| CO1 | S | S | S | S | S | S | S | M | M | M |
| CO2 | S | S | S | S | S | S | S | M | M | M |
| CO3 | S | S | S | S | S | S | S | M | M | M |
| CO4 | S | S | S | S | S | S | S | M | M | M |
| CO5 | S | S | S | S | S | S | S | M | M | M |

\*S-Strong; M-Medium; L-Low

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| **Course code** | | **33D** | | **BLOCK CHAIN MANAGEMENT** | **L** | | | | | **T** | | **P** | **C** |
| **Core -14** | | | | **4** | | | | | **-** | | **-** | **4** |
| **Pre-requisite** | | | | Basic Knowledge in Computer Applications | **Syllabus Version** | | | | **2025 - 26** | | | | |
| **Course Objectives:** | | | | | | | | | | | | | |
| The main objectives of this course are to:   * To give an overview on block chain technology * To gain knowledge on Bit coin and network structure * Familiarize with crypto currencies. * To learn the technical challenges in Block chain technology. * To develop & integrate ideas from various domains and implement the technology in different perspectives | | | | | | | | | | | | | |
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| **Expected Course Outcomes:** | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | |
| 1 | Learn the basic concepts of distributed systems and structure of Block chain | | | | | | | | | | K2 | | |
| 2 | Gain insights on Bitcoin and understand the mechanics of Bitcoin transactions | | | | | | | | | | K2 | | |
| 3 | Know the importance of various crypto currencies | | | | | | | | | | K2 | | |
| 4 | Understand Blockchain Learning and its application for various Business Models | | | | | | | | | | K2 | | |
| 5 | Analyze the Blockchain Solutions and understand the idea of Blockchain Society | | | | | | | | | | K4 | | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** - Create | | | | | | | | | | | | | |
| **Unit I** | | | **Overview of Block Chain** | | | | | **10 Hours** | | | | | |
| A Payment System- Two types of Software Architecture- Advantages of Distributed Systems- Disadvantages of Distributed Systems- Mixing Centralized and Distributed Systems- Purpose of Blockchain- Layers of Blockchain- Blockchain Uses and Use Cases- Laying the Blockchain Foundation- Cryptography- The Structure of Blockchains- Blockchain Applications- The Blockchain Life Cycle- Blockchains in Use. | | | | | | | | | | | | | |
| **Unit II** | | | **Overview of Bitcoins** | | | | **12 Hours** | | | | | | |
| History of Money- Dawn of Bitcoin- Bitcoin Definition- Working with Bitcoins- The Bitcoin Blockchain- Block Structure- Merkle Tree- The Genesis Block- The Bitcoin Network- Network Discovery for a New Node- Bitcoin Transactions- Consensus and Block Mining- Block Propagation- Bitcoin Scripts- Bitcoin Wallets. | | | | | | | | | | | | | |
| **Unit III** | | | **Block Chain 1.0, 2.0 and 3.0** | | | **14 Hours** | | | | | | | |
| Blockchain 1.0: Currency- How a Cryptocurrency Works- Blockchain 1.0 in Practical Use- Blockchain 2.0: Contracts- Financial Services- Crowd funding- Bitcoin Prediction Markets- Smart Property- Smart Contracts- Blockchain 2.0 Protocol Projects- Ethereum: Turing Complete Virtual Machine- Automatic Markets and Trade nets- The Blockchain as a Path to Artificial Intelligence- Blockchain 3.0: Applications Beyond Currency, Economics, and Markets- Blockchain Science: Grid coin, Folding coin. | | | | | | | | | | | | | |
| **Unit IV** | | | **Impacts of Block Chain** | | | **12 Hours** | | | | | | | |
| Blockchain Learning: Bitcoin MOOCs and Smart Contract Literacy- Learn coin- Currency, Token, Tokenizing- Community coin- Campus coin- Currency Multiplicity-Demurrage Currencies- Technical Challenges- Business Model Challenges- Scandals and Public Perception- Government Regulation- Privacy Challenges for Personal Records- Blockchain Genomics- Blockchain Health. | | | | | | | | | | | | | |

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| **Unit V** | | | | **The Real Business of Block chain** | | | | | | | | **10 Hours** | | |
| Blockchain Inspired Solution- Business Currencies with Blockchain Inspired Solution- Blockchain complete solution- Seeking Value Consorting with the Enemy- Game on for Tokenization- Embracing Consensus through Decentralization- Market Access and Participation- Enhanced Blockchain Solutions- Unleashing the Power of Smart Things- The Blockchain Organization- The Blockchain Society. | | | | | | | | | | | | | | |
| **Unit:6** | | | | **Contemporary Issues** | | | | | | | | **2 Hours** | | |
| Webinars – Quiz - Online Assignments | | | | | | | | | | | | | | |
|  | | | | **Total Lecture Hours** | | | | | | | | **60 Hours** | | |
| **Note: Question Paper shall cover 100% theory.** | | | | | | | | | | | | | | |
| **Books for Study** | | | | | | | | | | | | | | |
| 1 | Block chain Basics: A Non-Technical Introduction in 25 Steps, Daniel Drescher, Apress Publishers, 2017 | | | | | | | | | | | | | |
| 2 | Dhameja, G., Singhal, B., Panda, P. S. (2018). Beginning Blockchain: A Beginner's Guide to Building Blockchain Solutions. Germany: Apress | | | | | | | | | | | | | |
| 3 | Swan, M. (2015). Blockchain: Blueprint for a New Economy. United States: O'Reilly Media | | | | | | | | | | | | | |
| 4 | Uzureau, C., Furlonger, D. (n.d.). The Real Business of Blockchain: How Leaders Can Create Value in a New Digital Age. United States: Harvard Business Review Press | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| **Books for Reference** | | | | | | | | | | | | | | |
| 1 | | Daniel Drescher, “Block Chain Basics”, Apress; 1stedition, 2017 | | | | | | | | | | | | |
| 2 | | Anshul Kaushik, “Block Chain and Crypto Currencies”, Khanna Publishing House, Delhi | | | | | | | | | | | | |
| 3. | | Imran Bashir, “Mastering Block Chain: Distributed Ledger Technology, Decentralization and Smart Contracts Explained”, Packt Publishing, first edition – 2012 | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | | | |
| 1 | | <https://www.blockchain.com/learning-portal/bitcoin-faq> | | | | | | | | | | | | |
| 2 | | <https://www.bitdegree.org/crypto/tutorials/blockchain-explained> | | | | | | | | | | | | |
| 3 | | <https://link.springer.com/article/10.1007/s00287-020-01246-7> | | | | | | | | | | | | |
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| Course Designed By: NSE ACADEMY LTD / E-Mail ID: | | | | | | | | | | | | | | |
| **Mapping with Programme Outcomes** | | | | | | | | | | | | | | |
| **Cos** | | | **PO1** | | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | | **PO9** | **PO10** |
| **CO1** | | | L | | L | L | L | S | S | S | S | | M | S |
| **CO2** | | | M | | M | M | M | S | S | S | S | | M | S |
| **CO3** | | | M | | M | M | M | S | S | S | S | | M | S |
| **CO4** | | | M | | M | M | M | S | S | S | S | | M | S |
| **CO5** | | | S | | S | S | S | S | S | S | S | | M | S |

\*S - Strong; M - Medium; L - Low

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| **Course code** | | **3EA** | | **FINANCIAL MODELING** | **L** | | | | | **T** | | **P** | | **C** |
| **Elective** | | | | **4** | | | | | **-** | | **-** | | **4** |
| **Pre-requisite** | | | | Basics of python, MS excel | **Syllabus Version** | | | | | | **2025 - 26** | | | |
| **Course Objectives:** | | | | | | | | | | | | | | |
| The main objectives of this course are to:   1. To make the students understand how Financial models are used to estimate the valuation of a business 2. To apply knowledge and understanding of financial statements 3. To learn to compare businesses to their peers in the industry through various models. 4. To understand how financial models are used in strategic planning to test various scenarios, calculate the cost of new projects, decide on budgets, and allocate corporate resources. 5. To build valuation models using different methods | | | | | | | | | | | | | | |
| **Expected Course Outcomes:** | | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | | |
| 1 | Learn the basic concepts of modelling and its perspective in analysis and auditing. | | | | | | | | | | | | K1 & K2 | |
| 2 | Gain insights on Financial Statement and forecasting various finance parameters | | | | | | | | | | | | K4 | |
| 3 | Develop a financial model suitable that aids management and documentation | | | | | | | | | | | | K3,K4, K6 | |
| 4 | Understand potential applications of Finance Models and its implementation | | | | | | | | | | | | K2 | |
| 5 | Practice and implement Financial modelling in Python Environment. | | | | | | | | | | | | K3 & K6 | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** - Create | | | | | | | | | | | | | | |
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| **Unit I** | | | **Principles of Modelling** | | | | | | **10 Hours** | | | | | |
| A Good Model- Model Design- Selection of Model Variables and their Dependencies- Level of Detail or Aggregation- Model Structure and Planning- Model Building- Results Presentation and Other Uses of Sensitivity Analysis- Model Auditing. | | | | | | | | | | | | | | |
| **Unit II** | | | **Financial Statement, Cash Flow and Valuation Modelling** | | | | | **14 Hours** | | | | | | |
| Financial Statement Modelling: Core Points and Example- Income Statement Forecasting- Sales Forecasts- Cost Forecasts- Operating Profit- Taxable Profit, Tax and Net Income- Dividends and Retained Earnings Balance Sheet Forecasting- Error Checks and Feasibility Checks- Cash Flow Statement Forecasting- Cash Flow Valuation. | | | | | | | | | | | | | | |
| **Unit III** | | | **Developing Financial Models** | | | | **10 Hours** | | | | | | | |
| Financial Modelling- Basics of Design- Design process and method- Menu structure- Management reports and summaries- Development- Testing and auditing- Protection as an application- Documentation- Features and techniques - Data validation- Controls- Graphics- Sample model planning- Example model. | | | | | | | | | | | | | | |
| **Unit IV** | | | **Applications of Financial Modeling** | | | | **12 Hours** | | | | | | | |
| Analyzing performance- Forecasting models- Portfolio analysis- Cost of capital- Bonds- Investment analysis- Risk- Depreciation- Leasing- Company valuation- Optimization- Decision trees- Risk management- Modeling checklist. | | | | | | | | | | | | | | |
| **Unit V** | | | **Financial Modeling in Python** | | | **12 Hours** | | | | | | | | |
| Welcome to Python- PPF package- Basic Mathematical Tools- Data Model- Timeline- The Hull White Model- Pricing using Numerical Methods- Pricing Financial Structures in Hull White-Python Excel Integration. | | | | | | | | | | | | | | |

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| **Unit:6** | | | | **Contemporary Issues** | | | | | | | | | **2 Hours** | |
| Expert lectures -webinars-quiz-online assignments- case study | | | | | | | | | | | | | | |
|  | | | | **Total Lecture hours** | | | | | | | | | **60 Hours** | |
| **Note: Question Paper shall cover 100% Theory** | | | | | | | | | | | | | | |
| **Books for Study** | | | | | | | | | | | | | | |
| 1 | Rees, M. (2015). Financial Modelling in Practice: A Concise Guide for Intermediate and Advanced Level. United Kingdom: Wiley. | | | | | | | | | | | | | |
| 2 | Day, A. (2012). Mastering Financial Modelling in Microsoft Excel 3rd Edn: A Practitioner's Guide to Applied Corporate Finance. United Kingdom: Pearson Education Limited. | | | | | | | | | | | | | |
| 3 | Gardner, C., Fletcher, S. (2010). Financial Modelling in Python. Germany: Wiley. | | | | | | | | | | | | | |
| **Books for Reference** | | | | | | | | | | | | | | |
| 1 | Mastering Financial Modelling In Microsoft Excel: A Practitioner'S Guide To Applied Corporate Finance, 2/E. (2008). India: Pearson Education. | | | | | | | | | | | | | |
| 2 | Benninga, S. Z., Benninga, D. F. o. M. S., Benninga, S., Czaczkes, B. (2000). Financial Modeling. United Kingdom: MIT Press. | | | | | | | | | | | | | |
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| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | | | |
| 1 | | <https://corporatefinanceinstitute.com/resources/knowledge/modeling/types-of-financial-models> | | | | | | | | | | | | |
| 2 | | <https://www.wallstreetprep.com/knowledge/financial-modeling-best-practices-and-conventions/> | | | | | | | | | | | | |
| 3 | | <https://www.ey.com/en_nl/finance-navigator/the-ultimate-guide-to-financial-modeling-for-startups> | | | | | | | | | | | | |
| Course Designed By: NSE ACADEMY LTD / E-Mail ID: | | | | | | | | | | | | | | |
| **Mapping with Programme Outcomes** | | | | | | | | | | | | | | |
| **COs** | | | **PO1** | | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | | **PO10** |
| **CO1** | | | L | | M | M | M | M | M | M | M | M | | M |
| **CO2** | | | S | | M | S | S | S | S | S | S | S | | S |
| **CO3** | | | S | | M | S | S | S | S | S | S | S | | S |
| **CO4** | | | L | | M | M | M | M | S | S | S | M | | M |
| **CO5** | | | S | | M | S | S | S | S | S | S | S | | M |

\*S-Strong; M-Medium; L-Low

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| **Course code** | | **3EB** | **INTERNET OF THINGS** | **L** | | | | **T** | | | **P** | **C** |
| **Elective** | | | **4** | | | | **-** | | | **-** | **4** |
| **Prerequisite** | | | Basic Knowledge in Technology | **Syllabus Version** | | | | | | **2025 - 26** | | |
| **Course Objectives:** | | | | | | | | | | | | |
| The main objectives of this course are to:   1. Teach the students about a new technology called “Internet of Things”. 2. Make the students acquainted with Internet of Things Architecture. 3. Gain the idea of Internet of Things applications in various fields. 4. Know about the Internet of Things Devices. 5. Gain Knowledge in the Web of Things. | | | | | | | | | | | | |
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| **Expected Course Outcomes:** | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | |
| 1 | Remember the basic idea about the Internet of Things. | | | | | | | | K1 | | | |
| 2 | Understand the design and structure of the Internet of Things. | | | | | | | | K2 | | | |
| 3 | Grasp the idea of how the Internet of things applied in various fields. | | | | | | | | K2 | | | |
| 4 | Identify and use the available Internet of Things devices. | | | | | | | | K2 | | | |
| 5 | Remember the Concept of the Web of Things and how it differs from the Internet of Things. | | | | | | | | K1 | | | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create | | | | | | | | | | | | |
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| **Unit:1** | | **IoT OVERVIEW** | | | | | **11 Hours** | | | | | |
| Internet of Things - How does the Internet of Things (IoT) Work? - Features of IOT Advantages and Disadvantages of (IoT) - Embedded Devices (System) in (IoT) - Embedded System Hardware- Embedded System Software - IoT Ecosystem - IoT Decision Framework. | | | | | | | | | | | | |
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| **Unit:2** | | **IoT ARCHITECTURE** | | | | **10 Hours** | | | | | | |
| IoT Architecture- Components of IoT Architecture- Stages of IoT Solutions Architecture- IoT Energy Domain- IoT Biometrics Domain. | | | | | | | | | | | | |
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| **Unit:3** | | **IoT APPLICATION** | | | **11 Hours** | | | | | | | |
| IoT in Smart Home and Smart City Application- IoT Smart Agriculture Domain- IoT - Healthcare- Internet of Things (IoT) in Transportation - Internet of Things (IoT) in Manufacturing - Internet of Things (IoT) in Education - Internet of Things (IoT) in Law enforcement - Internet of Things (IoT) in Sales force - Internet of Things (IoT) in Identity Protection. | | | | | | | | | | | | |
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| **Unit:4** | | **IoT DEVICES** | | | **13 Hours** | | | | | | | |
| IoT in Transforming Businesses - Smart Objects in IoT - IoT Devices - Major IoT Boards in Market - IoT - Platform- Thing Work in Internet of Things - IoT Data Link Communication Protocol- IoT Network Layer Protocols - IoT Session Layer Protocols. | | | | | | | | | | | | |
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| **Unit:5** | | **WEB OF THINGS** | **13 Hours** |
| 1. Web Of Things: Web of Things Vs Internet of Things – Web of Things Pillars – Architecture Standardization for WoT: Platform Middleware for WoT – Unified Multi Tier WoT Architecture – WoT Portals and Business Intelligence. | | | |
| **Unit:6** | | **Contemporary Issues** | **2 Hours** |
| Expert Lectures, Online Seminars – Webinars | | | |
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|  | | **Total Lecture Hours** | **60 Hours** |
| **Note: Question paper shall cover 100% theory.** | | | |
| **Books for Study** | | | |
| 1 | [Arsheep Bahga](https://www.amazon.in/s/ref=dp_byline_sr_book_1?ie=UTF8&field-author=Arsheep+Bahga&search-alias=stripbooks), [Vijay Madisetti](https://www.amazon.in/s/ref=dp_byline_sr_book_2?ie=UTF8&field-author=Vijay+Madisetti&search-alias=stripbooks), "Internet Of Things: A Hands-On Approach", Orient Blackswan Private Limited - New Delhi,2015. | | |
| 2 | Lele, Chitra, "Internet of Things (IoT) A Quick Start Guide", BPB Publications, New Delhi, 2022 | | |
|  | | | |
| **Books for Reference** | | | |
| 1 | Greengard, Samuel., "The Internet of Things, revised and updated edition (The MIT Press Essential Knowledge series)", MIT Press, Cambridge, 2021. | | |
| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | |
| 1 | https://www.javatpoint.com/iot-internet-of-things | | |
|  | | | |
| Course Designed By: Dr.M.Nirmala / E-Mail ID: nimmiswetha@gmail.com | | | |

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| **Mapping with Programme Outcomes** | | | | | | | | | | |
| **Cos** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | S | S | S | S | S | M | S | S | M | S |
| **CO2** | S | S | S | S | S | S | M | S | S | M |
| **CO3** | S | S | S | S | S | S | M | S | S | S |
| **CO4** | S | S | S | S | S | S | S | S | S | M |
| **CO5** | M | S | S | S | S | S | M | S | M | S |

\*S-Strong; M-Medium; L-Low

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| **Course Code:** | **33P** | **TECHNICAL ANALYSIS** | **L** | **T** | **P** | **C** |
| **Practical** | |  |  | **4** | **4** |
| **Pre-requisite** | | Basic Knowledge in Stock Market | **Syllabus Version** | | **2025 - 26** | |
| **Course Objective** | | | | | | |
| * To obtain comprehensive knowledge about Technical Analysis. * To understand the basics of Technical Analysis. * To understand various trading strategies | | | | | | |
| **Expected Course Outcome** | | | | | | |
| * Understand the strengths and weaknesses of Technical Analysis. * Analyze Charts * Study various patterns * Know various Indicators and Oscillators * Obtain knowledge related to various trading strategies and theories * Understand the importance of risk management | | | | | | |
| **Exercises** | | | | | | |
| * **The Charts** * **Candlestick Analysis**   + One candle pattern   + Two candle patterns   + Three candle patterns * **Pattern Study**   + Trend Line   + Support and resistance lines   + Head and shoulders,   + Double top and double bottom   + Rounding Bottom and Top   + Cup and Handle Pattern   + Fibonacci Retracement   + Gap theory * **Major Indicators & Oscillators**   + Simple moving average   + Exponential moving average   + moving average price crossover   + multiple moving average   + Oscillators   + Relative strength index   + Moving average, convergence / divergence(MACD), * **Dow Theory** * **Elliot Wave Theory** | | | | | | |
| **Books for Study** | | | | | | |
| * Text books: NCFM-Technical Analysis Module, Mumbai * Schabacker, Richard.," Technical Analysis and Stock Market"Harriman House, England and Wales 2021 | | | | | | |
| **Books for Reference** | | | | | | |
| * Murphy, J J**,**. "Technical Analysis of the Financial Markets: A Comprehensive Guide to   Trading Methods and Applications" Prentice Hall, Hoboken, New Jersey, U.S 2020.   * Penn., "Technical Analysis for Beginners", 2021 * Jamsandekar, andar .,"Trading and Technical Analysis Course: How to Trade   Safely and Profitably", Vision Books, New Delhi.2018. | | | | | | |
| Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.] | | | | | | |
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| Course Designed By: Mr. S. Arunkumar / E-Mail ID: s\_arunkumar @yahoo.com | | | | | | |

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| **Mapping with Programme Outcomes** | | | | | | | | | | |
| **Cos** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | S | S | S | S | S | M | S | S | M | S |
| **CO2** | S | S | S | S | S | S | M | S | S | M |
| **CO3** | S | S | S | S | S | S | M | S | S | S |
| **CO4** | S | S | S | S | S | S | S | S | S | M |
| **CO5** | M | S | S | S | S | S | M | S | M | S |

\*S-Strong; M-Medium; L-Low

**VALUE ADDED COURSE - I**

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| **CREDIT ANALYST (1VA)** | | | | | | |
| **Name of the Department** | | | | | **COMMERCE** | |
| **Name of the Faculty Member i/c**  **With Complete Address with Phone and e-mail** | | | | | **Dr.P.CHELLASAMY**  Professor, Department of Commerce  Bharathiar University, Coimbatore - 641046  [drchellamsamy@gmail.com](mailto:drchellamsamy@gmail.com)  Mobile : 9443349179 | |
| **Inter / Intra Department Course** | | | | | **Intra Department Course** | |
| **Duration of the Course** | | | | | **40 Hours** | |
| **Eligibility** | | | | | **Knowledge in Accounting** | |
| **Number of Candidates to be Admitted** | | | | | **-** | |
| **Registration Procedure** | | | | | **-** | |
| **Job Opportunities:** | | | | | | |
| Financial analysts | | | | | | |
| Credit managers | | | | | | |
| Credit Rating analyst | | | | | | |
| **The objectives of the Course are:** | | | | | | |
| The main objectives of this course are to: | | | | | | |
| 1 | | To acquire the practical skill of data analysis | | | | |
| 2 | | Train them with critical thinking and communication skill to become a Financial Analysts | | | | |
| 3 | | Learn the role of credit manager | | | | |
| 4 | | Learn the investment opportunities | | | | |
| 5 | | Acquire an understanding of credit rating | | | | |
| **Course Content** | | | | Lecture (Online) | | |
|  | | | | | | |
| **Module 1** | | | A Brief Introduction- Banking Credit Analysis Process | | | **4 Hours** |
| **Module 2** | | | Fundamental Financial Math- Commercial Credit Analysis | | | **4 Hours** |
| **Module 3** | | | Finance Training | | | **4 Hours** |
| **Module 4** | | | Excel Crash Course: Master Excel for Financial Analysis | | | **4 Hours** |
| **Module 5** | | | Risk Management | | | **4 Hours** |
| **Module 6** | | | Risk Management Process - Analysis | | | **4 Hours** |
| **Module 7** | | | Financial Management A Complete Study for CA/CMA/CS/CFA/ACCA | | | **4 Hours** |
| **Module 8** | | | Career Hacking- Resume, LinkedIn, Interviewing | | | **4 Hours** |
| **Module 9** | | | Essential of Soft Skills | | | **4 Hours** |
| **Module 10** | | | Assignment | | | **4 Hours** |
| **Books for Study** | | | | | | |
| 1 | Blokdyk. Gerardus “**Credit Analyst**”, Create Space Independent Publishing Platform, 2018 | | | | | |
| **Books for Reference** | | | | | | |
| 1 | Arnold Ziegel, Ronna Ziegel, **Fundamentals of Credit and Credit Analysis: Corporate Credit Analysis**, Create Space Independent Publishing Platform, 2015 | | | | | |
| **Related Online Contents** | | | | | | |
| - | | | | | | |

**VALUE ADDED COURSE – II**

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| MARKETING AND SALES PROMOTION (3VA01) | | | | | | |
| Name of the Department | | | | | COMMERCE | |
| Name of the Faculty Member i/c  With Complete Address with  Phone and e-mail | | | | | Dr. M. SUMATHY  Professor & Head  Dr.M.NIRMALA  Assistant Professor, Department of Commerce  Bharathiar University, Coimbatore-46  Mobile : 9487430218 | |
| Inter / Intra Department Course | | | | | Intra | |
| Duration of the Course | | | | | 40 Hours | |
| Eligibility | | | | | Basic knowledge in Marketing | |
| Number of Candidates to be Admitted | | | | | - | |
| Registration Procedure | | | | | - | |
| Job Opportunities: | | | | | | |
| Digital Marketing Manager, Content Writers, Inbound Marketing Manager, Social Media Marketing Experts/Specialists, Search Engine Marketers, sales manager | | | | | | |
| The objectives of the Course are: | | | | | | |
| The main objectives of this course are to: | | | | | | |
| 1 | | Learn the basic concepts in marketing | | | | |
| 2 | | Create a website | | | | |
| 3 | | Gain knowledge in CRM | | | | |
| 4 | | Manage social media effectively | | | | |
| 5 | | Learn the marketing strategy | | | | |
| Course Content | | | | Lecture / Practical / Project / Internship | | |
|  | | | | | | |
| Module 1 | | | Evolution of Marketing – Marketing Concept | | | 4 Hours |
| Module 2 | | | Marketing Environment- Marketing Mix | | | 4 Hours |
| Module 3 | | | Market Segmentation – Product positioning | | | 4 Hours |
| Module 4 | | | Pricing strategies –logistics and supply chain | | | 4 Hours |
| Module 5 | | | Advertising | | | 4 Hours |
| Module 6 | | | Sales Promotion- Direct Marketing | | | 4 Hours |
| Module 7 | | | Digital Marketing :Fundamentals Components of Digital Marketing: | | | 4 Hours |
| Module 8 | | | Building a Website - Hosting a Website | | | 4 Hours |
| Module 9 | | | Customer Relationship Management (CRM) | | | 4 Hours |
| Module 10 | | | Leadership skills for digital marketing professionals | | | 4 Hours |
| Books for Study | | | | | | |
| 1 | Pineet Singh Bhatia, Fundamentals of Digital Marketing", Pearson Publishers, 2019. | | | | | |
| 2 | [Philip Kotler](https://www.amazon.in/s/ref=dp_byline_sr_book_1?ie=UTF8&field-author=Philip+Kotler&search-alias=stripbooks)  and [Gary Armstrong](https://www.amazon.in/s/ref=dp_byline_sr_book_2?ie=UTF8&field-author=Gary+Armstrong&search-alias=stripbooks), Principles of Marketing, Pearson Education, 2023 | | | | | |
| Books for Reference | | | | | | |
| 1 | Deiss, R., & Henneberry, R, Digital marketing for dummies. John Wiley & Sons, 2020 - 21 | | | | | |
| Related Online Contents | | | | | | |
| 1 | Basics of Digital Marketing - SWAYAM | | | | | |

VALUE ADDED COURSE (3VA02) - III

HEALTH AND WELLNESS

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| Unit 1: Introduction to Holistic well being – Components of Health and well being-Wellness wheel – Benefits Physical well being: Fitness: Nutrition- Yoga and Meditation- Hygiene and Grooming. |
| Unit 2: Emotional well being: Stress Management- Positivity. |
| Unit 3: Social well being: Practicing Gratitude- Digital Detox - Intellectual well being: Lifelong learning- Digital Literacy. |

**Reference materials prescribed by TANSCHE.**