



PSGR
Krishnammal College for Women



DEPARTMENT OF B.COM (CA)

**CHOICE BASED CREDIT SYSTEM (CBCS) &
LEARNING OUTCOMES- BASED CURRICULAR FRAMEWORK (LOCF)**

BACHELOR OF COMMERCE WITH COMPUTER APPLICATIONS

2024 – 2027 BATCH



**DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS
CHOICE BASED CREDIT SYSTEM (CBCS) & LEARNING OUTCOMES BASED CURRICULAR
FRAMEWORK (LOCF)**

BACHELOR OF COMMERCE WITH COMPUTER APPLICATIONS-2024 -2027 BATCH ONWARDS

| Sem | Part | Course Code | Title of the Course | Course Type | Instruction hours/week | Contact hours | Tutorial | Duration of Examination | Examination Marks | | | Credits | |
|-----|------|--|---|------------------------------------|------------------------|---------------|----------|-------------------------|-------------------|-----|-------|---------|---|
| | | | | | | | | | CA | ESE | TOTAL | | |
| I | I | TAM2301A/ HIN2301A/ FRE2301A | Tamil Paper I/ Hindi Paper I/ French Paper I | L | 4 | 58 | 2 | 3 | 25 | 75 | 100 | 3 | |
| | II | ENG2301A | English Paper I | E | 4 | 58 | 2 | 3 | 25 | 75 | 100 | 3 | |
| | III | CM23C01 | Principles of Accounting | CC | 5 | 73 | 2 | 3 | 25 | 75 | 100 | 3 | |
| | III | BP24C02 | e-business Applications | CC | 6 | 88 | 2 | 3 | 25 | 75 | 100 | 4 | |
| | III | TH24A07 | Mathematics for Commerce | GE | 5 | 73 | 2 | 3 | 25 | 75 | 100 | 4 | |
| | III | BP24CP1 | Financial Forecasting and Analytics Practical | CC | 4 | 60 | - | 3 | 15 | 35 | 50* | 2 | |
| | IV | Non Tamil Students | | | | | | | | | | | |
| | | | NME23B1 / NME23A1 | Basic Tamil I/ Advanced Tamil I | AEC | 2 | 28 | 2 | - | 100 | - | 100 | 2 |
| | | Students with Tamil as Language | | | | | | | | | | | |
| | | | NME23ES | Introduction to Entrepreneurship | AEC | 2 | 30 | - | - | 100 | - | 100 | |
| I-V | VI | 24BONL1 | Online Course I | ACC | - | - | - | - | - | - | - | - | |
| | | 24BONL2 | Online Course II | | | | | | | | | | |
| | | 24BONL3 | Online Course III | | | | | | | | | | |
| I | I | TAM2302A/ HIN2302A/ FRE2302A | Tamil Paper II/ Hindi Paper II/ French Paper II | L | 4 | 58 | 2 | 3 | 25 | 75 | 100 | 3 | |
| | II | ENG2302A | English Paper II | E | 4 | 58 | 2 | 3 | 25 | 75 | 100 | 3 | |
| | III | BP24C03 | Object Oriented Programming with C++ | CC | 6 | 88 | 2 | 3 | 25 | 75 | 100 | 4 | |

| | | | | | | | | | | | | |
|------------|-----|-------------------------------|---|------|----|----|---|---|------|------|-----|----|
| II | III | CM23C04 | Financial Accounting | CC | 5 | 73 | 2 | 3 | 25 | 75 | 100 | 3 |
| | III | TH24A16 | Statistics for Commerce | GE | 5 | 73 | 2 | 3 | 25 | 75 | 100 | 4 |
| | III | BP24CP2 | Programming with C++ Practical | CC | 4 | 60 | - | 3 | 15** | 35** | 50 | 2 |
| | IV | NM24UHR | Universal Human values and Human Rights | AECC | 2 | 30 | - | - | 100 | - | 100 | 2 |
| | | *NME23B2 NME23A2 | Basic Tamil II/ Advanced Tamil II | AEC | - | - | - | - | 100 | - | 100 | Gr |
| | VI | NM23GAW | General Awareness | AECC | SS | - | - | - | 100 | - | 100 | Gr |
| | VI | COM15SER | Community Service 30Hours | GC | - | - | - | - | - | - | - | - |
| I-V | VI | 24BONL1 24BONL2 24BONL3 | Online Course 1 Online Course 2 Online Course 3 | ACC | - | - | - | - | - | - | - | - |

L-Language

CC – Core Courses

GE – Generic Elective

AEC – Ability Enhancement Course

GC - General Course

****CA conducted for 25 and converted into 15, ESE conducted for 75 and converted into 35**

*** After class hours**

E-English

CA – Continuous Assessment

ESE–End Semester Examination

ACC – Additional Credit Course

AECC-Ability Enhancement Compulsory Courses

SS – Self study

Examination System

One test for continuous assessment will be conducted on pre-determined dates i.e., commencing on the 50th day from the date of reopening. The Model exam will be conducted after completing 85th working days. Marks for ESE and CA with reference to the maximum for the courses will be as follows

23-24 Batch onwards

CA Question Paper Pattern and distribution of marks UG Language and English

| | | | |
|--------------|---------------------|---|----------------------|
| Section A | 5 x 1 (No choice) | : | 5 Marks |
| Section B | 4 x 5 (4 out of 6) | : | 20 Marks (250 words) |
| Section C | 2 x 10 (2 out of 3) | : | 20 Marks (500 words) |
| Total | | | 45 |

Marks UG- Core and Allied - (First 3 Units)

CA Question from each unit comprising of

One question with a weightage of 2 Marks : $2 \times 3 = 6$

One question with a weightage of 5 Marks

(Internal Choice at the same CLO level) : $5 \times 3 = 15$

One question with a weightage of 8 Marks

(Internal Choice at the same CLO level) : $8 \times 3 = 24$

Total: 45 Marks

End Semester Examination – Question Paper Pattern and Distribution of Marks Language and English – UG

| | | | |
|--------------|-----------------------|---|----------------------------|
| Section A | 10 x 1 (10 out of 12) | : | 10 Marks |
| Section B | 5 x 5 (5 out of 7) | : | 25 Marks (250 words) |
| Section C | 4 x 10 (4 out of 6) | : | 40 Marks (600 - 700 words) |
| Total | | | 75 Marks |

UG - Core and Allied courses:

ESE Question Paper Pattern: 5 x 15 = 75 Marks

Question from each unit comprising of

One question with a weightage of 2 Marks: $2 \times 5 = 10$

One question with a weightage of 5 Marks
(Internal Choice at the same CLO level) : $5 \times 5 = 25$

One question with a weightage of 8 Marks
(Internal Choice at the same CLO level) : $8 \times 5 = 40$

ESE Question Paper Pattern :(for Accounts Paper) 5 x 15 = 75 Marks

Question from each unit comprising of

One question with a weightage of 2 Marks : $2 \times 5 = 10$

One question with a weightage of 5 Marks: $5 \times 5 = 25$

One question with a weightage of 8 Marks
(Internal Choice at the same CLO level) : $8 \times 5 = 40$

Continuous Internal Assessment Pattern Theory

I Year UG (24 Batch)

| | | |
|-------------------------|---|--|
| CIA Test | : | 5 marks (conducted for 45 marks after 50 days) |
| Model Exam | : | 7 marks (Conducted for 75 marks after 85 days (Each Unit 15 Marks)) |
| Seminar/Assignment/Quiz | : | 5 marks Class |
| Participation | : | 5 marks |
| Attendance | : | 3 marks |
| Total | : | 25 Marks |

Part IV

Introduction to Entrepreneurship / Universal Human values and Human Rights

| | | |
|----------------------|---|------------------|
| Quiz | : | 50 marks |
| Assignment | : | 25marks |
| Project / Case study | : | 25 marks |
| Total | : | 100 Marks |

MAPPING OF PLOs WITH CLOs

| COURSE LEARNING OUTCOMES | PROGRAMME LEARNING OUTCOMES | | | | |
|--------------------------|-----------------------------|-------------|-------------|-------------|-------------|
| | PLO1 | PLO2 | PLO3 | PLO4 | PLO5 |
| COURSE – CM23C01 | | | | | |
| CLO1 | S | M | S | M | S |
| CLO2 | S | M | S | M | M |
| CLO3 | S | M | M | M | M |
| CLO4 | S | M | S | M | S |
| COURSE – BP24C02 | | | | | |
| CLOs | PLO1 | PLO2 | PLO3 | PLO4 | PLO5 |
| CLO1 | S | S | S | S | M |
| CLO2 | S | S | S | S | S |
| CLO3 | S | M | S | S | M |
| CLO4 | S | S | M | S | M |
| COURSE –BP24CP1 | | | | | |
| CLOs | PLO1 | PLO2 | PLO3 | PLO4 | PLO5 |
| CLO1 | S | S | S | S | M |
| CLO2 | S | S | M | S | M |
| CLO3 | S | S | S | S | M |
| CLO4 | M | S | M | M | M |
| COURSE – BP24C03 | | | | | |
| CLOs | PLO1 | PLO2 | PLO3 | PLO4 | PLO5 |
| CLO1 | S | S | M | S | S |
| CLO2 | M | S | S | M | S |
| CLO3 | S | M | S | M | S |
| CLO4 | S | S | M | L | L |

| COURSE – CM23C04 | | | | | |
|-------------------------|---|---|---|---|---|
| CLO1 | S | S | M | M | S |
| CLO2 | S | S | M | M | S |
| CLO3 | S | S | S | S | M |
| CLO4 | S | S | S | S | M |
| COURSE –BP24CP2 | | | | | |
| CLO1 | S | S | M | M | M |
| CLO2 | S | M | S | M | M |
| CLO3 | S | M | M | S | L |
| CLO4 | M | S | M | S | L |

| COURSE CODE | COURSE NAME | CATEGORY | L | T | P | CREDIT |
|-------------|--------------------------|----------|----|---|---|--------|
| CM23C01 | PRINCIPLES OF ACCOUNTING | THEORY | 73 | 2 | - | 3 |

Preamble

To enable the students to apply the conceptual principles and to develop an expertise in handling accounts of business entities and the consolidation of accounts through appropriate accounting techniques and policies.

Prerequisite

- Basic Knowledge in Financial Statements

Course Learning Outcomes

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

| CLO Number | CLO Statement | Knowledge Level |
|------------|--|-----------------|
| CLO1 | Define the concepts and conventions in accounting. | K1 |
| CLO2 | Interpret accounting statement using basic concepts. | K2 |
| CLO3 | Apply the procedures of recording transactions and preparation of Reports. | K3 |
| CLO4 | Articulate the accounting concepts to interpret the performance of a Firm. | K4 |

Mapping with Programme Learning Outcomes

| CLOs | PLO1 | PLO2 | PLO3 | PLO4 | PLO5 |
|------|------|------|------|------|------|
| CLO1 | S | M | S | M | S |
| CLO2 | S | M | S | M | M |
| CLO3 | S | M | M | M | M |
| CLO4 | S | M | S | M | S |

S-Strong; M-Medium;

Syllabus

PRINCIPLES OF ACCOUNTING-CM23C01 (73 Hrs)

Unit I (14 Hrs)

Basic Accounting Concepts (AS-1)-Rectification of errors- Final Accounts - Bank Reconciliation Statement.

Unit II (14 Hrs)

Average due date-Bills of exchange (trade bills only) –Joint Venture (AS-27).

Unit III (15Hrs)

Departmental Accounts-Basis for allocation of expenses .Branch Accounts (Dependent Branches - Debtors and Stock & Debtors System - Independent Branches only).

Unit IV (15 Hrs)

Hire purchase Accounts: Default and Repossession- Hire purchase Trading Account-Installment purchase system.

Unit V (15Hrs)

Depreciation (excluding change in method of depreciation) - Investment Account (AS-13).

Text Book

| S. No | Authors | Title | Publishers | Year of Publication |
|-------|--------------------|----------------------|----------------------|---------------------------------------|
| 1. | Reddy TS &A Murthy | Financial Accounting | Margham Publications | Reprint 2021, 7 th Edition |

Reference Books

| S. No | Authors | Title | Publishers | Year of Publication |
|-------|------------------------------------|-----------------------------|---------------------|---------------------------------|
| 1. | R L Gupta & Radhasamy | Advanced Accountancy(Voll) | Sultan Chand &Sons. | 2018, 13 th Edition |
| 2. | Jain S.P & Narang K.L | Principles of Accountancy | Kalyani Publishers | 2018, 7 th Edition. |
| 3. | MC Shukla, T.S. Grewal &S.C. Gupta | Advanced Accountancy | S. Chand &sons | 2016, 19 th Edition. |

Skill Components

- Identifying concepts and conventions adopted by a firm in their financial statement.
- Prepare a Bank Reconciliation Statement for the business concern.
- Study a firm's financial statement and present a report on the accounting policies followed.
- To calculate the due date and amount on discounting of bills for a firm.
- Analyzing the financial statement of a hire purchase company and present a report on the collection system.
- Analyse the treatment of depreciation for different firms.

Pedagogy

Lecture through power point presentations, Discussion, Assignment, Quiz, and Seminar

Course Designers

1. Dr. S. Sujatha, Department of Commerce
2. Dr. G. Indrani, Department of Commerce

| COURSE CODE | COURSE NAME | CATEGORY | L | T | P | CREDIT |
|-------------|-------------------------|----------|----|---|---|--------|
| BP24C02 | e-BUSINESS APPLICATIONS | THEORY | 88 | 2 | - | 4 |

Preamble

To enable the students

- To understand about the fundamentals of computers and programming languages
- To provide in-depth understanding about Computer based Information system
- To impart knowledge about E-Commerce working models

Prerequisite

- Basic Knowledge in E-commerce

Course Learning Outcomes

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

| CLO Number | CLO Statement | Knowledge Level |
|------------|---|-----------------|
| CLO1 | Understand the computing concepts and computer applications in business with security policies. | K1 |
| CLO2 | Associating data processing, network programming and multimedia tools application with the business. | K2 |
| CLO3 | Develop and interpret the technical framework required for an e-Business, E-commerce in Internet, Ethics in E-commerce. | K3 |
| CLO4 | Analyzing computer characteristics in business and evaluating multimedia tools' significance within a business context. | K4 |

Mapping with Programme Learning Outcomes

| CLOs | PLO1 | PLO2 | PLO3 | PLO4 | PLO5 |
|------|------|------|------|------|------|
| CLO1 | S | S | S | S | M |
| CLO2 | S | S | S | S | S |
| CLO3 | S | M | S | S | M |
| CLO4 | S | S | M | S | M |

S-Strong; M-Medium;

e-BUSINESS APPLICATIONS – BP24C02 (88 Hrs)

Syllabus

UNIT – I

(18 Hrs)

*Computer- Characteristics- Importance – *Computer applications in various areas of Business – General applications of computers in various fields*. Data and Information –Data processing – *Steps of data processing*. Data structure – File Organisation and Maintenance – Programming Language – Machine language, Assembly language, High Level Languages – Programming tools- Steps in developing a computer Program – Computer networks- Features-Network Structure-*Types of networks*-*Multimedia tools**

UNIT – II

(17 Hrs)

*Introduction to E-Commerce-Defining E-Commerce-Features, Importance, Objectives of E-Commerce-E-Commerce industry framework-*Types of E-Commerce-Levels*- Need for E-Commerce-Applications of E-Commerce-*Challenges in E-Commerce application*-E-Commerce and E-Business-*Future of E-Commerce* - E- Service: E – Service technologies – E- Commerce Opportunities in India. EDI- Features of EDI- Introduction to cloud and grid computing-Android applications. E-tailing: Traditional retailing and e retailing, Benefits of e retailing, *Models of e-retailing, Features of e-retailing**

UNIT – III

(18 Hrs)

*E-commerce over the Internet-Concept of networking-Advantages of networking-*classification of networking*. Electronic payment methods-overview of EPS-*modes of E-payment*. Ethics in E-Commerce Issues in E Commerce Understanding Ethical, Social and Political issues in E-Commerce: A model for Organizing the issues, *Basic Ethical Concepts, Analyzing Ethical Dilemmas*, Candidate Ethical principles Privacy and Information Rights: *Information collected at E-Commerce Websites* - E – Commerce Process and Payment Solutions.*

UNIT – IV**(18 Hrs)**

E-Banking: Introduction Concepts and Meaning-Need for computerization-Electronic delivery channels-Automated teller machine - **Electronic Fund Transfer –Uses**-Computerization in clearing houses-Tele banking- Computer bank branches- **E-Cheque-MICR Cheque**-*e-Banking* in India. Threats in Computer System: Virus, Cybercrime Network Security: Encryption, Protecting Web server with firewall, **Firewall and Security policy**, Network firewalls and Application Firewalls, **Proxy Server**. E –Locking Technique – E – Locking Products – E – Locking Services.

UNIT – V**(17 Hrs)**

E- Business Communication – Importance of E – Technology. SSL protocol – Legal Aspects of E-Business, Internet frauds – Cyber Laws. Introduction to Industry 4.0 - **Need – Reasons for Adopting Industry 4.0** - Definition – Goals and Design Principles – Technologies of Industry 4.0- Skills required for Industry 4.0- **Advancements in Industry 4.0** – Impact of Industry 4.0 on Society, Business, Government and People - **Introduction to 5.0.**

*** Highlighted Content offered in Blended Mode**

Text Book

| S.No | Author Name | Title of the Book | Publisher | Year and Edition |
|------|--|---|--------------------------------|-----------------------------------|
| 1 | R. Saravana Kumar, R. Parameswaran T. Jayalakshmi(unitI) | A text book of Information Technology | S. Chand & Co ltd New Delhi | 16 th Edition 2016. |
| 2 | Rayudu C.S (unit II- IV) | E Commerce – E- Business | Himalaya Publishing House. | 1 st Edition 2015. |
| 3 | Kenneth C. Laudon and Carol Guercio Traver(Unit V) | E-Commerce 2022 | Pearson Publications | 1 st Edition 2022. |

Reference Books

| S.No | Author Name | Title of the Book | Publisher | Year and edition |
|------|-------------|--|----------------------------------|------------------------------|
| 1 | Joseph PT, | E Commerce, an Indian Perspective | Margham Publications | 5 th Edition 2015 |
| 2 | Murthy CSV | E Commerce – Concepts, Models, Strategies | Himalaya Publishing House. | 1 st Edition 2016 |

Pedagogy

- Lecture, Assignment, Group Discussion, PowerPoint Presentation and Seminar.

Course Designer

1. Dr. S. Nithya Sumathi
2. Mrs. L. Mahalakshmi

| COURSE CODE | COURSE NAME | CATEGORY | L | T | P | CREDIT |
|-------------|---|-----------|---|---|----|--------|
| BP24CP1 | FINANCIAL FORECASTING AND ANALYTICS PRACTICAL | PRACTICAL | - | - | 60 | 2 |

Preamble

To enable the students

- To adopt new tools and techniques in financial analysis using spreadsheets
- To use financial analysis tools in Libre Office Calc to support decision-making processes and solve complex financial problems.

Course Learning Outcomes

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

| CLO Number | CLO Statement | Knowledge Level |
|------------|---|-----------------|
| CLO1 | Understanding spread sheet fundamentals using Libre Office Calc | K1 |
| CLO2 | Organise and summarisation of financial data. | K2 |
| CLO3 | Extract the relevant financial statements and make the financial decisions | K3 |
| CLO4 | Develop skills in building financial models to analyse and evaluate business decisions. | K4 |

Mapping with Programme Learning Outcomes

| CLOs | PLO1 | PLO2 | PLO3 | PLO4 | PLO5 |
|------|------|------|------|------|------|
| CLO1 | S | S | S | S | M |
| CLO2 | S | S | M | S | M |
| CLO3 | S | S | S | S | M |
| CLO4 | M | S | M | M | M |

S-Strong; M-Medium;

FINANCIAL FORECASTING AND ANALYTICS -BP24CP1 (60 Hrs)

1. Calculation of present and future values (NPV and IRR) for Investment Analysis.
2. Calculation of Depreciation using Straight line and diminishing balance method.
3. Preparation of Loan amortization Table.
4. Integrating Data Validation using VLOOKUP and HLOOKUP
5. Organising, summarizing and Data manipulation through pivot table.
6. Financial Analysis using Sensitivity Analysis and What-If Analysis

7. Calculation of Break-Even Analysis using Goal Seek.
8. Preparation of Gantt chart to monitor project progress and prioritise activities
9. Developing three Statement Financial Model- Income Statement, Balance sheet and Cash Flow Statement
10. Horizontal and vertical Analysis of financial data of the company
11. Preparation of financial projection template of the business.
12. Forecasting Model-Straight line, Moving Average and Linear regression model.
13. Preparation of merger and acquisition model (M&A) Model.
14. Preparation of Discounted Cash Flow Analysis (DCF) Model.
15. Preparation of comparable company analysis (CCA) model

Pedagogy

Lecture, Demo in System

Course Designer

1. Dr. R. Jayasathya
2. Dr. C. Esakkiammal

| COURSE CODE | COURSE NAME | CATEGORY | L | T | P | CREDIT |
|--------------------|---|-----------------|-----------|----------|----------|---------------|
| NME23ES | INTRODUCTION TO ENTREPRENEURSHIP | THEORY | 30 | - | - | 2 |

Unit 1

(6hrs)

Introduction:

Entrepreneurship-Introduction-Factors-Barriers-Entrepreneurial Traits and Types- Steps for starting a Small Industry- MSMEs – Social entrepreneurship.

Unit 2

(6hrs)

Entrepreneurship Development Programmes-Institutional Framework (IFCI, ICICI, IDBI, IRBI, EXIM Bank, NSIC, SIDBI, SFC, SIPCOT AND TIIC) - Role of Incentives and Subsidies

Unit 3

(6hrs)

Innovation - Types –Role- Creative Problem Solving -Incubators - Angel Investors - Venture Capital.

Unit 4

(6hrs)

Intellectual Property- Meaning- Copy Right Registration- Patents- Trademark- Design and Procedure for registration.

Unit 5**(6hrs)****Project Preparation**

Project identification and Classification - Project Formulation- Project Appraisal- Project Report Presentation

Text Books

| Sl. No. | Author(s) | Title of the Book | Publisher | Year of Publication |
|---------|-------------------------------------|-----------------------------|-----------------------|---------------------|
| 1. | Gupta. C.B and Srinivasan.N. P | Entrepreneurial Development | Sultan Chand and Sons | 2020 |
| 2 | Sauhari Vinnie and Bhushan Sudhashu | Innovation Management | Oxford | 2014 |

Reference Books

| Sl. No. | Author(s) | Title of the Book | Publisher | Year of Publication |
|---------|-------------------------------|---|-----------|---------------------|
| 1. | KolbBonitaM | Entrepreneurship for the creative and cultural industries | Routedge | 2015 |
| 2. | P.T.Vijayashree & M.Alagammai | Entrepreneurship and Small Business Management | Margham | 2020 |

| COURSE CODE | COURSE TITLE | CATEGORY | L | T | P | CREDIT |
|-------------|--------------------------------------|----------|----|---|---|--------|
| BP24C03 | OBJECT ORIENTED PROGRAMMING WITH C++ | THEORY | 88 | 2 | - | 4 |

Preamble

The course provides an introduction to object-oriented programming using C++ language. It enables the students to apply C++ features in program design and implementation.

Prerequisite

- Basic Computer Skills, Basic Math Skills

Course Learning Outcomes

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

| CLOs | CLO Statement | Knowledge Level |
|------|--|-----------------|
| CLO1 | Define key concepts and principles of OOP's, C++ syntax, and file handling. | K1 |
| CLO2 | Associating the significance and functionality of OOP features and C++ constructs. | K2 |

| | | |
|-------------|--|-----------|
| CLO3 | Use OOP's, C++ features, and file management techniques for developing a program | K3 |
| CLO4 | Evaluate and compare programming paradigms, inheritance types, and runtime features. | K4 |

Mapping with Programme Learning Outcomes

| CLOs | PLO1 | PLO2 | PLO3 | PLO4 | PLO5 |
|-------------|-------------|-------------|-------------|-------------|-------------|
| CLO1 | S | S | M | S | S |
| CLO2 | M | S | S | M | S |
| CLO3 | S | M | S | M | S |
| CLO4 | S | S | M | L | L |

S- Strong; M-Medium; L – Low

OBJECT ORIENTED PROGRAMMING WITH C++ - BP24C03 (88 Hrs)

UNIT I

(17 Hours)

Object Oriented Programming: A New Paradigm – Evaluation of Programming Paradigm- Principles of Object Oriented Programming: ***Benefits of OOPs – Applications of OOPs*** – Beginning with C++: Structure of C++ program. Basic and user defined data types, Objects – **Data members and member functions** – private and public access specifiers - Static members - **Constructors – Destructors.**

UNIT II

(18 Hours)

C++ statements – operators in C++ **Scope Resolution Operator*** –Functions in C++: The Main Functions – Function Prototyping – **Friend Functions and Friend Classes** - Array of objects – **Pointer to objects** - this pointer **Function Overloading: Overloading a function** - Default arguments – Operator Overloading: Overloading an operator as a member function – Overloading an operator as a friend function.

UNIT III

(17 Hours)

Inheritance: Defining derived classes – Single Inheritance – ***Multilevel Inheritance*** Multiple Inheritance – ***Hierarchical Inheritance*** – Hybrid Inheritance .Run-time Polymorphism: **Virtual Functions**

UNIT IV

(18 Hours)

Polymorphism: ***Virtual Base Classes*** – Abstract classes – ***Constructors in Derived Classes***. Function overriding - Pure virtual function –Templates: **Function templates** – **Overloading a function template** – Class templates. Exception Handling: Exceptions – try, catch,

throw – Rethrowing an exception – Restricting exceptions - **Handling exceptions in derived classes.**

UNIT V

(18 Hours)

Managing Console I/O Operations: C++ streams – ***C++ stream classes*** – Unformatted I/O operations – ***Formatted console I/O operations*** – Managing output with manipulators. Working with files: Classes for file stream operations – ***opening and closing a file***– **Detecting End – of - File** – sequential I/O operations–***Error handling during file operations*** - implementation. Binary search algorithm and implementation.

*** Highlighted Content offered in Blended Mode**

Text Books

| S.No | Author | Title of the Book | Publisher | Year of Publication & Edition |
|------|-----------------|--------------------------------------|--------------------------------|-------------------------------|
| 1 | E. Balagurusamy | Object Oriented Programming with C++ | Tata McGraw Hill Publications. | 2013 and 6 th Edn. |

Reference Books

| S.No | Author | Title of the Book | Publisher | Year of Publication & Edition |
|------|--|--------------------------------------|----------------------------------|-------------------------------|
| 1 | Bjarne Stroustrup | The C++ Programming Language | Pearson Education. | 2014 and 4 th Edn. |
| 2 | Rajesh K. Shukla | Object Oriented Programming in C++ | Wilsey India Pvt.Ltd., | 2008 and 1 st Edn. |
| 3 | Robert Lafore | Object Oriented Programming in C++ | Galgotia Publications, Pvt Ltd., | 2001 and 4 th Edn. |
| 4 | Tony Gaddis, Judy Walfers, Godfery Muganda | Starting Out with C++: Early Objects | Addison-Wesley Publication. | 2013 and 8th Edn. |

Pedagogy

Lecture through power point presentations, Discussion, Assignment, Quiz, and Seminar

Blended Link

| UNIT | TOPIC | REFERENCE LINK |
|------|-----------------------------------|---|
| I | Benefits of OOPs | https://emeritus.org/in/learn/benefits-of-object-oriented-programming/ |
| | Applications of OOPs | https://www.quickstart.com/software-engineering/10-applications-of-object-oriented-programming/ |
| | Data members and member functions | https://www.includehelp.com/cpp-tutorial/data-members-and-member-functions.aspx |
| | Constructors – Destructors | https://www.geeksforgeeks.org/difference-between-constructor-and-destructor-in-c/ |

| | | |
|-----|--|--|
| II | Scope Resolution Operator | https://www.geeksforgeeks.org/scope-resolution-operator-in-c/ |
| | Friend Functions and Friend Classes | https://www.geeksforgeeks.org/friend-class-function-cpp/ |
| | Function Overloading: Overloading a function | https://www.geeksforgeeks.org/function-overloading-c/ |
| | Pointer to objects | https://www.javatpoint.com/pointer-to-an-object-in-cpp |
| III | Multilevel Inheritance | https://www.geeksforgeeks.org/cpp-multilevel-inheritance/ https://www.youtube.com/watch?v=BLb6-ZgxqHg |
| | Hierarchical Inheritance | https://www.youtube.com/watch?v=UYxJBJQZU-I |
| | Virtual Functions | https://www.geeksforgeeks.org/virtual-function-cpp/ |
| IV | Virtual Base Classes | https://www.geeksforgeeks.org/virtual-base-class-in-c/ |
| | Constructors in Derived Classes | https://www.geeksforgeeks.org/order-constructor-destructor-call-c/ |
| | Function templates | https://www.geeksforgeeks.org/templates-cpp/ |
| | Overloading a function template | https://www.ibm.com/docs/en/zos/2.4.0?topic=only-overloading-function-templates-c |
| V | Handling exceptions in derived classes | https://prepinsta.com/c-plus-plus/catching-base-and-derived-classes-as-exceptions/ |
| | C++ stream classes | https://www.geeksforgeeks.org/c-stream-classes-structure/ |
| | Formatted console I/O operations | https://www.geeksforgeeks.org/formatted-i-o-in-c/ |
| | Opening and closing a file | https://www.geeksforgeeks.org/how-to-open-and-close-file-in-cpp/ |
| | Detecting End – of - File | https://www.geeksforgeeks.org/ios-eof-function-in-c-with-examples/ |
| | Error handling during file operations | http://www.btechsmartclass.com/cpp-programming/Cpp-error-handling-during-file-operations.php#google_vignette |

Course Designers

1. Dr. A. Meenakshi
2. Mrs. A. Sasikala

| COURSE CODE | COURSE TITLE | CATEGORY | L | T | P | CREDIT |
|--------------------|-----------------------------|-----------------|-----------|----------|----------|---------------|
| CM23C04 | FINANCIAL ACCOUNTING | THEORY | 73 | 2 | - | 3 |

Preamble

AS

- To enable the students to apply the conceptual principles in financial Accounting
- To develop an expertise in handling the accounts and thereby to increase their level of understanding about the financial statements relating to partnership firms, insurance claims & insolvency.
- To enhance knowledge in partnership, insurance and insolvency accounting

Prerequisite

Basic Knowledge in accountancy

Course Learning Outcomes

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

| CLOs | CLO Statement | Knowledge Level |
|-------------|--|------------------------|
| CLO1 | Define the concepts of Partnership Firms, Fire Insurance Claims and Insolvency Accounts | K1 |
| CLO2 | Describe the accounting treatment of Partnership Firms, Fire Insurance Claims and Insolvency Accounts | K2 |
| CLO3 | Apply the procedures related to partnership firms, calculation of insurance claims and Insolvency Accounts | K3 |
| CLO4 | Analyze and prepare financial accounts for partnership firms in different situations, Insurance claims and Insolvency Accounts | K4 |

Mapping with Programme Learning Outcomes

| CLOs | PLO1 | PLO2 | PLO3 | PLO4 | PLO5 |
|-------------|-------------|-------------|-------------|-------------|-------------|
| CLO1 | S | S | M | M | S |
| CLO2 | S | S | M | M | S |
| CLO3 | S | S | S | S | M |
| CLO4 | S | S | S | S | M |

S- Strong; M-Medium

Syllabus

FINANCIAL ACCOUNTING - CM23C04 -73 HOURS

Unit I

(15Hrs)

Partnership Accounts: Division of Profits – Fixed & Fluctuating Capital – Past Adjustments – Guarantee of Profits – Admission of a partner - **Limited Liability Partnership:** Introduction- Definition – LLP Act 2008 - Features – Advantages and Disadvantages (Theory Only)

Unit II

(14Hrs)

Retirement of a Partner: Retirement Cum Admission -Death of a partner- Joint Life Policy – Accounting Treatment

Unit III

(15Hrs)

Dissolution of a Firm: Insolvency– Rule in Garner Vs Murray – Piece –Meal Distribution.(Maximum Loss Method only).Sale of Partnership to a Limited Company.

Unit IV

(15Hrs)

Fire Insurance Claims: Computation of Claim for Loss of Stock and loss of profit (excluding normal & abnormal loss)

Unit V

(14Hrs)

Insolvency Accounts: Relevant Act- Statement of Affairs – Deficiency Accounts - The Insolvency & Bankruptcy code 2016

Text Book

| S. No | Authors | Title | Publishers | Year of Publication & Edition |
|-------|----------------------|----------------------|----------------------|-------------------------------|
| 1. | Reddy T S & A Murthy | Financial Accounting | Margham Publications | Reprint 2023 |

Reference Books

| S. No | Auhors | Title | Publishers | Year of Publication & Edition |
|-------|-------------------------------------|------------------------------|----------------------|----------------------------------|
| 1. | RL Gupta &Radhasamy | Advanced Accountancy (Vol I) | Sultan Chand & Sons. | 2018, & 13 th Edition |
| 2. | Jain S.P &Narang K.L | Principles of Accountancy | Kalyani Publishers | 2018 & 12 th Edition |
| 3. | MC Shukla, T.S. Grewal & S.C. Gupta | Advanced Accountancy | S. Chand & sons | 2019 & 13 th Edition |

Skill Component

- Working on practical aspects of admission and retirement with partners' capital
- Preparation of partnership deed with important terms and conditions
- Preparation of deficiency statement for a real time partnership firm
- Calculation of Insurance claims for real time losses
- Case study analysis on Insolvency and Bankruptcy code

Pedagogy

Lecture, PPT, Assignment, Seminar, Group Discussion, Activity based Learning

Course Designers:

- Dr. S. Sujatha, Department of Commerce
- Dr. L. Nithya, Department of Commerce

| COURSE CODE | COURSE TITLE | CATEGORY | L | T | P | CREDIT |
|-------------|-----------------------------------|-----------|---|---|----|--------|
| BP24CP2 | PROGRAMMING WITH C++ PRACTICAL | PRACTICAL | - | - | 60 | 2 |

Preamble

To enable the students to enhance practical knowledge in C++ Programming.

Course Learning Outcomes

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

| CLO Number | CLO STATEMENT | Knowledge Level |
|------------|--|-----------------|
| CLO1 | Defining basic programming concepts of c++ which includes arithmetic operations, decision-making, and file handling. | K1 |
| CLO2 | Interpreting the principles of object-oriented programming, inheritance, operator overloading, and exception handling. | K2 |
| CLO3 | Use control structures, arrays, classes, inheritance, and file operations to solve problems. | K3 |
| CLO4 | Evaluate the functionality and efficiency of programs using advanced features of C++. | K4 |

Mapping with Programme Learning Outcomes

| CLOs | PLO1 | PLO2 | PLO3 | PLO4 | PLO5 |
|------|------|------|------|------|------|
| CLO1 | S | S | M | M | M |
| CLO2 | S | M | S | M | M |
| CLO3 | S | M | M | S | L |
| CLO4 | M | S | M | S | L |

S- Strong; M-Medium; L – Low

PROGRAMMING WITH C++ PRACTICAL - BP24CP2 (60 Hrs)

Syllabus

1. Develop a C++ program to perform addition of two numbers.
2. Create a C++ program to determine whether a given number is even or odd.
3. Implement a C++ program that exchanges (Swap) the values of two numbers.
4. Craft a C++ program to identify the largest number among three input values.
5. Construct a C++ program to verify the given number is prime or not.
6. Design a C++ program to compute the result of raising a number to a specified power.
7. Formulate a C++ program to determine the average of elements within an array.
8. Design a C++ program to check if a word is palindrome or not.
9. Design a class representing a "Student" with attributes like name, roll number, and age. Include member functions to set and display the student information.
10. Construct a program using classes and objects with single inheritance.
11. Write a C++ program to implement the Unary Operator Overloading.
12. Develop a program utilizing constructors and destructors in C++.
13. Write a program to implement Pure Virtual Functions
14. Write a C++ program that reads and prints the content of a text file.
15. Create a program that attempts to open a file. If the file is not found, throw an exception, and display an appropriate error message.

Pedagogy

- Lecture, Demo in System

Course Designers

1. Dr. A. Meenakshi
2. Mrs. A. Sasikala

| COURSE NUMBER | COURSE TITLE | CATEGORY | L | T | P | CREDIT |
|---------------|---|----------|----|---|---|--------|
| NM24UHR | UNIVERSAL HUMAN VALUES AND HUMAN RIGHTS | AEC | 30 | - | - | 2 |

This course aims at making learners conscious about universal human values in an integral manner, without ignoring other aspects that are needed for learner's survival at hard ships and personality development.

Objectives: The present course deals with meaning, purpose, and relevance of universal human values and how to inculcate and practice them consciously to be a good human being and realise one's potentials.

Unit I: Introduction to value Education:

5 Hours

Education system in India, value erosion at various levels-personal, family, society, nationalandinternational, Values-conceptandneed, Typesofvalues-personal, family and society, importance of value education , Incorporating Universal Human Values in Higher Education.

Unit II: Introduction to Universal Values

6 Hours

Introduction to Universal Values: Introduction, needs and basic understanding .Universal Values-Love, truth, nonviolence, peace and righteousness.

Love: Need of Love, Cultivating Love, Value aspects of Love.

Peace: Approaches to peace,Conflict–prevention and resolution, Fostering Culture of Peace in the Classroom.

Truth: Universal truth, Importance of Truth, Benefits of Truthfulness.

Nonviolence: Need, Gandhian Principles of Non-violence, Nonviolence-Its application in handling today's conflict, Six Guidelines to Carryout Nonviolent Action, ways to promote principles of non-violence.

Righteousness (Dharma): Meaning, functioning of Dharma, Characteristics of Dharma, Dharma of a Student, Practicing Dharma in daily life.

Unit III : Promoting Universal Human Values

6 Hours

Harmony in the Human Being: Understanding the Human Being as Co-existence of Self ('I') and Body, Discriminating between the Needs of theSelfandtheBody, TheBodyasanInstrumentof'I', UnderstandHarmonyintheSelf('I'), HarmonyoftheSelf('I')withtheBody.

Harmony in the Family and Society: Harmony in the Family – the Basic Unit of Human Interaction, Values in Human – to – Human Relationships, 'Trust'–the Foundational Value in Relationships, 'Respect' – as the Right Evaluation, Understand Harmony in the Society.

Harmony in the Nature (Existence): Understand Harmony in the Nature, Inter connectedness, Self-regulation and Mutual Fulfillment among the Four Orders of Nature, Realizing 'Existence is Co-existence' at All Levels, The Holistic Perception of Harmony in Existence

Unit IV Holistic Well-Being

7 Hours

Influence of universal human values on holistic wellbeing – Definition of well-being (state of being comfortable, healthy, happy and equanimity) – Types of Well Being: Hedonic (Subjective) and Eudaimonic (Psychological) – 8 Pillars of Holistic Wellness – (Physical, Emotional, Social, Spiritual, Intellectual, Occupational, Financial, Environment) – Resilience: Meaning and definition of Resilience – Learning from setbacks, well-being and resilience.

Unit V: Indian Constitutional Values

6 Hours

Human Rights: Meaning, characteristics of human rights, Human Rights and UNO, UDHR- Universal Declaration of Human Rights, Indian Constitution- Preamble, Fundamentals of Rights, fundamental duties, Right to Information Act (RTI), National Human Rights Commission (NHRC), State Human Rights Commission, Tamil Nadu.

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- **Narayan, R.S.,** A Text Book on Professional Ethics and Human Values, New Age International Publishers, New Age International (P) Ltd, New Delhi, 2006.
- **Norman, R.,** the Moral Philosophy An Introduction to Ethics, Oxford University Press, Oxford, 1998.
- **Nicotera, N., & Laser-Maira, J.A. (2017).** *Innovative Skills to Support Well-Being and Resiliency in Youth.* Oxford University Press.
- **Pradeep Kumar, Raman Charla,** Human Values & Professional Ethics, Paramount Publishing House, Hyderabad, 2013.
- **Susairathinam, A.A. (2020).** Lived experiences of separated women in Tamil Nadu, India: Psychological well-being. *Indian Journal of Positive Psychology*, 11(2), 93–104.

Activities:

- Quiz - **At the end of each session**
- Assignment - **After completion of each unit**
- Project Submission