



PSGR
Krishnammal College for Women



Affiliated to Bharathiar University \ Autonomous \ College of Excellence \ Accredited with A++ Grade \ Ranked 9th in NIRF

DEPARTMENT OF B COM (BUSINESS ANALYTICS)

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

BACHELOR OF COMMERCE WITH BUSINESS ANALYTICS

2025 – 2028 BATCH



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PROGRAMME LEARNING OUTCOMES (PLO's)

After completion of the programme, the student will be able to

PLO1: Exhibit conceptual and procedural foundations of business analytical methods and techniques integrated with disciplines such as commerce, mathematics, statistics, management, economics and computer science.

PLO2: Understand data science and its role of descriptive, predictive and prescriptive analytics using data mining techniques in problem solving and decision making that is imperative for business organizations.

PLO3: Inculcate programming knowledge and ability to explore Big Data technologies, and algorithms for data visualization and data inference of different industries.

PLO4: Apply appropriate analytic tools and techniques to resolve complex business analytical problems in various industry sectors and domains with hands on experience in relevant software.

PLO5: Identify and resolve practically relevant business analytic tools to handle data based on diversified commerce conjecture to build and sustain a competitive advantage by expanding analytics capabilities for successful career.

PROGRAMME SPECIFIC OUTCOME (PSO's)

The students at the time of graduation will be able

PSO1: To Provide Hands-on learning of leading analytical tools.

PSO2: To acquire theoretical knowledge of data science tools, but will also gain exposure to business perspectives.

PSO3: To provide perfect blend of analytical skills and business knowledge to excel as business analyst.



BACHELOR OF COMMERCE WITH BUSINESS ANALYTICS
CHOICE BASED CREDIT SYSTEM (CBCS) &
LEARNING OUTCOMES - BASED CURRICULUM FRAMEWORK (LOCF)
Scheme and Syllabus of Examination
2025-2028 BATCH
Semester I

| Semester | Part | Course Code | Title of the Course | Course Type | Instruction hours/ week | Contact hours/sem | Tutorial hours | Duration of Examination | Examination Marks | | | |
|-------------|------------|------------------------------------|--|-------------|-------------------------|-------------------|----------------|-------------------------|-------------------|-----|-------|---------|
| | | | | | | | | | CA | ESE | Total | Credits |
| I | I | TAM2501A/ HIN2501A/ FRE2501A | Tamil Paper I/ Hindi Paper I/ French Paper I | L | 4 | 58 | 2 | 3 | 25 | 75 | 100 | 3 |
| | II | ENG2501A | English Paper I | E | 4 | 58 | 2 | 3 | 25 | 75 | 100 | 3 |
| | III | CM25C01 | Principles of Accounting | CC | 5 | 73 | 2 | 3 | 25 | 75 | 100 | 3 |
| | | DA25C02 | Fundamentals of Business Analytics | CC | 6 | 88 | 2 | 3 | 25 | 75 | 100 | 4 |
| | | TH24A05 | Statistics I | GE | 5 | 73 | 2 | 3 | 25 | 75 | 100 | 4 |
| | | DA25CP1 | Analysis with Excel Practical | CC | 4 | 60 | - | 3 | 15 | 35 | 50* | 2 |
| | | NME25B1/ NME25A1 | Basic Tamil I Advanced Tamil I | AEC | 2 | 28 | 2 | - | 100 | - | 100 | 2 |
| | | NME23ES | Introduction to Entrepreneurship | AEC | 2 | 30 | - | - | 100 | - | 100 | |
| II | I | TAM2502A/ HIN2502A/ FRE2502A | Tamil Paper II / Hindi Paper II / French Paper II | L | 4 | 58 | 2 | 3 | 25 | 75 | 100 | 3 |
| | II | ENG2502A | English -Paper II | E | 4 | 58 | 2 | 3 | 25 | 75 | 100 | 3 |
| | III | CM25C04 | Financial Accounting | CC | 5 | 73 | 2 | 3 | 25 | 75 | 100 | 3 |
| | | AF24C05 | Fundamentals of Investment | CC | 5 | 73 | 2 | 3 | 25 | 75 | 100 | 3 |
| I-II | VI | NM25GAW | General Awareness | AECC | SS | - | - | - | 100 | - | 100 | Gr |
| I-II | VI | COM25SER | Community Services 30 Hours | GC | - | - | - | - | - | - | - | - |
| I-V | VI | 24BONL1 24BONL2 24BONL3 | Online Course I Online Course II Online Course III | ACC | - | - | - | - | - | - | - | - |

| | |
|--|--------------------------------|
| L-Language | E- English |
| CC - Core Courses | GE - Generic Elective |
| AEC - Ability Enhancement Courses | ACC–Additional Credit Course |
| CA- Continuous Assessment | ESE - End Semester Examination |
| AECC - Ability Enhancement Compulsory Course | GC – General Course |
| Gr – Grade | SS – Self Study |

* - CA conducted for 25 and converted to 15, ESE conducted for 75, and converted to 35 Marks.

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

CA Question Paper Pattern and distribution of marks

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

Core and Allied - (First 3 Units)

CA Question from each unit comprising of

One question with a weightage of 2 Marks : 2 x 3 = 6
 One question with a weightage of 5 Marks (Internal Choice at the same CLO level) : 5 x 3 = 15
 One question with a weightage of 8 Marks (Internal Choice at the same CLO level) : 8 x 3 = 24

Total : 45 Marks

CA Question Paper Pattern: (For Accounts)

Question from each unit comprising of

One question with a weightage of 2 Marks : 2 x 3 = 6
 One question with a weightage of 5 Marks : 5 x 3 = 15
 One question with a weightage of 8 Marks (Internal Choice at the same CLO level) : 8 x 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 |

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 x 5=10

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

One question with a weightage of 8 Marks (Internal Choice at the same CLO level) : 8 x 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 x 5=10

One question with a weightage of 5 Marks : 5 x 5=25

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

Total : 75 Marks

Continuous Internal Assessment Pattern Theory

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**

Quiz : 50 marks

Assignment : 25 marks

Project / Case study : 25 marks

Total : 100 Marks

Practical

Lab Performance : 7 Marks

Regularity : 5 Marks

Model Exam : 10 Marks

Attendance : 3 Marks

Total : 25 Marks

Advanced Tamil/ Basic Tamil

CIA Test : 25 Marks (conducted for 50 Marks after 50 days)

Model Exam : 50 Marks (conducted for 75 Marks after 85 days)

Quiz : 15 Marks

Assignment : 10 Marks

Total : 100 Marks

Attendance Marks

91 – 100% : 3 Marks

81 – 90 % : 2 Marks

75 – 80% : 1 Mark

MAPPING OF PLOs WITH CLOs

| COURSE | PROGRAMME OUTCOMES | | | | |
|-------------------------|---------------------------|-------------|-------------|-------------|-------------|
| | PLO1 | PLO2 | PLO3 | PLO4 | PLO5 |
| COURSE – DA24C03 | | | | | |
| CLO1 | S | S | M | S | S |
| CLO2 | S | M | S | S | M |
| CLO3 | M | S | S | M | M |
| CLO4 | S | M | S | S | M |
| COURSE – CM25C04 | | | | | |
| 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 – DA25CP2 | | | | | |
| CLO1 | S | S | M | M | M |
| CLO2 | S | M | M | S | M |
| CLO3 | S | M | M | M | S |
| CLO4 | S | S | M | S | M |
| COURSE | PROGRAMME OUTCOMES | | | | |
| | PLO1 | PLO2 | PLO3 | PLO4 | PLO5 |
| COURSE – CM25C01 | | | | | |
| 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 – DA25C02 | | | | | |
| CLO1 | S | S | S | S | M |
| CLO2 | S | S | S | S | M |
| CLO3 | S | S | S | S | M |
| CLO4 | S | S | M | S | S |
| COURSE – DA24CP1 | | | | | |
| CLO1 | S | S | S | S | S |
| CLO2 | S | S | S | S | S |
| CLO3 | S | S | S | M | S |
| CLO4 | S | S | M | S | S |

S-Strong; M-Medium

| COURSE CODE | COURSE TITLE | CATEGORY | L | T | P | CREDIT |
|-------------|--------------------------|----------|----|---|---|--------|
| CM25C01 | 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

| CLOs | 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

Unit I

(14 Hrs)

Basic Accounting Concepts and Conventions -Journal, Ledger Accounts– Subsidiary Books — Trial Balance – Disclosure of Company Accounting Policies (AS 1) - Revenue Recognition (AS 9)– Final Accounts of Sole Trading Concern- Capital and Revenue Expenditure and Receipts – Preparation of Trading, Profit and Loss Account and Balance Sheet with Adjustments.

Unit II

(15Hrs)

Classification of Errors - Rectification of Errors – Preparation of Suspense Account. Bank Reconciliation Statement - Need and Preparation. Average due date- Bills of Exchange – Definition – Specimens – Discounting of Bills – Endorsement of Bill – Collection – Noting – Renewal – Retirement of Bill under rebate (trade bills only).

Unit III

(15Hrs)

Accounting from Incomplete Records – Single Entry System: Incomplete Records -Meaning and Features - Limitations - Difference between Incomplete Records and Double Entry System - Methods of Calculation of Profit - Statement of Affairs Method – Preparation of final statements by Conversion method. Joint Venture (AS-27).

Unit IV**(15 Hrs)**

Royalty and Insurance Claims: Meaning – Minimum Rent – Short Working – Recoupment of Short Working – Lessor and Lessee – Sublease – Accounting Treatment. Provisions, Contingent Liabilities, and Contingent Assets (AS 29) - Insurance Claims –Calculation of Claim Amount-Average clause (Loss of Stock only).

Unit V**(14 Hrs)**

Depreciation (AS 6)- Meaning – Objectives – Accounting Treatments - Types - Straight Line Method – Diminishing Balance method – Conversion method – Annuity Method – Revaluation Method.

Text Book

| S. No | Authors | Title | Publishers | Year of Publication |
|-------|-----------------------|---------------------------|----------------------|---------------------------------------|
| 1. | Jain S.P & Narang K.L | Principles of Accountancy | Kalyani Publishers | 2022, 21 st Edn. |
| 2. | Reddy TS & A Murthy | Financial Accounting | Margham Publications | Reprint 2021, 7 th Edn. |

Reference Books

| S.No | Authors | Title | Publishers | Year of Publication |
|------|--------------------------------------|---------------------------------|----------------------|-----------------------------|
| 1. | R L Gupta & Radhasamy | Advanced Accountancy (Vol I) | Sultan Chand & Sons. | 2018, 13 th Edn. |
| 2. | M C Shukla, T.S. Grewal & S.C. Gupta | Advanced Accountancy | S.Chand & sons | 2022, 19 th Edn. |

Skill Components

- Review and assess a company's accounting policies and identify compliance with AS 1 (Disclosure of Accounting Policies) and AS 9 (Revenue Recognition).
- Identify and classify accounting errors and implement appropriate methods for their rectification.
- Apply the Single Entry System to business situations and evaluate the limitations of incomplete records.
- Analyze insurance claims with special emphasis on calculating the claim amount under the average clause, and apply it to loss of stock situations.
- Apply various methods of depreciation to different business scenarios and understand the financial impact of each method.

Pedagogy

- Power Point Presentations, Group Discussion, Seminar, Quiz Assignment, Experience Discussion

Course Designers

1. Dr. B. Thulasi Priya, Department of Commerce.
2. Mrs. G. Deebikaa, Department of Commerce.

| COURSE CODE | COURSE TITLE | CATEGORY | L | T | P | CREDIT |
|-------------|------------------------------------|----------|----|---|---|--------|
| DA25C02 | FUNDAMENTALS OF BUSINESS ANALYTICS | THEORY | 88 | 2 | - | 4 |

Preamble

- To achieve and establish vital understanding of big data application in business intelligence
- To institute the concept of systematic transformation of process - oriented data into information of the underlying business process
- To exhibit knowledge of data analysis techniques and to apply principles of data sciences integrating enterprise reporting

Prerequisite

- Understanding business goals, decision-making processes, and the role of data in business strategy.

Course Learning Outcomes

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

| CLOs | CLO Statement | Knowledge Level |
|------|--|-----------------|
| CLO1 | Define and understand the importance of business analytics and data science in business process and industry | K1 |
| CLO2 | Outline data integration, projecting, maintenance, designing and modeling of various data techniques | K2 |
| CLO3 | Identify the concepts of data ware house, data profiling, data dimension, mobility and various related systems and their applications in different industries | K3 |
| CLO4 | Analyse the business views using IT applications, its purpose and analyzing various concepts relating to it and inculcate problem solving and decision-making skills | K4 |

Mapping with Programme Learning Outcomes

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

S-Strong; M-Medium

Syllabus

Unit I

(18 Hrs)

Introduction to the BA Role: *Business Analysis -Business Analyst - The evolving role of the Business Analyst - Competing in a data-driven world*. The BA roadmap: different levels of business analysis - The basic rules of Business & Business Analysis - *Classical Requirements and Tasks performed by Business Analysts*. Project Definition and Scoping: Aspects-Projects phases-*Project approaches (Waterfall, Agile, Iterative, Incremental)* - The role of the BA across the project lifecycle. How companies are using big data and analytics - Why Everyone Needs Analytical Skills.

Unit II

(18Hrs)

Business view of Information Technology Applications: Business Enterprise Functions - Core business process – Baldrige Business Excellence framework - Key purpose of using IT in business - Internet-ready IT Applications - *Technology Centric Applications* - Enterprise Applications - Information users and their requirements. *Data Definition: Types of Data* – Attributes and Measurement–Types of data sets–Data quality–Types of Digital Data– *Characteristics – Storage and extraction process* - Difference between semi structured and structured data.

Unit III

(17Hrs)

Introduction to OLTP and OLAP – OLTP – Transaction – Segmentation – Advantages - Challenges - OLAP – *Different OLAP Architectures – OLTP and OLAP – Data models for OLTP and OLAP* – Role of OLAP Tools in BI Architecture. OLAP Operations in Multidimensional data - Business Intelligence – Business Intelligence defined – Evolution of BI and Role of DSS, EIS, MIS and Digital Dashboards – Need for BI – BI value chain – Introduction to Business Analytics - *Business Intelligence versus Business Analytics. BI Definitions and Concepts – BI Component Framework – Need for BI – BI Users* – Business Intelligence applications – BI roles and responsibilities – BI tools.

Unit IV

(18Hrs)

Data Integration – Data Warehouse – Ralph Kimball's Approach vs. W.H. Inmon's Approach- Goals – Data sources – *Extract, Transform and Load – Stages in ETL – ETL tools* - Data Integration - Challenges – Technologies – Approaches - Data Quality maintenance – Data profiling. Data Integration in Healthcare Domain - Data Modeling – Basics – Types – Techniques – Fact table – Dimension Table – *Typical Dimensional Models – Dimensional modeling life cycle* – Designing the Dimensional Model. BI in Real world – BI and mobility – BI and cloud computing – BI for ERP systems – Social CRM and BI.

Unit V

(17Hrs)

KPI: Measures and Performance – Measurement System Terminology – Navigating a Business Enterprise – Role of Metrics and Metrics Supply Chain – Fact-based Decision Making and KPIS – KPI Usage in Companies. *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 – Comparison: Industry 4.0 vs. 5.0 – Indian Knowledge System (IKS) in Business Analytics: Overview of IKS in business – Traditional Indian approaches to data, governance, and decision-making – Ancient frameworks for performance and success – Role of IKS in sustainable analytics and Industry 5.0.

Text Books

| S.No. | Author Name | Title of the Book | Publisher | Year & Edition |
|-------|-------------------------------|---|-----------------------|---------------------------|
| 1. | R.N. Prasad and Seema Acharya | Fundamentals of Business Analytics | Wiley | 2016, 2 nd Edn |
| 2. | P.Kaliraj and Dr.T.Devi | Higher Education for Industry 4.0 and Transformation to Education 5.0 | Bharathiar University | 2020, 3 rd Edn |

Reference Books

| S. No. | Author Name | Title of the Book | Publisher | Year & Edition |
|--------|--|--------------------------------|-------------------|---------------------------|
| 1. | Haydn Thomas– Demonoid | Business Analysis Fundamentals | Pearson Education | 2016, Revised Edn |
| 2. | Pang-Ning Tan Michael Steinbach, Vipin Kumar | Introduction to Data Mining | Pearson Education | 2021, 2 nd Edn |

Skill Components

- Determine the concepts of business analytics and business processes.
- Analyzing the techniques of integration and modeling.
- Analyze the concept of data warehouse, OLTP, OLAP.
- Understand KPI and measures to apply in a business.
- Forecast on business intelligence concepts for enterprise reporting.
- Understanding Industry 4.0 & 5.0, and integrating Indian Knowledge Systems (IKS) into sustainable analytics and decision-making.

Pedagogy

- Lecture, PPT, Quiz, Assignment, Group Discussion, Seminar

Course Designers

1. Dr Brindha N V
2. Mr B Ziyaudeen

| COURSE CODE | COURSE TITLE | CATEGORY | L | T | P | CREDIT |
|-------------|-------------------------------|-----------|---|---|----|--------|
| DA25CP1 | ANALYSIS WITH EXCEL PRACTICAL | PRACTICAL | - | - | 60 | 2 |

Preamb

- To inculcate the knowledge of MS Excel
- To understand the basic statistics tools & methods

Prerequisite

- Understanding of Excel interface, data entry, basic formulas and formatting tools.

Course Learning Outcomes

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

| CLOs | CLO Statement | Knowledge Level |
|------|--|-----------------|
| CLO1 | Understand and find commands in Excel, Getan head start with templates and setup an Excel template | K1 |
| CLO2 | Demonstrate the excel data model and connect to external data and use advance techniques for report visualization. | K2 |
| CLO3 | Discuss on statistical operation and tools used in Excel and Documentation and review tools | K3 |
| CLO4 | Illustrate on basic analytical tools and Application of financial functions | K4 |

Mapping with Program Learning Outcomes

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

S-Strong; M-Medium; L-Low

Syllabus

1. Create an MS Excel work sheet to illustrate sorting function.
2. Suppose that at the beginning of May 2012 you purchased shares in Apple, Inc. (Nasdaq: AAPL). It is now five years later and you decide to evaluate your holdings to see if you have done well with this investment. The table below shows the market prices of AAPL.

| DATE | PRICE |
|------|--------|
| 2018 | 59.77 |
| 2013 | 121.19 |
| 2014 | 188.75 |
| 2015 | 135.81 |
| 2016 | 256.88 |
| 2017 | 337.41 |

- a) Enter the data, as shown, into a worksheet and format the table as shown.
 - b) Create a formula to calculate rate of return for each year. Format the results as percentages with two decimal places.
 - c) Calculate the total return for the entire holding period. What is the compound average annual rate of return?
 - d) Create a Line chart showing the stock price from May 2006 to May 2011. Make sure to title the chart and label the axes. Now, create an XY Scatter chart of the same data. What are the differences between these types of charts? Which type of chart is more appropriate for this data?
 - e) Experiment with the formatting possibilities of the chart. For example, you might try changing it to a 3-D Line chart and fill the plot area with a marble background. Is there any reason to use this type of chart to display this data? Do the “enhancements” help you to understand the data?
3. In your position as research assistant to a portfolio manager, you need to analyse the profitability of the companies in the portfolio. Using the data for Chevron Corporation below:

| FISCAL YEAR | 2017 | 2016 | 2015 | 2014 | 2013 |
|---------------|----------|----------|----------|----------|----------|
| TOTAL REVENUE | 1,98,198 | 1,71,636 | 2,64,958 | 2,20,904 | 2,04,892 |
| NET INCOME | 19,024 | 10,483 | 23,931 | 18,688 | 17,138 |

- a) Calculate the net profit margin for each year.
- b) Calculate the average annual growth rates for revenue and net income using the **GEOMEAN** function. Is net income growing more slowly or faster than total revenue? Is this a positive for your investment in the company?

- c) Calculate the average annual growth rate of total revenue using the **AVERAGE** function. Is this result more or less accurate than your result in the previous question? Why?
- d) Create a Column chart of total revenue and net income. Be sure to change the chart so that the x-axis labels contain the year numbers, and format the axis so that 2017 is on the far right side of the axis.
4. Repeat Problem 2 using the data below for Qualcomm Inc. However, this time you should create a copy of your worksheet to use as a template. Replace the data for Chevron with that of Qualcomm.

| FISCAL YEAR | 2017 | 2016 | 2015 | 2014 | 2013 |
|----------------------|---------------|---------------|---------------|--------------|--------------|
| TOTAL REVENUE | 10,991 | 10,416 | 11,142 | 8,871 | 7,526 |
| NET INCOME | 3,247 | 1,592 | 3,160 | 3,303 | 2,470 |

- a) Do you think that Qualcomm can maintain the current growth rates of sales and net income over the long run? Why or why not?
- b) Which company was more profitable in 2010? Which was more profitable if you take a longer view? Would this affect your desire to invest in one company over the other?

5. Using the data for Paychex, Inc.(Nasdaq: PAYX),presented below:

| FISCAL YEAR | 2017 | 2016 | 2015 | 2014 | 2013 |
|--|------------------|------------------|------------------|------------------|------------------|
| SALES | \$2000.82 | \$2082.76 | \$2066.32 | \$1886.96 | \$1674.60 |
| EBIT | 729.31 | 812.08 | 854.82 | 743.27 | 674.77 |
| TOTAL NET INCOME | 477.00 | 533.54 | 576.14 | 515.45 | 464.91 |
| DIVIDENDS PER SHARE | 1.24 | 1.24 | 1.22 | 1.02 | 0.69 |
| BASICEPS FROM TOTAL | 1.32 | 1.48 | 1.56 | 1.35 | 1.23 |
| OPERATIONS | | | | | |
| TOTAL ASSETS | 5,226.30 | 5,127.42 | 5,309.79 | 6,246.52 | 5,549.30 |
| ACCOUNTS PAYABLE | 37.3 | 37.33 | 40.25 | 46.96 | 46.67 |
| TOTAL LIABILITIES | 3,824.32 | 3,785.94 | 4,113.15 | 4,294.27 | 3,894.46 |
| RETAINED EARNINGS | 856.29 | 829.50 | 745.35 | 1,595.10 | 1,380.97 |
| NETCASH FROM OPERATING ACTIVITIES | 610.92 | 688.77 | 724.67 | 631.23 | 569.23 |

- a) Calculate the ratio of each years' data to the previous year for each of the above items for Paychex, Inc. For example, for the year 2010, the ratio for sales is $\$2,000.82 / \$2,082.76 = 0.9607$.
- b) From your calculations in part a, calculate each year's rate of growth. Using the example in part a, the ratio is 0.9607, so the percentage growth in sales for 2010 is $0.9607 - 1$ or -3.93% .
- c) Calculate the average growth rate (using the **AVERAGE** function) of each of the above items using the results you calculated in part b. These averages are arithmetic averages.

- d) Use the **GEOMEAN** function to estimate the compound annual average growth rate (CAGR) for each of the above items using the results that you calculated in part a. Be sure to subtract 1 from the result of the **GEOMEAN** function to arrive at a percent change. These averages are geometric averages.
- e) Compare the results from part c (arithmetic averages using the **AVERAGE** function) to those for part d (geometric averages using the **GEOMEAN** function) for each item. Is it true that the arithmetic average growth rate is always greater than or equal to the geometric average (CAGR)?
- f) Contrast the results for the geometric averages to those for the arithmetic average for the variables listed below. What do you observe about the differences in the two growth estimates for Sale and Accounts Payable? What do you observe about the differences in the two estimates for Total Assets and Retained Earnings? Hint: Look at the results from part b (the individual yearly growth rates) for each variable to draw some conclusions about the variation between the arithmetic and geometric averages.

- Sales
- EBIT
- Total Assets
- Accounts Payable
- Retained Earnings

2. Cash budget using What If Analysis

3. Using Goal Seek to calculate Break Even Points

4. Demonstrate the statistical functions of Qualcomm Company by using MS Excel.

5. Sensitivity analysis of Capital Budgeting–Scenario Analysis, NPV Profile Charts

6. Use Goal Seek to find out what grade is need on the final assignment to pass the class given that the grades on the first four assignments are **64, 55, 78, and 59**. Use formula or function that calculates the final grade.

7. Analyzing Data sets with Tables and Pivot Tables

8. Create an Excel Worksheet for the monthly sales of a product and also represent the data by using bar chart.

9. Use Goal Seek in Excel find the grade of the fourth exam that produces a final grade of 70.

| Exam | Marks |
|-------|-------|
| Exam1 | 50 |
| Exam2 | 80 |
| Exam3 | 60 |

10. Prepare a pay-bill using a worksheet. The worksheet should contain Employee Id, Name, Designation, Experience and Basic Salary and Job ID.

If Job Id is 1 then DA is 45% of the basic salary. HRA is Rs.5500.

If Job Id is 2 then DA is 40% of the basic salary. HRA is Rs. 4500.

For all the other Job ids DA is 35% of the basic salary and HRA is Rs.3500. For all the above Job ids PF to be deducted is 4%.

For the job ids 1&2 Rs.100 to be deducted as Professional Tax.

11. Design a Dynamic Dashboard with Data Validation

12. Create Charts for Data Visualization

Pedagogy

- Lecture, PPT, Quiz, Assignment, Group Discussion, Seminar

Course Designers

1. Dr Brindha N V
2. Mr B Ziyaudeen

| COURSE CODE | COURSE TITLE | CATEGORY | L | T | P | CREDIT |
|-------------|----------------------|----------|----|---|---|--------|
| CM25C04 | FINANCIAL ACCOUNTING | THEORY | 73 | 2 | - | 3 |

Preamble

To enable the students to apply the conceptual principles in financial Accounting and to develop an expertise in handling the accounts and thereby to increase their level of understanding about the financial statements relating to partnership firms, Branch and Departmental accounting.

Pre requisite

- 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, the accounting treatment of Partnership Firms | K1 |
| CLO2 | Describe the procedures related to partnership firms, calculation of Insolvency Accounts | K2 |
| CLO3 | Apply appropriate accounting treatments in partnership accounts, hire purchases Installment system , Branch and Departmental accounts | K3 |
| CLO4 | Evaluate the financial impact of hire purchases Installment system , Branch and Departmental 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 -CM25C04 -73 HOURS

Unit I (15Hrs)

Partnership Accounts: Division of Profits – Fixed & Fluctuating Capital – Past Adjustments – Guarantee of Profits –Admission of a partner - Treatment of Goodwill - Calculation of Hidden Goodwill.

Unit II (14Hrs)

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

Unit III (15Hrs)

Dissolution of Partnership - Methods – Settlement of Accounts Regarding Losses and Assets – Realization account – Treatment of Goodwill – Preparation of Balance Sheet - One or more Partners insolvent – All Partners insolvent – Application of Garner Vs Murray Theory – Accounting Treatment - Piecemeal Distribution – Surplus Capital Method – Maximum Loss Method.

Unit IV**(15Hrs)**

Hire Purchase and Installment System -Hire Purchase System – Accounting Treatment –Calculation of Interest - Default and Repossession - Hire Purchase Trading Account- Installment System - Calculation of Profit.

Unit V**(14Hrs)**

Branch and Departmental Accounts :Branch – Dependent Branches: Accounting Aspects - Debtors system -Stock and Debtors system – Distinction between Wholesale Profit and Retail Profit – Independent Branches (Foreign Branches excluded) - Departmental Accounts: Basis of Allocation of Expenses – Inter- Departmental Transfer at Cost or Selling Price.

Text Book

| S.No | Authors | Title | Publishers | Year and Edition |
|------|--------------------|----------------------|----------------------|------------------------------------|
| 1. | Reddy TS& A Murthy | Financial Accounting | Margham Publications | 2023 & Revised 6 th edn |

Reference Books

| S.No | Authors | Title | Publishers | Year and Edition |
|------|-----------------------------------|------------------------------|----------------------|-------------------------------|
| 1. | RL Gupta & Radhasamy | Advanced Accountancy (Vol I) | Sultan Chand & Sons. | 2020, & 13 th edn. |
| 2. | Jain S.P & NarangK.L | Principles of Accountancy | Kalyani Publishers | 2021 &13 th edn. |
| 3. | MC Shukla,T.S.Grewal & S.C. Gupta | Advanced Accountancy | S. Chand &sons | 2021 &14 th edn. |

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 hire purchase accounts on real time basis.
- Preparation of branch and departmental accounts.

Pedagogy

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

Course Designers

1. Dr. G.Indrani
2. Dr.L.Nithya

| COURSE CODE | COURSE TITLE | CATEGORY | L | T | P | Credit |
|-------------|----------------------------|----------|----|---|---|--------|
| AF24C05 | FUNDAMENTALS OF INVESTMENT | THEORY | 73 | 2 | - | 3 |

Preamble

- To provide the essential principles for allocating resources, managing risk, and achieving financial growth through informed, strategic decision making

Prerequisite

- Basic Knowledge in fundamentals of investment.

Course Learning Outcomes

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

| CLO Number | CLO Statement | Knowledge Level |
|------------|--|-----------------|
| CLO1 | Define the concept of investment decision process and types of Investments | K1 |
| CLO2 | Demonstrate an understanding of investment principles, asset types, risk – return trade off by considering sustainable investment strategies | K2 |
| CLO3 | Construct investment portfolios that balance financial returns with ethical and environmental considerations. | K3 |
| CLO4 | Motivate students to navigate financial markets that focus on sustainable growth. | K4 |

Mapping with Programme Learning Outcomes

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

S- Strong; M-Medium

Syllabus

FUNDAMENTALS OF INVESTMENT - AF24C05 -73 Hrs

UNIT I

(15Hrs)

The Investment Environment - The investment decision process - Types of Investments – Commodities, Real Estate and Financial Assets - the Indian securities market - the market participants and trading of securities - Security market indices- sources of financial information -Concept of return and risk- Impact of Taxes and Inflation on return.

UNIT II**(14 Hrs)**

Fixed Income Securities - Bond features - Types of bonds - Estimating bond yields- Valuation types of bond risks – Price earning multiple approach to equity valuation

UNIT III**(15 Hrs)**

Introduction to sustainable Investing - ESG Investing: Understanding ESG factors and metrics - Impact Investing: Generating measurable social and environmental impact alongside financial returns – Green bonds- Sustainability-linked investments.

UNIT IV**(15 Hrs)**

Introduction to Geopolitical Investments – Macroeconomic fundamentals and Geopolitics – Political risk in Investments – Global Investment Opportunities – Currency risks and Geopolitics- Core concept in global GDP growth: Introduction to GDP and economic indicators- Theories of economic growth and development- Regional and global trends- Challenges to global growth.

UNIT V**(14 Hrs)**

Investor Protection - Role of SEBI and stock exchanges in investor protection - Investor grievances and their redressal system - Insider trading - investors' awareness and activism.

Text Books

| S.No | Authors | Title | Publishers | Year and Edition |
|------|--------------------|---------------------------------------|-------------------------------------|---------------------------------------|
| 1 | V K Bhalla | Fundamentals of Investment Management | Sultan Chand Publication, New Delhi | 2020 and 5 th Revised edn. |
| 2 | Dr.Vanita Tripathi | Fundamental of Investment | Taxmanns, New Delhi | 2021 and 5 th edn. |
| 3 | Dr.Preeti Singh | Fundamentals of Investment | Himalaya Publishing House, Mumbai | 2020 and 20 th edn |

Reference Books

| S.No | Author | Title | Publishers | Year and Edition |
|------|---------------------------|----------------------------|-----------------------------------|---------------------------------------|
| 1 | S K Sharma & Gurmeet Kaur | Fundamentals of Investment | Sultan Chand, New Delhi | 2023 and Current edn |
| 2 | R P Rustogi | Fundamentals of Investment | Sultan Chand and Sons , New Delhi | 2023 and 12 th Revised edn |

Skill Components

- To evaluate macro-economic factors such as interest rates, inflation, GDP growth and geopolitical trends.
- To know how to structure investments for tax efficiency which is an essential component for framing successful investment strategy
- To analyze the growth trends and challenges of a specific industrial sector.
- To identify and interpret the income generation opportunities of a selected industrial sector
- To evaluate the liquidity position of bonds with the ease of transacting them in the financial market

Pedagogy

- Powerpoint Presentations Quiz, Assignment, Group Discussion, Seminar, Experiential Discussion

Course Designers

1. Dr.G.Rekha
2. Dr. S. Manasha

| COURSE CODE | COURSE TITLE | CATEGORY | L | T | P | CREDIT |
|-------------|--------------|----------|----|---|---|--------|
| CM23C06 | BUSINESS LAW | THEORY | 73 | 2 | - | 3 |

Preamble

- To provide students with an understanding of general principles of law of contract and special contracts and to provide an insight into the sale of Goods Act. To familiarize with various types of Insurance and claim.

Prerequisite

- Basic Knowledge on Indian contract Act

Course Learning Outcomes

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

| CLO Number | CLO Statement | Knowledge Level |
|------------|---|-----------------|
| CLO1 | State the fundamental rules of commercial law applicable to all the business context | K1 |
| CLO2 | Understand the different elements of business and legal terminology of procedures in this current business scenario | K2 |
| CLO3 | Examine the rules regarding the administration of agreements relating to the business activities | K3 |
| CLO4 | Apply the various principles of contracts and interpret the legal issues | K4 |

Mapping with Programme Learning Outcomes

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

S- Strong; M-Medium

Syllabus

BUSINESS LAW-CM23C06-73 HOURS

Unit I

(14 Hrs)

Indian Contract Act 1872 – Meaning of Contract – Definition – Obligation & Agreement – Nature of Contract & Classification – Components of Valid Contract - Offer & Acceptance- Consideration – Capacity to Contract. AI in Contract Law

Unit II

(14 Hrs)

Free Consent – Unlawful Agreements – Quasi Contracts - Different Modes of Discharge of Contract – Remedies of Breach – Principles for awarding Damages

Unit III**(15 Hrs)**

Contract of Indemnity & Guarantee, Essential elements of Indemnity and Guarantee. Rights of Surety – Discharge of Surety. Bailment & Pledge – Rights & Duties of Bailor & Bailee – Rights and Liabilities of Finder of Lost Goods.

Unit IV**(15 Hrs)**

Sale of Goods Act 1930 – Sale & Agreements to Sell – Rules Regarding Passing of Property in Goods – Conditions & Warranties – Actual & Implied -Principle of “Caveat Emptor” and its Limitations – Rights of Unpaid Vendor. Law of Agency – Kinds of Agency – Rights & Liabilities of Principal and Agent.

Unit V**(15 Hrs)**

Consumer Protection Act 1986 - Introduction to Intellectual Property Right Act- - Copyright, Patent and Trademark - Competition Act 2002. *Contract of Insurance - Nature and Fundamental Principles of Insurance – Life Insurance – Fire insurance – Marine Insurance - Policy claims - IRDA and its functions.

Text Book:

| S.No | Authors | Title | Publishers | Year and Edition |
|------|------------|--------------|---------------------|-------------------------------------|
| 1. | Kapoor N.D | Business Law | Sultan Chand & sons | 2023 & 4 th Revised edn. |

Reference Books:

| S.No | Authors | Title | Publishers | Year and Edition |
|------|--------------------------------|--------------|-------------------|-------------------------------------|
| 1. | Pillai. R.S.N & Bagavathi. B | Business Law | S.Chand& Co | 2015 & 3 rd Revised edn. |
| 2 | P C Tulsian and Bharat Tulsian | Business Law | Tata McGraw- Hill | 2017 & 3 rd Revised edn. |

Skill Component

- Preparation of different types of contracts and to develop the working knowledge on the execution of the same.
- Apply the regulatory framework to various laws pertaining to business and sale of goods in real case analysis.
- Framing a sample legal deed of understanding between bailor and bailee
- Analyse the significant aspects in IRDA and calculate the claim of the insured.

Pedagogy

PowerPoint presentations, Lecture, PPT, Assignment, Seminar, Group Discussion, Activity-based Learning

Course Designers

1. Dr. B.Thulasi Priya
2. Ms.G.Deebika