



DEPARTMENT OF B COM (BUSINESS ANALYTICS)

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

BACHELOR OF COMMERCE WITH BUSINESS ANALYTICS

2023 – 2026 BATCH

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

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.

DEPARTMENT OF B COM (BUSINESS ANALYTICS)
CHOICE BASED CREDIT SYSTEM (CBCS) & LEARNING OUTCOMES BASED
CURRICULAR FRAMEWORK (LOCF)BACHELOR OF COMMERCE WITH
BUSINESS ANALYTICS – 2023-2026 BATCH

Programme & Branch: B Com (Business Analytics)												
<i>Scheme of Examination</i> (Applicable to students admitted during the academic year 2023- 2024 onwards)												
Semester	Part	Subject Code	Title of the Paper	Instruction hrs/ week	Course Type	Instruction	Tutorial hrs	Examination	Examination marks			
									CIA	ESE	Total	Credits
I	I	TAM2301A/ HIN2301A/ FRE2301A	Tamil Paper I/ Hindi Paper I/ French Paper I	4	Language	58	2	3	25	75	100	3
	II	ENG2301A	English Paper I	4	English	58	2	3	25	75	100	3
	III		Group A – Core									
		CM23C01	Principles of Accounting	5	CC	73	2	3	25	75	100	4
		DA23C02	Fundamentals of Business Analytics	5	CC	73	2	3	25	75	100	3
		TH23A15	Allied - Statistics I	6	GE	88	2	3	25	75	100	4
		DA23CP1	Computer Application Practical I - Analysis with Excel	4	CC	57	3	3	50	50	50*	2
	IV		Non Tamil Students									
		NME23B1	Basic Tamil I	2	AECC	30	-	-	100	-	100	2
		NME23A1	Advanced Tamil I	2		30	-	-	100	-	100	
			Students with Tamil as a Language									
		NME23ES	Introduction to Entrepreneurship	2		30	-	-	100	-	100	

II	I	TAM2302A/ HIN2302A/ FRE2302A	Language – Tamil / Hindi / French Paper II	4	Language	58	2	3	25	75	100	3
	II	ENG2302A	English Paper II	4	English	58	2	3	25	75	100	3
	III	DA23C03	Paper III – R Programming	5	CC	73	2	3	25	75	100	4
		CM23C04	Paper IV – Financial Accounting	5	CC	73	2	3	25	75	100	3
		TH23A16	Allied - Statistics II	6	GE	88	2	3	25	75	100	4
		DA23CP2	Computer Application Practical II-Analysis with Statistical Package & R	4	CC	57	3	3	25	75	50*	2
III	IV	Non-Tamil Students										
		NME23B2	Basic Tamil II- Outside regular class hours	-	AECC	28	2	-	100	-	100	Gr
		NME23A2	Advanced Tamil II- Outside regular class hours	-		28	2	-	100	-	100	
			Open Course Self-Study - Online course	-	-	-	-	-	-	-	-	
	V	23PECM1	Professional English for Commerce and Management	2	AECC	40	5	5	100	-	100	2
	VI		Personality Development Programme	-	-	-	-	-	-	-	-	-
	III B	NM23GAW	General awareness	-	Self- Study	-	1	-	-	-	100	Gr
III	I	TAM2303A/ HIN2303A/ FRE2303A	Tamil paper III/ Hindi paper III/ French paper III	4	L	58	2	3	25	75	100	3
	II	ENG2303A	English Paper III	4	E	58	2	3	25	75	100	3
	III	BP23C05	Digital Marketing	5	CC	73	2	3	25	75	100	4
		DA23C06	Database Programming	4	CC	58	2	3	25	75	100	3
		BP23A01/ AF23A02/ DA23A03	Business Management and Ethics / Business Economics/ Corporate Governance	5	GE	73	2	3	25	75	100	4
		DA23CP3	Database Programming Practical	3	CC	45	-	3	15	35	50*	2
		DA23SCE1/ CS23SBGP	Skill-Based Subject I – Data Science and Statistics/ GEN AI	3	SEC	45/ 44	-/1	-	100	-	100	3
		NM23DTG	Design Thinking	2	AEC	30	-	-	100	-	100	2

	IV	NM22UHR	Universal Human Values and Human Rights #	-	AECC	-	-	-	100	-	100	Gr
IV	I	TAM2304A/ HIN2304A/ FRE2304A	Tamil Paper IV/ Hindi Paper IV/ French Paper IV	L	4	58	2	3	25	75	100	3
	II	ENG2304A	English Paper IV	E	4	58	2	3	25	75	100	3
	III	BP23C07/ CM23C10	Business Finance	CC	5	73	2	3	25	75	100	4
		DA23C08	Business Analytics with Python	CC	4	58	2	3	25	75	100	3
		BP23A03/ DA23A04/ DA23A05	Business Law/ Business Intelligence/ Business Data Mining	GE	5	73	2	3	25	75	100	4
		DA23CP4	Business Analytics with Python Practical	CC	3	45	-	3	15	35	50**	2
IV	III	DA22SCE1/ CS23SBGP	Data Science and Statistics/ GEN AI	SEC	3	45	-	-	100	-	100	3
IV	IV	NM23EII	Entrepreneurship and Innovation (Ignite X)	AECC	2	30	-	-	100	-	100	2
	IV	NM23EVS	Environmental Studies	AECC	SS	-	-	-	100	-	100	Gr
	V	COCOACT	Co-curricular Activities	GC	-	-	-	-	100	-	100	1
		COM15SER	Community Services 30 Hours	GC	-	-	-	-	-	-	-	-
		DA23C09	Machine Learning with Artificial Intelligence	CC	5	73	2	3	25	75	100	4
		BP23C10	Management Accounting	CC	5	73	2	3	25	75	100	4
V	VI	BP23C11/ CM23C12	Direct Taxation	CC	6	88	2	3	25	75	100	4
		AF23E01/ CM23E02/ CM23E03	Financial Services / Banking Theory Law, and Practice/ Performance Management	DSE	5	73	2	3	25	75	100	5
	III	DA23CP5	Machine Learning with Artificial Intelligence – Practical	CC	4	60	-	3	15	35	50*	3
		DA21SBP2	SAS & Sci Lab Practical	SEC	3	41	4	-	100	-	100	3
		AF23AC1/ AF23AC2	International trade / Merchant Banking	ACC	-	-	-	3	25	75	100	5\$

	IV	NM21CS1	Cyber Security I	AECC	2	30	-	-	100	-	100	Gr.
	IV	DA23INST	Field Work/Institutional Training	DSE	-				100	-	100	2
	VI	DA23COM	Comprehensive Examination	GC	-	-	-	-	100	-	100	Gr
VI	III	DA23C12	Big Data Framework	CC	6	88	2	3	25	75	100	5
		BP23C13/ CM23C14	Cost Accounting	CC	6	88	2	3	25	75	100	4
		DA23E01 BP23E04/ CM23C16	Security Analysis and Portfolio Management Business Taxation	DSE	5	73	2	3	25	75	100	5
		DA23CP6	Big Data Framework Practical	CC	4	60	-	3	15	35	50*	4
		DA21SB01	Research Methodology	SEC	3	41	4	-	100	-	100	3
		DA23PROJ	Project and Viva Voce	DSE	6	90	-	-	25	75	100	4
		DA23AC1/ AF23AC3	Knowledge Management System / Information Systems for Business	ACC	SS	-	-	3	25	75	100	5
	IV	16BONL1 16BONL2	Online Course Online Course	ACC	-	-	-	-	-	-	-	-
			Total								4100	140

CC – Core Courses

CA – Continuous Assessment

GE – Generic Elective

ESE – End

Semester Examination AECC – Ability Enhancing Compulsory Course

SEC –Skill Enhancing Course

*Credits applicable to candidates who take up Advanced level course examination

* Outside regular class hours

*100 marks converted to 50

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

2023-2024 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 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

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 (23 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 /Women Studies /Value education/

Environmental Studies / Design Thinking

Quiz : 50 marks

Assignment : 25marks

Project / Case study : 25 marks

Total : 100 Marks

Professional English

The course is offered in alignment with TANSCH norms with 2 credits. Quiz (5 x 20 Marks) : 100 Marks

MAPPING OF PLOs WITH CLOs

COURSE	PROGRAMME 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 – DA23C02					
CLO1	S	S	M	S	M
CLO2	S	S	L	S	S
CLO3	M	M	S	S	M
CLO4	S	L	M	S	S
COURSE – DA23CP1					
CLO1	S	M	L	L	M
CLO2	S	S	S	S	S
CLO3	S	S	M	M	S
CLO4	S	M	M	L	S
COURSE – DA23C03					
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 – 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 – DA23CP2					
CLO1	S	S	L	M	M
CLO2	S	M	M	S	M
CLO3	S	M	L	M	S
CLO4	S	L	L	S	M
COURSE – BP22CO7/CM23C10					
CLO1	S	S	S	S	S
CLO2	S	S	S	S	M
CLO3	S	S	S	S	S
CLO4	S	S	S	M	M
COURSE – DA23C08					

CLO1	S	S	M	S	S
CLO2	S	M	S	S	M
CLO3	M	S	S	M	M
CLO4	M	S	S	M	M
COURSE – BP23A03					
CLO1	S	M	S	S	M
CLO2	S	S	S	L	S
CLO3	S	M	S	L	M
CLO4	S	S	S	M	S
COURSE – DA23A04					
CLO1	S	S	M	M	L
CLO2	S	M	S	S	S
CLO3	S	M	M	M	S
CLO4	S	M	M	M	S
COURSE - DA23A05					
CLO1	S	S	L	M	M
CLO2	M	S	M	L	L
CLO3	M	M	S	S	L
CLO4	S	M	M	S	L
COURSE - DA23CP4					
CLO1	S	S	M	M	M
CLO2	S	M	M	S	M
CLO3	S	M	M	M	M
CLO4	S	M	M	M	M
COURSE – DA23C09					
CLO1	S	S	L	M	M

CLO2	M	S	M	L	M
CLO3	M	M	S	S	M
CLO4	M	M	M	M	S
COURSE – BP23C10 / CM23C11					
CLO1	S	S	S	M	S
CLO2	S	S	M	S	S
CLO3	S	M	S	M	S
CLO4	M	S	S	S	M
COURSE – BP23C11 / CM23C12					
CLO1	S	S	S	S	S
CLO2	S	S	S	S	M

CLO3	S	S	S	S	M
CLO4	S	S	S	M	M
COURSE – AF23E01					
CLO1	S	S	S	S	S
CLO2	S	S	M	S	S
CLO3	S	S	S	S	S
CLO4	S	M	S	S	S
COURSE – CM23E02					
CLO1	S	S	S	S	S
CLO2	S	S	S	S	S
CLO3	S	S	S	S	S
CLO4	S	S	S	S	S
COURSE – CM23E03					
CLO1	S	S	S	S	S
CLO2	S	S	S	S	M
CLO3	S	S	S	S	M
CLO4	S	S	S	S	M
COURSE – DA23CP5					
CLO1	S	S	L	M	L
CLO2	S	M	M	S	M
CLO3	S	M	L	M	L
CLO4	S	M	M	S	M

COURSE – DA21SBP2					
CLO1	S	L	M	L	M
CLO2	M	S	S	M	S
CLO3	S	S	S	S	M
CLO4	S	S	M	L	M
COURSE	PROGRAMME LEARNING OUTCOMES				
	PLO1	PLO2	PLO3	PLO4	PLO5
COURSE– DA23C12					
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 – BP23C13/ CM23C14					
CLO1	S	S	S	S	S
CLO2	S	S	S	M	S
CLO3	S	S	M	S	S
CLO4	S	M	S	S	S
COURSE – DA23E01					
CLO1	S	L	L	S	S
CLO2	S	S	S	S	S
CLO3	S	M	L	S	S
CLO4	S	S	M	M	M
COURSE – BP23E02/ CM23C16					
CLO1	S	S	S	M	S
CLO2	S	S	S	M	S
CLO3	S	S	S	M	S
CLO4	S	S	S	M	S
COURSE– DA23CP6					
CLO1	S	S	L	M	S
CLO2	M	M	M	S	M
CLO3	S	M	S	M	L
CLO4	S	M	M	S	M
COURSE– DA21SB01					
CLO1	S	S	L	M	L
CLO2	S	M	M	S	M
CLO3	S	M	L	M	L
CLO4	S	M	M	S	M

S-Strong; M-Medium; L-Low

COURSE CODE	COURSE NAME	CATEGORY	L	T	P	CREDIT
CM23C01	PRINCIPLES OF ACCOUNTING	Theory	73	2	-	4

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 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; L-Low

Syllabus

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**(15 Hrs)**

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**(15 Hrs)**

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

Text Book

S.No.	Authors	Title	Publishers	Year of Publication
1.	Reddy T S & A Murthy	Financial Accounting	Margham Publications	Reprint 2021

Reference Books

S.No.	Authors	Title	Publishers	Year of Publication
1.	RL Gupta & Radhasamy	Advanced Accountancy (Vol I)	Sultan Chand & Sons.	2018, 13 th ed.
2.	Jain S.P & Narang K.L	Principles of Accountancy	Kalyani Publishers	2018
3.	MC Shukla, T.S.Grewal & S.C. Gupta	Advanced Accountancy	S. Chand & sons	2016

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, PPT, Quiz, Assignment, Group Discussion, 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
DA23C02	FUNDAMENTALS OF BUSINESS ANALYTICS	Theory	73	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 in to Information of the underlying business process
- To exhibit knowledge of data analysis techniques and to apply principles of data sciences integrating enterprise reporting

Pre requisite

- Basic knowledge in computers

Course Learning Outcomes

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

CLOs	CLO Statement	Knowledge Level
CLO1	To define and understand the importance of business analytics and data science in business process and industry	K1
CLO2	To outline data integration, projecting, maintenance, designing and modeling of various data techniques	K2
CLO3	To identify the concepts of data warehouse, data profiling, data dimension, mobility and various related systems and their applications in different industries	K3
CLO4	To analyse the business views using IT applications, its purpose and analysing various concepts relating to it and inculcate problem solving and decision-making skills	K4

Mapping with Programme Outcomes

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

S- Strong; M-Medium; L-Low

Syllabus

Unit I (16 Hrs)

Introduction to the BA Role : Business Analysis -Business Analyst - The evolving role of the Business Analyst - 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.

Unit II (15 Hrs)

Business view of Information Technology Applications: 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

Unit III (16 Hrs)

Introduction to OLTP and OLAP – OLTP – Transaction – Segmentation - OLAP – Different OLAP Architectures – OLTP and OLAP – Data models for OLTP and OLAP – Role of OLAP Tools in BI Architecture. 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 (16 Hrs)

Data Integration – Data Warehouse – Goals – Data sources – Extract, Transform and Load – Stages in ETL – ETL tools - Data Integration - Challenges – Technologies – Approaches - Data Quality maintenance – Data profiling. 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 (10 Hrs)

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

Text Books

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

Reference Books

S. No.	Author Name	Title of the Book	Publisher	Year and Edition
1.	Haydn Thomas –Demonoid	Business Analysis Fundamentals	Pearson Education	2015, Revised Edition
2.	Pang-Ning Tan Michael Steinbach, Vipin Kumar	Introduction to Data Mining	Pearson Education	2021, 2 nd Edition

Related Online Contents

- Fundamentals of Business Analytics-RN Prasad. Global edition: Second Edition
- Business Analytics-James R Evans. Second edition-Wiley

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.

Pedagogy

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

Course Designers

1. Dr. M. Rajeswari
2. Dr. S. Krishnaveni

COURSE CODE	COURSE NAME	CATEGORY	L	T	P	CREDIT
DA23CP1	COMPUTER APPLICATION PRACTICAL I - ANALYSIS WITH EXCEL	PRACTICAL	-	3	57	1

Preamble

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

Prerequisite

- No prerequisite required

Course Learning Outcomes

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

CLOs	CLO Statement	Knowledge Level
CLO1	To understand and find commands in Excel, Get an 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 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 worksheet 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

- Enter the data, as shown, into a work sheet and format the table as shown.
- Create a formula to calculate rate of return for each year. Format the results as percentages with two decimal places.
- Calculate the total return for the entire holding period. What is the compound average annual rate of return?

3.

- Create a Line chart showing the stock price from May 2006 to May2011. 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?

- 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?

4. 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

- Calculate the net profit margin for each year.
- 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?
- 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.

5. 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

- e) Do you think that Qualcomm can maintain the current growth rates of sales and net income over the long run? Why or why not?
- f) 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?

6. 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
DEBIT	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
BASIC EPS FROM TOTAL OPERATIONS	1.32	1.48	1.56	1.35	1.23
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
NET CASH FROM OPERATING ACTIVITIES	610.92	688.77	724.67	631.23	569.23

- g) Calculate the ratio of each years' data to the previous year for each of the above items for Pay chex, Inc. For example, for the year 2010, the ratio for sales is

\$2,000.82/

\$2,082.76 = 0.9607.

- h) 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% .
- i) 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.
- j) 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.
- k) 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)?
- l) 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.
1. Sales
 2. EBIT
 3. Total Assets
 4. Accounts Payable
 5. Retained Earnings
 - 6.
7. Cash budget using What If Analysis
8. Using Goal Seek to calculate Break Even Points
9. Demonstrate the statistical functions of Qualcomm Company by using Ms Excel.
10. Sensitivity analysis of Capital Budgeting–Scenario Analysis, NPV Profile Charts
11. 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.
12. Analyzing Data sets with Tables and Pivot Tables
13. Create an Excel Worksheet for the monthly sales of a product and also represent the data by using bar chart.

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

Exam	Marks
Exam 1	50
Exam 2	80
Exam 3	60

15. Prepare a pay-bill using a worksheet. The work sheet 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.

16. Design a chart projecting the cash estimate of a concern.

17. Calculate the slope of a linear trend line equation using GROWTH.

Pedagogy

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

Course Designers

1. Dr. S. Krishnaveni
2. Mrs. R. Hemapriya

COURSE CODE	COURSE NAME	CATEGORY	L	T	P	CREDIT
DA23C03	R PROGRAMMING	CORE	73	2	-	4

Preamble

- To introduce R Programming concepts and to develop programming skills in R- Programming.
- To be easily extensible through functions and extensions, and its community is noted for its active package contribution.
- R is highly extensible through the use of packages for specific functions and specific areas of study.

Prerequisite

- No prerequisite required.

Course Learning Outcomes

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

CLOs	CLO Statement	Knowledge Level
CLO1	Relate R Programming concepts with Datasets and workflow through the conceptual factors.	K1
CLO2	Demonstrate data frames to perform data manipulations and stimulate the basic approaches.	K2
CLO3	Experiment with various analysis techniques and interpret the features of deployment.	K3
CLO4	Interpret and describe the flow to perform Visualization through several graphical features	K3

Mapping with Programme Outcomes

CLOs	PLO2	PLO2	PL03	PL04	PL05
CLO1	S	S	M	S	S
CLO2	S	M	S	S	M
CLO3	M	S	S	M	M
CLO4	S	M	S	S	M

S- Strong; M-Medium; L-Low

Syllabus

UNIT I

(15 Hrs)

An overview of R: Introduction to R expressions, variables, and functions- -Operator Data Type- Vectors: Grouping values into vectors, then doing arithmetic and graphs with them- Matrices: Creating and graphing two-dimensional data sets- Calculating and plotting some basic statistics: mean, median, and standard deviation- Factors: Creating and plotting categorized data.

UNIT II

(15 Hrs)

Data Frames: Organizing values into data frames, loading frames from files and merging them- Working with Real-World Data: Testing for correlation between data sets, linear models and installing additional packages.

UNIT III

(14 Hrs)

Data Manipulations: Overview of how to connect databases from R-How to run SQL queries from R to fetch data- Data manipulation using SQL to prepare data for analysis.

UNIT IV

(15 Hrs)

Reading and writing of csv file- Importing and exporting of data set-Merging of file having same or different number of column-Reading a file involving date and converting this date into different format-Plotting two series on one graph-one with a left y axis and another with a right y axis- histogram-Multivariate Statistical Techniques like Discriminant Analysis, Factor Analysis.

UNIT V**(14 Hrs)**

Formula notation and complex statistics: Analysis of Variance (ANOVA) - Manipulating Data and Extracting Components: Creating data for complex analysis – summarizing data Regression – Simple Linear Regression – Multiple Regression – Curvilinear Regression.

Text Book

S.No	Author Name	Title of the Book	Publisher	Year and Edition
1.	Dr.Mark Gardener	Beginning R: The Statistical Programming Language(Wrox)	John Wiley & Sons, Inc.,	2016 revised edition

Reference Books

S.No	Author Name	Title of the Book	Publisher	Year and Edition
1.	Norman Matloff	The Art Programming	No Starch Press	2011 Edition
2.	Michael.J.Crawle	The R Book	Wiley	2008 edition
3.	M.John	Statistical Analysis with R.	Tata McGraw Hill Publishing Co. Ltd	October Edition 2010
4.	R Richard Cotton	Learning R	O'Reilly Media	September Edition 2013

Online References

- 1.The Book of R - A First Course in Programming and Statistics - Tillman M. Davies - Publisher: William Pollock-2016
2. R for Beginners – Emmanuel

Skill Components

- Acquire knowledge to relate R Programming concepts with Datasets
- Establish data frames to perform data manipulations
- Analyze data using Descriptive Statistics and measures
- Experiment with various quantitative analysis techniques
- Analysis with Correlation and Regression

Course Designers

1. Dr. S. Krishnaveni.
2. Mrs. N.Sathya.

COURSE CODE	COURSE NAME	CATEGORY	L	T	P	CREDIT
CM23C04	FINANCIAL ACCOUNTING	Theory	73	2	-	3

Preamble

- 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 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; L-Low

Syllabus

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
1.	Reddy T S & A Murthy	Financial Accounting	Margham Publications	Reprint 2023

Reference Books

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

Skill Components

- 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

Course Designers

1. Dr. S. Sujatha, Department of Commerce
2. Dr. L. Nithya, Department of Commerce

COURSE CODE	COURSE NAME	CATEGORY	L	T	P	CREDIT
23PECM1	PROFESSIONAL ENGLISH FOR COMMERCE AND MANAGEMENT	AEC	25	5	-	2

Objectives

1. To develop the language skills of students by offering adequate practice in Professional contexts.
2. To enhance the lexical, grammatical and socio-linguistic and communicative Competence of first year commerce and management students
3. To focus on developing students' knowledge of domain specific registers and the required language skills.
4. To develop strategic competence that will help in efficient communication
5. To sharpen students' critical thinking skills and make students culturally aware of the target situation.

Course Learning Outcomes

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

CLOs	CLO Statement	Knowledge Level
CLO1	Recognize their own ability to improve their own competence in using the Language	K1
CLO2	Use language for speaking with confidence in an intelligible and acceptable manner	K2
CLO3	Read independently unfamiliar texts with comprehension and understand the importance of reading for life	K3
CLO4	Understand the importance of writing in academic life	K3
CLO5	Write simple sentences without committing error of spelling or grammar	K3

Mapping with Programme Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	L	M	S	S	S
CLO2	L	L	S	M	M
CLO3	M	L	M	L	M
CLO4	L	M	M	L	M
CLO5	L	M	M	M	M

S-Strong; M-Medium, L- Low

Syllabus

UNIT 1: COMMUNICATION

(5 hours)

Listening: Listening to audio text and answering question listening to Instructions

Speaking: Pair work and small group work.

Reading: Comprehension passages –Differentiate between facts and opinion

Writing: Developing a story with pictures.

Vocabulary: Register specific – Incorporated into the LSRW tasks

UNIT 2: DESCRIPTION

(5 hours)

Listening: Listening to process description.-Drawing a flow chart.

Speaking: Role play (formal context)

Reading: Skimming/Scanning- Reading passages on products, equipment and gadgets.

Writing: Process Description –Compare and Contrast
Paragraph-Sentence Definition and Extended
definition- Free Writing.

Vocabulary: Register specific -Incorporated into the LSRW tasks.

UNIT 3: NEGOTIATION STRATEGIES

(5 hours)

Listening: Listening to interviews of specialists / Inventors in fields (Subject specific)

Speaking: Brainstorming. (Mind mapping). Small group discussions (Subject- Specific)

Reading: Longer Reading text.

Writing: Essay writing (250 words)

Vocabulary: Register specific – Incorporated into the LSRW tasks

UNIT 4: PRESENTATION SKILLS

(5 hours)

Listening: Listening to lectures.

Speaking: Short talks.

Reading: Reading Comprehension passages

Writing: Writing Recommendations Interpreting Visuals inputs

Vocabulary: Register specific – Incorporated into the LSRW tasks

UNIT 5: CRITICAL THINKING SKILLS**(5 hours)****Listening:** Listening comprehension- Listening for information.**Speaking:** Making presentations (with PPT- practice).**Reading:** Comprehension passages –Note making.**Comprehension:** Motivational article on Professional Competence, Professional Ethics and Life Skills**Writing:** Problem and Solution essay– Creative writing –Summary writing**Vocabulary:** Register specific – Incorporated into the LSRW tasks**Text Book**

S.No.	Authors	Title of the Book	Publishers	Year of Publication
1.	Tamil Nadu State Council for Higher Education (TANSCH)	English for Commerce and Management Semester 1	--	--

Reference Books

S. No.	Authors	Title of the Book	Publishers	Year of Publication
1	Sreedhr an, Josh	The Four Skills for Communication	Foundation books	2016
2	Pillai, G Radhakrishna, K Rajeevan, P Bhaskaran Nair	Spoken English for you	Emerald	1998
3	Pillai, G Radhakrishna, K Rajeevan, P Bhaskaran Nair	Written English for you	Emerald	1998

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
BP23C05	DIGITAL MARKETING	THEORY	73	2	-	4

Preamble

- To provide students with a comprehensive understanding of methodologies underlying digital Marketing
- To provide insight into digital marketing channels
- To familiarize with ethical considerations and technological advancements in digital marketing

Course learning out comes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Identify the key concepts of digital marketing and its terminology	K1
CLO2	Interpret the principles of digital marketing strategies	K2
CLO3	Apply diverse digital marketing techniques in real-world scenarios	K3
CLO4	Examine with practical skills and knowledge to plan, execute, and optimize effective digital marketing campaigns	K4

S- Strong; M-Medium; L – Low

Mapping with Programme Learning Outcomes

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

Syllabus

UNIT I

(14 Hrs)

Digital Marketing - Origin & Development - Role - Strategy- P-O-E-M Framework – Factors Impacting Digital Market Place- Value Chain Digitalization- Digital Marketing Business Models - ***Digital Marketing Plan*** - Ethical and Legal Framework of Digital Marketing- Skills required In Digital Marketing - ***Careers in Digital Marketing***

UNIT II

(15Hrs)

Digital Ecosystem-The Rise of Digital marketing-Digital paradigm and marketing- Online Consumer behavior -Branding-Digital Brand Ecosystem-Brand Experience- **Search Engine Optimization**- SEO Phases - ***Website Design and Hosting*** - Blogs -Search Engine Advertising - Display Advertising - Types of Display Ads - Targeting in Digital Marketing- ***Consumer persona***- Programmatic Digital Advertising

UNIT III

(15 Hrs)

E-Mail Marketing - Creating an E-Mail Campaign in Mail Chimp - Building Effective E-Mail Lists - ***Campaign Design and Mail Delivery*** – **Mobile Marketing** – Mobile Advertising - Mobile Advertising Models- ***Advantages of Mobile Advertising*** - Mobile Marketing Toolkit - Mobile Apps - Screen Analytics

UNIT IV

(15 Hrs)

Social Media Marketing - Strategy- Listening-***Social Messaging Apps***- Social Entertainment- Gamification -***AI for Social Media Marketing***- Influencer Marketing- Video Marketing – Online Reputation Management- **Digital Marketing Services** - Online Retail Services - Online Travel Services- Online Career Services -***Online Publishing***

UNIT V

(14Hrs)

Technological Advancements in Digital Marketing -Voice Search- Beacon Technology- Micro Moment Marketing-Cross Device Marketing-***Artificial Intelligence***- Chat bots - Big Data- Virtual Reality-***Augmented Reality***- Block Chain Technology

Text Book

S.No	Authors	Title	Publishers	Year and edition
1.	Seema Gupta	Digital Marketing	McGrawHill Education	3 rd Edition 2023

Books for Reference

S.No	Authors	Title	Publishers	Year and edition
1.	Puneet Singh Bhatia	Fundamentals of Digital Marketing	Pearson Education	2 nd Edition 2019
2	Vandana Ahuja	Digital Marketing	Oxford University	2 nd Edition 2018

Skill Component

- Develop multimedia content, such as blog posts, videos, and data visualizations to target specific
- Audit of a Brand's Social Media Presence
- Conduct market research to identify target segments, analyze competitors, and uncover market trends relevant to a chosen industry or product.
-

Pedagogy

PowerPoint presentations, Group Discussion, Seminar, Quiz, Assignment, Brainstorming, Case Study

Course Designers

1. Dr.R.Jayasathya
2. Ms.R.Sangeetha

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
DA23C06	DATABASE PROGRAMMING	THEORY	58	2	-	3

Preamble

To provide comprehensive knowledge about relational and NoSQL database management system

Prerequisite

- No prerequisite required

Course Learning Outcomes

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

CLOs	CLO Statement	Knowledge Level
CLO1	Interpret relational database management concepts	K1
CLO2	Develop the tables using normalization	K2
CLO3	Illustrate SQL operators and keys	K3
CLO4	Understand the concepts of NOSQL, MONGODB and WEKA	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	M	S	S	S	M
CLO4	M	M	S	S	M

S- Strong; M-Medium

Syllabus

Unit I

(12 Hrs)

Introduction to Database Management System - Data Models - Database system architecture - The SQL Language - Relational Database Management System - ***Candidate key, primary tables key, Foreign Key - Relational Operators - Attribute domains and their Implementations - New conventions for Database Object*** - Structure of SQL statements and SQL writing Guidelines

Unit II

(12 Hrs)

Functional Dependencies - Normalization process: 1NF, 2NF, 3NF, BCNF - Creating foreign keys and primary keys - ***The E-R Model - Entities and Attributes-Relationships*** - Normalizing the Model- Creating Tables - Describing the structure of a Table - Populating Tables - Table Instance Charts Implementation of the selection Operator - ***Using aliases to Control column Headings - Implementation of the projection and join Operators***

Unit III

(12 Hrs)

Built in Functions – Numeric - Character Conversion Functions - Introduction to group functions - sum, avg, max, min, count - combining single value and group functions - ***Displaying Specific Groups-Introduction to processing date and Time*** - Arithmetic with Dates - Date Functions Formatting dates and time – Subqueries - Correlated Queries - ***Using subqueries to create, update, insert and delete rows from a Table – Transaction - Commit, rollback, save point and auto Commit**

Unit IV

(12 Hrs)

Overview and History of NoSQL Databases - Definition of the Four Types of NoSQL Database-The Value of Relational Databases - Getting at Persistent Data – Concurrency – Impedance Mismatch-Application and Integration Databases - Attack of the Clusters - The Emergence of NoSQL -***Aggregates - Key-Value and Document Data Models - Column-Family Stores - Summarizing Aggregate-Oriented Databases - More Details on Data Models - Distribution Models – Consistency***Introduction to MongoDB - Getting Started – Querying - Creating, Updating, and Deleting Documents***Designing Your Application: Indexing - Special Index and Collection Types***

Unit V

(10 Hrs)

Introduction to WEKA – Installation - The Explorer – ***Getting started*** – Loading data – File formats- Processing data – ***Filtering algorithm*** The over view of Graf database

Text Books

S.No.	Author Name	Book Name	Publisher	Year and Edition
1	Ramon A Mata- Toledo Pauline K Cushman	Database Management System	Tata McGraw-Hill Publishing company limited, New Delhi.	2010, 2nd edition
2.	Pramod J. Sadalage & Martin Fowler	NoSQL Distilled	Pearson Education, Inc. O'Reilly Media, Inc.,	2013
3	Kristina Chodorow	MongoDB: The definitive guide	Pearson Education, Inc. O'Reilly Media, Inc.,	2013, 2nd Edition
4	Eibe Frank, Mark A. Hall, and Ian H. Witten	The WEKA work bench	Morgan Kaufmann	2016, 4th Edition

Reference Books

S.No.	Author Name	Book Name	Publisher	Year and edition
1	Ramakrishnan & Gehrke	Database Management Systems	Tata McGraw Hill	2009, 8th edition
2	Nilesh Shah	Database Systems using Oracle	PHI learning pvt Ltd	2014, 2nd edition
3	Alexis Leon & Mathews Leon	Fundamentals of database management systems	Tata McGraw Hill	2011, 3rd edition

Skill Components

- Understand the concepts of tables, queries and SQL.
- Demonstrate SQL queries, operators, aggregate function, sub query and join operators.
- Identify the concepts of normalization.
- Interpret SQL and NOSQL - MONGODB.
- Identify and evaluate the data and infer the results with WEKA.

Pedagogy

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

Course Designers

1. Mrs.N.Sathya
2. Ms.M.Pooja

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
BP23A01	BUSINESS MANAGEMENT AND ETHICS	THEORY	73	2	-	4

Preamble

- To provide the students with an understanding of the basic principles of management in the functional areas of business to pursue careers in management with ethics

Prerequisite

- Basic Knowledge on Business Management

Course Learning Outcomes

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

CLOs	CLO Statement	Knowledge Level
CLO1	Recognize the fundamental concepts and principles of management, Planning, Organisation, leadership and control including the function and its nature.	K1
CLO2	Identify the management process and decision making in management functions	K2
CLO3	Apply the theories and identify various case studies for practical applications of management concepts	K3
CLO4	Demonstrate the process of management functions and evaluate the social responsibility and ethical issues in business situations	K4

Mapping with Programme Learning Outcomes

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

S- Strong; M-Medium

Syllabus

UNIT I

(14 Hrs)

Management –Definition - Nature and Scope – ***Functions– Managerial Skills– Levels of Management*** – Roles and Skills of a Manager- Contributions by Henry Fayol, FW Taylor, Peter F Drucker, McGregor, Elton Mayo-***Management as a Science, Art, Profession- Management and Administration***– Principles of Management

UNIT II**(14 Hrs)**

Planning: Meaning – Nature- ***Importance- Purpose of Planning***- Planning Process - Advantages and Limitations- Types of Plans – ***Objectives – Policies – Strategies – Procedures – Programmes – Obstacles to Effective Planning*** - Decision Making: Steps in Decision Making – Role of MIS for Decision Making. ***MBO – MBE - Policy and Strategy***.

UNIT III**(15 Hrs)**

Organization –Meaning - Nature and Importance – ***Process of organization– Organization structure– Organization chart–Organization manuals***–Types of Organization - Departmentation - Span of Management - ***Authority – Responsibility - Accountability*** - Power – Delegation – Centralization – De centralization -Staffing-Case study

UNIT IV**(15 Hrs)**

Leadership –Meaning and Importance –***Functions of Leadership–Leadership styles– Qualities of good leader*** –Theories & Approaches of Leadership-Directing-Functions-***Coordination – Meaning – Definition – Principles-Advantages & Disadvantages***-Case study

UNIT V**(15 Hrs)**

Control –Meaning - and Importance –***Process & Techniques of control***-Ethics-Meaning– Importance Nature & ***Relevance-Structure of ethics management-Ethics in business***-Factors affecting ethical practice in business-Social Responsibility of Business.

Text Books

S. No	Authors	Title	Publishers	Year and Edition
1.	R K Sharma & Shasi K Gupta	Principles of Management	Kalyani Publishers	2017 reprint
2.	Dinkar Pagre	Principles of Management	Sultan Chand & sons	2018 reprint

Reference Books

S. No	Authors	Title	Publishers	Year and Edition
1.	Dr.C.N Sontakkai	Principles of Management	Kalyani Publishers,	2016 reprint
2.	PC tripathi & PN Reddy	Principles of Management	Tata Mcgraw Hill Publishing Co Ltd	2017 ed.
3.	Bbins, Deenzo, & Coulter.	Fundamentals of Management	Pearson Education Ltd	2017 th ed

Skill Components

- Preparation of different types of organisation charts
- Construct a standing plan for a new business venture
- Demonstrate different leadership styles through role play
- Study the ethical practices followed in the organisation
- Select any one company and prepare a SWOT analysis
- Prepare a report of CSR activities followed in an organization

Pedagogy

- Lecture, PPT presentation, Quiz, Group Discussion, Seminar, Assignment, Activity-based learning

Course Designers:

1. Dr.A.Meenakshi- Department of B Com(CA)
2. Dr.NithyaRamadass- Department of B Com(CA)

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
AF23A02	BUSINESS ECONOMICS	THEORY	73	2	-	4

Preamble

- To introduce microeconomic and macroeconomic concepts
- To familiarize with various economic theories
- To interpret and examine the monetary and fiscal policy

Prerequisite

- Basic knowledge in economics

Course Learning Outcomes

On the successful completion of the course, Students will demonstrate their knowledge of the fundamental and technical concepts of economics and also students will be able to make decisions wisely using cost-benefit analysis.

CLO Number	CLO Statement	Knowledge Level
CLO1	Define and understand the various laws of economics	K1
CLO2	Interpret Economic theories and policies	K2
CLO3	Examine the different market structure and pricing policy	K4
CLO4	Identify the various methods of Forecasting, Demand and Supply Functions, National Income & budgeting.	K3

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	S	S	M

S- Strong; M-Medium

Syllabus

Unit I (14 Hrs)

Introduction to Economics – Wealth, Welfare and Scarcity Views on Economics - Positive and Normative Economics. Definition – ***Scope and Importance of Business Economics***. Concepts: Production Possibility frontiers – Opportunity Cost – ***Accounting Profit and Economic Profit*** – ***Incremental and Marginal Concepts*** – Concept of Efficiency

Unit II (15 Hrs)

Demand and Supply Functions: Meaning of Demand – Determinants and Distinctions of demand – Law of Demand – ***Elasticity of Demand – Demand Forecasting*** – Supply concept and Equilibrium. ***Consumer Behaviour: Law of Diminishing Marginal utility – Equi-marginal Utility*** – Indifference Curve – Definition, Properties and equilibrium

Unit III (15 Hrs)

Production: Law of Variable Proportion – Laws of Returns to Scale – Producer's equilibrium – Economies of Scale. Cost Classification – ***Break Even Analysis. Product Pricing***: Price and Output Determination under Perfect Competition, Monopoly – Discriminating monopoly – Monopolistic Competition - Oligopoly-Pricing objectives and Methods

Unit IV (15 Hrs)

National Income - Gross National Product -Net National Product - Measurement of National Income - Consumptions, savings and investments. Theory of Employment- Type of unemployment- Labour and Population theories- Definition of capital and growth of capital- Steps in capital formation. Money - Definition and functions of money- ***Quantity theory of money***. Public Finance- Principle of taxation- ***Direct and indirect taxes***

Unit V (14 Hrs)

Monetary and Fiscal Policies– measures of money stock – policy and money supply – ***instruments of monetary policy*** – fiscal policy – the union budget – state budgets – Inflation - Deflation – Meaning – Causes & Effects – ***Measures to control inflation and deflation*** – ***importance of the budget***.

TextBook

S.No.	Author Name	Title of the book	Publisher	Year and edition
1.	Francis Cherunilam	Business Environment (Unit V)	Himalaya Publishing House, Mumbai – 04	2017,25 th Edition
2.	Shankaran S	Business Economics (Unit IV)	Margham Publications	2014 Edition
3.	Sundharam KPM Sundharam E N	Business Economics (Unit I-IV)	Sultan Chand & Sons -New Delhi – 02.	2016 Edition

Reference Books

Sl.No	Author Name	Title of the book	Publisher	Year and edition
1.	Chaudhary C.M	Business Economics	RBSA Publishers – Jaipur - 03.	2019 Edition
2.	Mehta P.L	Managerial Economics–Analysis, Problems & Cases	Sultan Chand & Sons - New Delhi – 02.	2016 th Edition

Skill Components

- Analyse the Corporate Governance mechanism and principles.
- To enable the students to do a study related to the implementation of Corporate Governance in leading Indian companies.
- Role play on the duties and responsibilities of the person incharge of the implementation of Corporate Governance in companies.
- Discuss the implementation of Corporate Governance code in different countries

Pedagogy

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

Course Designers

1. Mrs.S.Manasha
2. Ms.M.Pooja

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
DA23A03	CORPORATE GOVERNANCE	THEORY	73	2	-	4

Preamble

- To analyze corporate governance mechanisms and principles
- To understand the code and guidelines of corporate governance

Pre requisite

- Basic Knowledge of Corporate Governance

Course Learning Outcomes

On the successful completion of the course, students will be

CLOs	CLO Statement	Knowledge Level
CLO1	Find and Summarise mechanisms, principles, and issues related to corporate governance.	K1
CLO2	Illustrate the corporate governance code and guidelines	K2
CLO3	Develop and examine the role of corporate governance in national and international companies	K3
CLO4	Analyse mechanisms, principles, issues related to corporate governance	K4

Mapping with Programme Learning Outcomes

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

S- Strong; M-Medium

UNIT I

(15 Hrs)

Corporate Governance – Introduction – People Orientation of Public Governance- ***Different Systems in Public Governance*** - Structure of Public Governance and Corporate Governance - Comparison between Corporate Governance and Public Governance - ***History of Corporate Governance – Concept of Corporate Governance & Stakeholder***

UNIT II**(15Hrs)**

Corporate Governance Mechanism and Overview – 4 P's of Corporate Governance - Wealth Creation, Management and Distribution – ***Disclosure in Offer Documents - Clause 49***
 Principles of Corporate Governance – Introduction – OECD Principles of Corporate Governance – ***Annotations to the OECD Principles of Corporate Governance*** – Issues Related to Corporate Governance- Introduction –***Need for Good Corporate Governance*** - Role and Responsibilities of Investors - Competency and Training

UNIT III**(15Hrs)**

Decision System - Role of the Directors and Management – The Board Performs its Oversight Function- Relationships with Stockholders and other Constituencies - Corporate capital and its Property rights - Mechanism and control – ***Systemic Problem of Corporate Governance*** - Introduction and History ***Code of Business Conduct*** - Code of Business Ethics. – ***Corporate Social Responsibility*** - Introduction – implementation Generate Business Benefits

UNIT IV**(14 Hrs)**

Codes and Guidelines - Guidelines for Person in charge – Duties and Responsibilities of Person incharge -***General Code of Corporate Governance*** - Guidelines- Rules and Regulations ***Enforcement of Regulations - e-Governance***

UNIT V**(14Hrs)**

International Corporate Governance – ***Germany – France*** - United Kingdom- USA Corporate Governance in leading Indian Companies

Text Book

S.No.	Author Name	Title of the Book	Publisher	Year and Edition
1.	Swami Parthasarathy	Corporate Governance	Biztantra , New Delhi	5 th Edition, Reprint 2008

Reference Books

S.No.	Author Name	Title of the Book	Publisher	Year and Edition
1.	Kesho, Prasad	Corporate Governance	New Delhi: Prentice Hall	4 th Edition, 2006
2.	Singh. S	Corporate Governance	New Delhi: Excel Books	3 rd Edition, 2005

Skill Components

- Analyse the Corporate Governance mechanism and principles.
- To enable the students to do a study related to the implementation of Corporate Governance in leading Indian companies.
- Role play on the duties and responsibilities of the person incharge of the implementation of Corporate Governance in companies.
- Discuss the implementation of the Corporate Governance code in different countries

Course Designers

1. Mrs.S.Manasha
2. Mrs.Divya

COURSE NUMBER	COURSENAME	CATEGORY	L	T	P	CREDIT
DA23CP3	DATABASE PROGRAMMING PRACTICAL	PRACTICAL	-	-	45	1

Preamble

- To enhance practical knowledge in Database Management using SQL, MongoDB

Course Learning Outcomes

On the successful completion of the course, students will be able to analyse the data using query

CLOs	CLO Statements	Knowledge Level
CLO1	Show the features of database	K1
CLO2	Demonstrate data definition and data manipulation languages	K2
CLO3	Identify data store and query languages	K3
CLO4	Apply the databases in analytical tools	K4

Mapping with Programme Learning Outcomes

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

Syllabus

1. Normalize the following dataset: Employee database

2. Data Definition Language and Data Manipulation

LanguageTable: Student

Regno	number(5)	primary key
Studname	varchar2(15)	
Gender	char (6)	
Deptname	char(15)	
Address	char(25)	
Percentage	number(4,2)	

Queries:

- To create a table, describe a table, alter a table, drop a table, and truncate a table
- To insert values, retrieve records, update records, delete records

3. Create an Employee table with following field.

Eno	number(5)	primary key
Ename	varchar2 (20)	not null
Deptno	number (2)	not null
Desig	char(10)	not null
Sal	number(9, 2)	not null
Comm.	number (7, 2)	null

Queries:

- Insert values and display the records
- Display sum, maximum amount of basic pay
- List the name of the clerks working in the department 20
- Display name that begins with „G“
- List the names having „I“ as the second character
- List the names of employees whose designation are „Analyst“ and „Salesman“
- List the different designation available in the Employee table without duplication (distinct)

4. Create a student table with the following fields

Stuno	number(5)	primary key
Stunm	varchar2(20)	
Age	number(2)	
Mark1	number(3)	
Mark2	number(3)	
Mark3	number(3)	

Queries:

- Insert values and display the records
- List the names and age of the student whose age is more than 12
- Display total and average of marks
- Display the names of the maximum total & minimum total student
- List the names of the student that ends with „A“
- List the names of student whose names have exactly 5 characters

5. Create the table PAYROLL with the following fields and insert the

values:Emplno	number(8)
Emplname	varchar2(8)
Dept	varchar2 (10)
Baspay	number(8, 2)
HRA	number(6, 2)
DA	number(6, 2)
Pf	number(6, 2)
Netpay	number (8, 2)

Queries:

- Update the records to calculate the net pay.
- Arrange the records of the employees in ascending order of the net pay.
- Display the details of the employees whose department is "Sales".
- Select the details of employees whose HRA \geq 1000 and DA \leq 900.
- Select the records in descending order.

6. Create a Table Publisher and Book with the following fields:

Table: publisher

Pubcode	varchar2(5)
Pubname	varchar2(10)
Pubcity	varchar2(12)
PubState	varchar2(10)
Bookcode	varchar2(5)
Booktitle	varchar2(15)
Bookcode	varchar2(5)
Bookprice	varchar2(5)

Queries:

- Insert the records into the table publisher and book.
- Describe the structure of the tables.
- Show the details of the book with the title "DBMS".
- Show the details of the book with price $>$ 300.
- Show the details of the book with publisher name "Kalyani".
- Select the book code, book title; publisher city is "Delhi".
- Select the book code, book title and sort by book price.
- Count the number of books of publisher starts with "Sultanchand".
- Find the name of the publisher starting with "S".

MONGODB:

- Create a Student Database in MongoDB using "use" Command.
- Create program using CRUD operation using MongoDB.
- Create program text search and indexes using MongoDB.

WEKA:

- Demonstration of preprocessing on dataset student.arff
- Demonstration of classification rule process on dataset employee.arff using J48 algorithm
- Demonstration of clustering rule process on dataset iris.arff using simple K-means

Pedagogy

- Demonstration through System, Demonstration through PPT

Course Designers

1. Mrs.N.Sathya
2. MS.M.Pooja

COURSE CODE	COURSE NAME	CATEGORY	L	T	P	CREDIT
DA23SCE1	SKILL BASED SUBJECT I – DATA SCIENCE AND STATISTICS	SEC	44	1	-	3

COURSERA BUNDLE

(44 HRS)

1. Data and Statistics Foundation for Investment Professionals (13 Hrs)

<https://www.coursera.org/learn/data-statistics-foundation-investment>

2. Statistics for Machine Learning for Investment Professionals (13 Hrs)

<https://www.coursera.org/learn/statistics-machine-learning-investment>

3. The Data Scientist's Toolbox (18 Hrs)

<https://www.coursera.org/learn/data-scientists-tools>

Course Number	Course Name	Category	L	T	P	Credit
CS23SBGP	SBS I - Gen-AI	Theory	44	1	-	3

Preamble

The objective of this course is to understand the breadth and depth of Generative Artificial Intelligence (Gen AI) C and to impart knowledge on its ethical implications, practical applications, and emerging trends.

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Understand the fundamental concepts and ethical considerations of Generative AI.	K2
CLO2	Apply AI principles in practical settings using basic AI tools and platforms	K3
CLO3	Develop advanced skills in specialized AI applications such as text analysis, natural language processing, and image recognition.	K3
CLO4	Explore emerging trends in AI, integrating advanced AI tools into diverse professional practices.	K4

Mapping with Programme Learning Outcomes

CLOs	PO1	PO2	PO3	PO4	PO5
CLO1	S	S	S	S	M
CLO2	S	S	S	S	S
CLO3	S	S	M	S	S
CLO4	S	M	S	M	S

S- Strong; M-Medium

SBS I: Gen-AI - CS23SBA1

(45 Hrs)

Unit 1: Introduction to Gen AI

(9 hours)

Understanding Gen AI: Definition and scope of Gen AI - Overview of its applications in various fields - Introduction to essential skills needed for Gen AI. Ethical Considerations: Discussion on ethical guidelines and responsible use of AI - Understanding the impact of AI on society and individuals.

Hands-on Activity: Exploring AI Tools

- Working with appropriate content creation Gen-AI tools to engage with ChatGPT to explore various subjects, simulate interviews, or create imaginative written content.
- Working with appropriate writing and rephrasing Gen-AI tools to drafting essays on designated topics and refining the content with improved clarity, coherence, and correctness.

Unit 2: Basic AI Concepts

(8 hours)

Introduction to AI: Basic concepts and terminology of artificial intelligence - Examples of AI in everyday life - Real-world examples of AI applications in different domains. Machine Learning Basics: Understanding the principles of machine learning - Overview of supervised and unsupervised learning.

Hands-on Activity: Simple AI Projects

- Working with appropriate educational content creation Gen-AI tools to generate quizzes and flashcards based on classroom material.
- Working with appropriate language learning Gen-AI tools to practice and enhance language skills through interactive exercises and games across multiple languages.

Unit 3: AI in Practice

(9 hours)

Text Analysis and Natural Language Processing (NLP): Introduction to NLP concepts and techniques - Hands-on exercises analyzing text data and extracting insights. Image Recognition and Processing: Basics of image recognition algorithms and techniques - AI Tools for Text and Image Processing

Hands-on Activity: Text and Image Projects

- Working with appropriate image processing Gen-AI tools to experiment with AI-generated images.
- Working with appropriate object recognition Gen-AI tools to identify various objects such as text, images, products, plants, animals, artworks, barcodes, and QR codes.

Unit 4: AI for Productivity and Creativity

(9 hours)

AI-enhanced Productivity and creativity Tools: Overview of productivity and creativity tools Enhanced with AI capabilities - Tips for integrating AI into daily tasks and workflows. AI and Jobs: Exploring how AI impacts jobs and industries - Discussion on opportunities and challenges- Exploration of AI-powered creative tools and applications.

Hands-on Activity: Productivity and Creativity

- Working with appropriate content creation Gen-AI tools to generate interactive videos / blog posts / art / drawing / music and storytelling experience.
- Working with appropriate resume generation Gen-AI tools to create professional resumes efficiently.

Unit 5: Future of Gen AI and Final Project

(9 hours)

Emerging Trends in Gen AI - Applications of Generative AI - Ethical and Societal Impact of Gen AI - Future Directions and Challenges - Case Studies in Generative AI.

Hands-on Activity: Trends in Gen AI

- Working with appropriate speech generation Gen-AI tools to customize synthetic speech for virtual assistance across different applications.
- Working with appropriate data analysis Gen-AI tools to perform data analysis, visualization, and predictive modeling tasks.
- Working with appropriate Gen-AI design tools to simplify the creation of visually appealing presentations.
- Working with appropriate website builder Gen-AI tools to develop professional websites with AI assistance.

Pedagogy

Demonstration of AI Tools, Lectures and Case studies.

Course Designers

Mrs. S. Ponmalar

COURSE CODE	COURSE NAME	CATEGORY	L	T	P	CREDIT
NM22DTG	DESIGN THINKING	THEORY	30	-	-	2

Preamble:

- To expose the students to the concept of design thinking as a tool for innovation
- To facilitate them to analyze the design process in decision making
- To impart the design thinking skills

Course Learning Outcome:

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Understand the concepts of Design thinking and its application in varied business settings	K1
CLO2	Describe the principles, basis of design thinking and its stages	K2
CLO3	Apply design thinking process in problem solving	K3
CLO4	Analyze the best practices of design thinking and impart them in business and individual day to day operations.	K4
CLO3	Apply design thinking process in problem solving	K3

Mapping with Learning Programme Outcomes

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

S-Strong; M-Medium

Syllabus

UNIT – 1

(6 Hours)

Design Thinking Overview: *Introduction to Design Thinking* and Design Research Strategies -***Design Thinking Skills***

UNIT – II (6 Hours)

Design Thinking Mindset: *Principles of Design Thinking - Basis for design thinking
- Design Thinking Hats* - Design thinking team

UNIT – III (6 Hours)

Empathize: Definition - Listen & ***Empathize*** with the Customers and / or Users – Tools and Techniques

UNIT – IV (6 Hours)

Define: Definition - ***Defining the Problem*** - Tools and Techniques - Journey mapping and
Ideate - definition - Ideation techniques

UNIT – V (6 Hours)

Prototype: Definition - ***Prototype*** Alternate Solutions - ***Test*** the Solutions - Visualization -
Storytelling - Cautions and Pitfalls - Best Practices

Text Books

S.No.	Author(s)	Title of the Book	Publisher	Year and edition
1.	Christian Mueller-Roter berg	Handbook of Design Thinking Tips& Tools for how to design thinking	Amazon Kindle Version	2018
2	Gavin Ambrose Paul Harris	Design Thinking	AVA Publishing Switzerland	2010
3	Sambhrant Srivastava and Vijay Kumar	A Text Book of DESIGN THINKING	Vayu Education of India	2022

Reference Books

S. No.	Author(s)	Title of the Book	Publisher	Year and edition
1	Maurício Vianna Ysmar Vianna Isabel K. Adler Brenda Lucena Beatriz Russo	Design Thinking – Business Innovation	MJV Press	2011
2	Moritz Gekeler	A practical guide to design thinking	Friedrich-Ebert- Stiftung	2019
3	J. Berengueres	The Brown Book of Design Thinking	UAE University College, Al Ain	2014

COURSE CODE	COURSE TITLE	Category	L	T	P	Credit
BP23CO7/ CM23C10	BUSINESS FINANCE	Theory	73	2	-	4

Preamble

- To Understand the Concepts of Business Finance and their Applications for Managerial Decision Making.
- To analyse the short term and long term decision making techniques
- To examine the various determinants of dividends

Prerequisite

- No prerequisite required

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	State the concepts and approaches in finance	K1
CLO2	Demonstrate the possibilities for the optimum acquisition and Application of the financial resources	K2
CLO3	Analyse the techniques required to select the feasible financial requirements of a Business Concern	K3
CLO4	Apply the concepts and tools of the financial decisions for adequate returns to the shareholders	K4

Mapping with Programme Learning Outcomes

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

S-Strong; M-Medium; L-Low

Syllabus

Unit I

(14 Hours)

Business Finance: Meaning and Definition–***Approaches to Finance Function*** – Scope – Financial Decisions - Profit Maximization Vs Wealth maximization. Sources of Finance. **Financial Planning:** Objectives –Characteristics – ***Steps in financial planning – Limitations of Financial Planning. Role of Financial Manager***. **Time Value of money** – Practical Applications of Time Value Techniques – AI for TVM Calculation

Unit II**(15 Hours)**

Capital Budgeting:– Meaning – Need–***Importance – Kinds and Process of Capital Budgeting***–Cash Flow Estimation- Capital Budgeting Appraisal Methods: Traditional Methods - Payback Period – Accounting Rate of Return (ARR). Discounted Cash-flow Methods: Net Present Value (NPV) – Net Terminal Value - Internal Rate of Return – Profitability Index. **Cost of Capital:** Meaning – ***Significance – Classification of Cost***–Computation of Cost of Capital: Cost of Debt, Preference, Equity, Retained Earnings and Weighted Average Cost of Capital – Integration of AI to estimate cost of capital.

Unit III**(15 Hours)**

Capital Structure: Introduction – Importance – Factors Determining the Capital Structure***Theories of Capital Structure: Net Income Approach- Net Operating Income Approach-Traditional Approach and Modigliani and Miller Approach***. **Leverage:** Meaning – Types of Leverage – Impacts of Financial Leverage – Integration of AI for Trading and Equity.

Unit IV**(15 Hours)**

Capitalisation: Concept – Need- Theories of Capitalisation – ***Fair capitalization – Over Capitalization – Under Capitalization – Watered Stock – Over Trading and Under Trading**.* **Working Capital Management:** Meaning – Classification-***Importance- Factors Determining the Working Capital Requirements***– Management of Working Capital – Methods of Estimating Working Capital Requirements – Integration of AI for estimation of working capital.

Unit V**(14 Hours)**

Receivables Management: Forming of credit policy. Inventory Management – Tools and Techniques. **Dividend Policy:** Determinants of Dividend Policy – ***Types of Dividend Policy – Advantages and Disadvantages of Stable Dividend Policy – Theory of Relevance***and Irrelevance - IKS principles in Dividend Policy - IKS inspired Dividend Policy Strategies.

***Distribution of marks: Theory 40% Problems 60%**

Text Book

Sl.No.	Author name	Title of the book	Publisher	Year & Edition
1.	Shashi. K. Gupta Sharma R. K	Financial Management	Kalyani Publishers	2018

Reference Books

Sl.No.	Author name	Title of the book	Publisher	Year & Edition
1	Ravi.M. Kishore	Financial Management – Problems and Solutions	Taxmann Publications Pvt Ltd	2017 Edition
2	Khan & Jain	Financial Management	Tata Mc GrawHill	2018
3	Maheshwari S.N	Financial Management	Sultan Chand & Sons	15 th Edition 2019
4	Alan C.Shapiro Peter Moles	International Financial Management	Wiley	2016 Edition

Skill Components

- Preparation of financial planning for the concern
- Application of time value techniques to the real situations
- Analyse the capital structure of different companies belongs to different industries
- Estimate the cost of capital for the funds raised by the company
- Application of capital budgeting techniques to select the project proposals.
- Analyse the financial statements and Estimate the working capital requirements of the company.

Pedagogy

- Lecture, Group Discussion, Case study, Role playing, Activity based learning

Course Designers:

1. Dr.B.Thulasipriya, Department of Commerce
2. Dr.S.Sujatha, Department of Commerce

COURSECODE	COURSENAME	CATEGORY	L	T	P	CREDIT
DA23C08	BUSINESS ANALYTICS WITH PYTHON	THEORY	58	2	-	3

Preamble

To introduce Python concepts and to develop programming skills in Python

Pre requisite

No prerequisite required.

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Recognize the implementation of python in various fields including web development, Data science, Machine learning and data science	K1
CLO2	Classify the support for testing with libraries	K2
CLO3	Develop algorithms and pandas and various quantitative analysis techniques	K3
CLO4	Examine the versatility and strong ecosystem libraries for beginners and seasoned developers	K4

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PL03	PL04	PL05
CLO1	S	S	M	S	S
CLO2	S	M	S	S	M
CLO3	M	S	S	M	M
CLO4	M	S	S	M	M

S-Strong; M-Medium

Syllabus

UNIT I

(11Hrs)

Setting up Python - Your First Python Program – ***Data Types: Values and Variables*** -Operators - Expressions – Types of Expressions- Arithmetic – Comparison – Logical - ***Conditional Expressions and Iterations*** - Functions: Using functions-Writing functions and More on Functions.

UNIT II**(12Hrs)**

Lists–Tuples–***Sets–Dictionaries***- Comprehension: Working with files and dictionaries-***List Comprehensions***-Dictionary Comprehensions-Set Comprehension.

UNIT III**(12 Hrs)**

Strings: ***Various String Methods*** - Slicing a string – Strings versus bytes - ***Regular expression***- closure and generators– classes and iterators– Advanced iterators.

UNIT IV**(12Hrs)**

NumPy Basics: Arrays and Vectorised Computation: NumPynd array - File Input and Output with Array- Getting started with Pandas: Introduction to Pandas-***Data structures – Handling Missing Data - Hierarchical Indexing - Data Wrangling: Clean, Transform - Merge*** -Reshape: Combining and Merging Dataset-Data Transformation – String Manipulation.

UNIT V**(11Hrs)**

Plotting and Visualization: A brief matplotlib API primer-Plotting functions in pandas-Line plot, Barplot, Histogram and Scatter plot-***Time Series: Basics- time zone handling-* Resampling** and Frequency Conversion-***Time Series plotting***.

Text Books

S.No	Author Name	Title of the book	Publisher	Year and Edition
1	Richard L.Haltman	Learning to Program with Python	Southern Adventist University	2011, Revised Edition
2	Phuong Vo.T.H., Martin Czygan	Getting started with Python Data Analysis	Packet Publishing	2015

Reference Book

S.No.	Author Name	Title of the book	Publisher	Year and Edition
1	Allen Downey	Think Python	Green Tea Press Needham, Massachusetts	2016 Edition

Skill Components

- To explore the object-oriented programming, Graphical programming aspects of python with help of built in modules.
- Remembering the concept to operators, data types, looping statements in Python programming.
- Understanding the concepts of Input /Output operations in file.
- Applying the concept of functions and exception handling.
- Analyzing the structures of list, tuples and maintaining dictionaries.
- Demonstrate significant experience with the python program development environment.

Pedagogy

- Demonstration through System, Demonstration through PPT

Course Designers

1. Dr.N.V. Brindha
2. Mr.B. Ziyaudeen

COURS CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
BP23A03	BUSINESS LAW	THEORY	73	2	-	3

Preamble

- To provide students with an understanding of general principles of law of contract and special contracts
- 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; L-Low

Syllabus

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 of Publication & Edition
1.	Kapoor N.D	Business Law	Sultan Chand & sons	2020 & 3 rd Revised Edition

Books for Reference:

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

Skill Component

- Preparation of different types of Contract and to develop the working knowledge on execution of the same.
- Apply the regulatory framework on 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:

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

Course Designers:

1. Dr. B.Thulasi Priya, Department of Commerce
2. Dr. S.Sujatha, Department of Commerce

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
DA23A04	BUSINESS INTELLIGENCE	THEORY	73	2	-	4

Preamble

To equip knowledge on technical components of Business Intelligence

Prerequisite

Basic knowledge in business operations

Course Learning Outcome

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Identify the concepts of business intelligence tools & techniques	K1
CLO2	Interpret the strategies, performance, issues of legality and Privacy & Ethics of business intelligence	K2
CLO3	Apply the applications of text mining, web mining, social networking, databases and enterprise systems	K3
CLO4	Analyse the emerging trends of business intelligence & application opportunities.	K4

Mapping with Programme Learning Outcomes

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

S-Strong; M-Medium; L- Low

Syllabus

UNIT I (14 Hrs)

Introduction to Business Intelligence: Framework for Business Intelligence–Intelligence Creation–
Transaction Processing Versus Analytic Processing–Major Tools and Techniques of BI

UNIT II (15Hrs)

BusinessPerformanceManagement–***Strategize–Plan***–Monitor–PerformanceMeasurement–
BPM Methodologies–Performance Dashboards and Scorecards

UNIT III (15Hrs)

Text and web mining–text mining concepts and definitions–natural language processing – text mining applications– ***text mining process***– text mining tools – web mining overview – web content mining and web structure mining–***web usage mining–web mining success stories***

UNITIV (15Hrs)

Business Intelligence Implementation: ***Integration and Emerging Trends***– Implement BI–
Bi and Integration implementation– *Connecting BI systems to Databases and other enterprise systems*

UNITV (14Hrs)

On-Demand BI– Issues of Legality, Privacy and Ethics– ***Emerging Topics in BI** *– the web2.0 Revolution– ***online social networking*** –virtual worlds– social networks and BI: collaborative decision making-***RFID and new BI application opportunities***– reality mining.

Text Book

S.No.	Author Name	Book Name	Publisher	Year& Edition
1.	Efraim Turban Ramesh Sharda Dursun Delen David King	Business Intelligence – A Managerial Approach	Pearson	2013 3 rd Edition
2.	Stuart Russel and Peter Norvig	Artificial Intelligence: A Modern Approach	Prentice Hall	2020, 4 th Edition

Skill Components

- Identify the concept of Business Intelligence and its framework
- Understand the technique of BI
- Infer the knowledge of mining.
- Applying the concept of visualisation and its trends

Pedagogy

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

Course Designers

1. Dr.D. Sujaritha
2. Dr.S. Subalakshmi

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
DA23A05	BUSINESS DATA MINING	THEORY	73	2	-	4

Preamble

- To understand data mining techniques and algorithms in business analytics
- To apply data preprocessing techniques and tools to solve business problems

Prerequisite

No prerequisite knowledge required

Course Learning Outcome

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Identify the data model and its operations	K1
CLO2	Classify the basic concepts and techniques of Data Mining	K2
CLO3	Apply data mining tools for solving practical business problems	K3
CLO4	Analyze the algorithms and concepts for real-time execution	K4

Mapping with Programme Learning Outcomes

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

S-Strong; M -Medium; L– Low

Syllabus

UNIT I

(14Hrs)

Data Mining Introduction-Data Warehousing and Online Analytical Processing-
Introduction to Knowledge Discovery from Databases–Data Preprocessing– Data Cleaning–
Data Integration and Transformation–Data Reduction– Data Disc retisation and Concept
 Hierarchy Generation

UNIT II

(15Hrs)

Association Rule Mining: Market Basket Analysis-***Frequent, Closed, Association Rules***-Frequent
 Item set Mining Methods: *** Algorithm, Generating frequent itemset***- Pattern growth approach-
Correlation Analysis

UNIT III

(14Hrs)

Classification :***Decision tree induction***-Bayes Classification – Rule Based Classification-
Model Evaluation and Selection-Techniques to Improve Classification Accuracy

UNIT IV

(15Hrs)

***Clustering: Clustering Analysis*-Partitioning Method-Hierarchical Method -Density-based-**
Grid based method-Evaluation Clustering

UNIT V

(15Hrs)

Outlier Detection: Outlier and Analysis-Outlier Detection-Statistical Approaches- ***Proximity based
 approaches***-Clustering and classification-based approaches- **Outlier detection in high dimension***

Text Book

S.No.	Author Name	Book Name	Publisher	Year and Edition
1	Jiawei Han,Micheline Kamber and Jian Pei	Data Mining: Concepts And Techniques	Morgan Kauf man	2022,4 th Edition

Reference Books

S.No.	Authors	Title	Publishers	Year of Publication
1.	Ian H.Witten and Eibe Frank	Data Mining: Practical Machine Learning Tools and Techniques	Morgan Kaufman publications	2017, 4 th Edition
2	M. H.Dunham	Data Mining :Introductory And Advanced Topics	Imprint Pearson Education	2011 4 th Impression
3	Arun K.Pujari	Data Mining Techniques	Universities Press(India) Pvt. Ltd.	2013, Kindle Edition

Skill Components

- Identify the concept to fusing data in real time
- Analyze the fact of using algorithms in corporation in programming.
- Interpret various techniques to develop a well determined pattern.
- Applying the concept of statistical basis in data

3.

Pedagogy

Demonstration through System, Lecture, PPT, Quiz, Assignment, Group Discussion, Seminar and Activity based learning

Course Designers

1. Dr.N.V. Brindha
2. Mr.B. Ziyaudeen

COURSE CODE	COURSENAME	CATEGORY	L	T	P	CREDIT
DA23CP4	BUSINESS ANALYTICS WITHPYTHON PRACTICAL	PRACTICAL	-	-	45	2

Preamble

To explore and acquire skills in Python Programming

Prerequisite

Basic knowledge of Computers

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Relate the implementation of python for statistical calculations in various fields	K1
CLO2	Describe the algorithms and pandas and various quantitative analysis techniques	K2
CLO3	Demonstrate the data structure	K3
CLO4	Apply plotting graphs	K4

Mapping with Programme Learning Outcomes

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

S-Strong; M –Medium

Syllabus

1. Write a program that reads a file, break search line into words, strips white space and punctuation from the words, and convert them to lowercase.
2. Develop a program to read the book downloaded out-of-copyright ,skip the header information at the beginning of the file and process the text in the book to find and print the total number of words, frequency of each word and the total number of unique words. Compare the vocabulary sizes of books and identify which author uses the most extensive vocabulary.
3. Modify the program from the previous exercise to print the 20 most frequently- used words in the book.
4. Modify the previous program to read a word list and then print all the words in the book that are not in the word list. Analyze these words to determine how many typos, common words missing from the list, are or truly obscure terms.
5. Write a function named choose_from_hist that takes a histogram as defined in and returns a random value from the histogram, chosen with probability in proportion n to frequency.
6. Write a Python program that reads a text file, builds a word histogram in the file, update the histogram by creating a new item or incrementing an existing one and count the total number of words in the file by add up the frequencies in the histogram.
7. Find the most common words by applying the DSU pattern; most common takes a histogram and returns a list of word-frequency tuples, sorted in reverse order by frequency and prints the ten most common words in a histogram.

8. Write a program that uses set subtraction to find words in the book that are not in the word list.
9. Use keys to get a list of the words in the book, and build a list that contains the cumulative sum of the word frequencies. Chooses a random number from 1 to n. Find the index and also the corresponding word from the word list.
10. Write a program that uses this algorithm to choose a random word from the book.

Pedagogy

Demonstration through System, Demonstration through PPT

Course Designers

1. Dr.N.V. Brindha
2. Mr.B.Ziyaudeen

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
DA22SBCE	COURSERA- DATA SCIENCE AND STATISTICS	SEC	45	-	-	3

S.No.	COURSE NAME	COURSE LINK	HOURS
1.	Statistics Foundations	https://www.coursera.org/learn/statistics-for-marketing	18
2.	Introduction to Artificial Intelligence (AI)	https://www.coursera.org/learn/introduction-to-ai?specialization=ibm-ai-foundations-for-business	10
3.	The Data Scientist's Toolbox	https://www.coursera.org/learn/data-scientists-tools	17

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
NM23EII	Entrepreneurship and Innovation (Ignite X)	THEORY	30	-	-	2

Ignite Course Course Learning Objectives

1	Inspire; develop entrepreneurial mind-set and attributes; entrepreneurial skill sets for venture creation and intrapreneurial leadership
2	Apply process of problem-opportunity identification and validation through developing a macro perspective of the market, industries and customers while using design thinking principles.
3	Understand and analyse Customer and Market segmentation, estimation of Market size, Customer personae development and validation
4	Understand and Initiate Solution design, Prototyping for Proof of Concept. Understand MVP development and validation to determine Product-Market fit
5	Craft initial Business and Revenue models, financial planning and pricing strategy for profitability and financial feasibility of a venture. Understand relevance and viability of informal and formal funding with respect to different business models.
6	Understand and develop Go-to-Market strategies with a focus on digital marketing channels.
7	Understand and apply story telling skills in presenting a persuasive and defensible Venture Pitch.

Course Content

Unit I: Entrepreneurship Fundamentals & Context

Meaning and concept, attributes and mindset of entrepreneurial and intrapreneurial leadership, role models in each and their role in economic development. Gamified role play based exploration aligned to one's short term career aspiration and ambition. An understanding of how to build entrepreneurial mindset, skillsets, attributes and networks while on campus.

Core Teaching Tool: Simulation, Game, Industry Case Studies (Personalized for students – 16 industries to choose from), Venture Activity

Unit II: Problem & Customer Identification

Understanding and analysing the macro-Problem and Industry perspective, technological, socio-economic and Urbanization trends and their implication on new opportunities. Identifying passion, identifying and defining problem using Design thinking principles. Analysing problem and validating with the potential customer. Iterating problem-customer fit. Understanding customer segmentation, creating and validating customer personas. Competition and Industry trends mapping and assessing initial opportunity.

Core Teaching Tool: Several types of activities including Class, game, Gen AI, 'Get out of the Building' and Venture Activity.

Unit III: Solution design & Prototyping, Opportunity Assessment and Sizing

Understanding Customer Jobs-to-be-done and crafting innovative solution design to map to customer's needs and create a strong value proposition. Developing Problem-solution fit in an iterative manner. Understanding prototyping and MVP. Developing a feasibility prototype with differentiating value, features and benefits. Initial testing for proof-of-concept and iterate on the prototype.

Core Teaching Tool: Venture Activity, no code Innovation tools, Class activity

Unit IV: Business & Financial Model, Go-to-Market Plan

Introduction to Business model and types, Lean approach, 9 block lean canvas model, riskiest assumptions to Business models. Importance of Build - Measure – Lean approach Business planning: components of Business plan- Sales plan, People plan and Financial plan, Financial Planning: Types of costs, preparing a financial plan for profitability using financial template, understanding basics of Unit economics and analysing financial performance. Introduction to Marketing and Sales, Selecting the Right Channel, creating digital presence, building customer acquisition strategy. Choosing a form of business organization specific to your venture, identifying sources of funds: Debt & Equity, Map the Start-up Lifecycle to Funding Options.

Core Teaching Tool: Founder Case Studies – Sama and SecurelyShare; Class activity and discussions; Venture Activities.

Unit V: Scale Outlook and Venture Pitch readiness

Understand and identify potential and aspiration for scale vis a vis your venture idea. Persuasive Storytelling and its key components. Build an Investor ready pitch deck.**Core Teaching Tool:** Class activity and discussions; Venture Activities.

References:

1. Robert D. Hisrich, Michael P. Peters, Dean A. Shepherd, Sabyasachi Sinha (2020). Entrepreneurship, McGrawHill, 11th Edition.
2. Ries, E. (2011). The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses. Crown Business
3. Osterwalder, A., & Pigneur, Y. (2010). Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers. John Wiley & Sons.
4. Chowdhry Ajay, (2023) Just Aspire: Notes on Technology, Entrepreneurship and the Future,
5. Simon Sinek (2011) Start With Why, Penguin Books limited
6. Brown Tim (2019) Change by Design Revised & Updated: How Design Thinking Transforms Organizations and Inspires Innovation, Harper Business
7. Namita Thapar (2022) The Dolphin and the Shark: Stories on Entrepreneurship, Penguin Books Limited
8. Collins Jim, Porras Jerry, (2004) Built to Last: Successful Habits of Visionary Companies
9. Burlington Bo, (2016) Small Giants: Companies That Choose to Be Great Instead of Big
10. Saras D. Sarasvathy, (2008) Effectuation: Elements of Entrepreneurial Expertise, Elgar Publishing Ltd

Web Resources:

- Learning resource- IgniteX Course Wadhvani platform (Includes 200+ components of custom created modular content + 500+ components of the most relevant curated content.

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
DA23C09	MACHINE LEARNING WITH ARTIFICIAL INTELLIGENCE	THEORY	73	2	-	4

Preamble

- To understand machine learning techniques and AI algorithm
- To get insight on analysis and AI technique.

Prerequisite

- Requires solid foundation in Programming skills.

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Identify the data model and its operation	K1
CLO2	Classify the basic concepts and techniques of Data Mining	K2
CLO3	Apply data mining tool for solving practical business problem	K3
CLO4	Apply Artificial Techniques applications	K4

Mapping with Programme Learning Outcomes

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

S- Strong; M-Medium; L-Low

Syllabus

Unit – I (15 Hrs)

Machine Learning: Introduction - What is Machine Learning - Types of Machine Learning - ***Machine Learning Algorithms*** - Tools Available: Programming Languages – Frameworks - ***Databases - Deployment Tools***

Unit II (14 Hrs)

Application Areas of Machine Learning: Transportation - Education - Social Media - Financial World- Machine Learning Concepts: Supervised Learning -***Unsupervised Learning-Reinforcement Learning***

Unit III (14 Hrs)

Machine Learning Models in Product Development and Its Statistics Evaluation: Introduction - Methods for Model Building - Product Development - Smart Manufacturing - Quality Control Aspects - ***Machine Learning Methods***- Statistical Measures - ***Algorithm for Data Analytics - Real-Time Applications***

Unit IV (15 Hrs)

Artificial Intelligence: Introduction - Artificial Intelligence: What and Why? - History of AI - Foundation of AI - The AI Environment - ***Application Domains of AI - AI Tools - Challenges in AI*** - Future Prospects of AI - Artificial Intelligence and Gender: What is Artificial Intelligence – What is Machine Learning - What is Deep Learning? -Artificial Intelligence Enterprise Applications - ***Artificial Intelligence and Gender***

Unit V (15 Hrs)

Artificial Intelligence Application Areas: AI in Various Medical Imaging Modalities - AI in Environmental Management - Disease Diagnosis via Smartphone Applications - ***Ubiquitous Smart Learning -Educational Environments*** - Implementing concepts from the **Indian Knowledge System (IKS)** in **Artificial Intelligence (AI)**: Ethical, Philosophical, and Cognitive diversity to AI development. *** Highlighted Content offered in Blended Mode**

Text Book

S.No.	Author Name	Title of the book	Publisher	Year and Edition
1	P. Kaliraj & Dr.T. Devi	Artificial Intelligence Theory, Model & Applications	CRC Press	2022, Current Edn.

Reference Books

S.No.	Author Name	Title of the book	Publisher	Year and edition
1	Mitchell	Machine Learning	McGraw Hill	2017, 1st Edn.
2	Stuart Russell, Peter Norvig	Artificial Intelligence - A Modern Approach	Pearson	2018, 4th Edn

Skill Components

- Understanding of the fundamental issues and challenges of machine learning: data, model selection, model complexity, etc.
- Explain about the concepts of computational learning theory and dimensionality reduction
- Apply basic principles of AI in solutions that require problem solving, inference, perception, knowledge representation, and learning. Demonstrate awareness and a fundamental understanding of various applications of AI techniques in intelligent agents, expert systems, artificial neural networks and other machine learning models

Pedagogy

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

Course Designers

1. Dr N V Brindha
2. Mr. B Ziyaudeen

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
BP23C10/ CM23C11	MANAGEMENT ACCOUNTING	THEORY	73	2	-	4

Preamble

- To provide the fundamental knowledge and techniques in Management Accounting
- To apply the tools and techniques used to plan, control and make decisions
- To learn the Budgetary control procedures, reporting of organizational performance and calculation of variances

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 fundamental concept of management accounting and its objectives in facilitating decision making	K1
CLO2	Understand the different types of activity-based management tools through the preparation of estimates.	K2
CLO3	Analyse cost-volume-profit techniques using relevant costing and benefits to determine optimal managerial decisions.	K3
CLO4	Apply managerial accounting and its objectives in a way that demonstrates a clear understanding of ethical responsibilities.	K4

Mapping with Programme Learning Outcomes

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

S- Strong; M-Medium

Syllabus

Unit I

(15 Hrs)

Management Accounting: Meaning, ***Objectives & Scope – Need*** and Significance
***Relationship between Management Accounting, Cost Accounting & Financial Accounting.**
Financial Statement and the importance*-Tools for Analysis and Interpretation- Common Size Statements, Comparative statement, and Trend Analysis

Unit II

(15 Hrs)

Ratio Analysis - Significance of Ratios - Uses and Limitations of Ratios – Classification of Ratios - Analysis of Short-Term Financial Position - Analysis of Long-Term Financial Position Profitability Ratios– Leverage Ratios – Preparation of Financial statement from ratios.

Unit III

(14 Hrs)

Fund Flow Analysis: Meaning and Concept of Funds and Flow of Funds- Difference between Fund Flow Statement, Income Statement and Balance Sheet- Uses, Importance and Limitations of Fund Flow Statement *** - Statement / Schedule of Changes in Working Capital- Funds from Operation - Statement of Sources and Application of Funds. ***Cash Flow Analysis: Meaning- Classification of Cash Flows - Comparison between Fund Flow and Cash Flow Statement – Uses, Importance and Limitations of Cash Flow Statement-Preparation of Cash Flow Statement Using Direct and Indirect methods - Accounting Standard AS 3

Unit IV**(15 Hrs)**

Budgeting and Budgetary Control: Definition, Importance, Essentials and Classification of Budgets- Preparation of Cash Budget, Sales Budget, Production Budget, Direct Labour Budget, Purchase Budget, Material Budget, Overhead Budgets–Flexible Budget -Master Budget***Budgetary control – Steps in Budgetary Control– Zero Base Budgeting***.

Unit V**(14 Hrs)**

Marginal Costing:** Meaning – Features – Marginal Costing Vs Absorption Costing - Managerial Applications of Marginal Costing including transfer pricing- Significance and limitations of Marginal Costing- Marginal Cost Equation - **Cost-Volume-Profit Analysis and Break-Even Analysis-Decision Making – Make or buy Decision. ***Standard Costing-Meaning, suitability as a management tool-limitation-Variance Analysis***- Material and Labour Variances only **Distribution of Marks - Theory 20% and Problems 80%**

Text Books

S.No.	Author Name	Title of the book	Publishers	Year and Edition
1	Sharma R. K Sashi K. Gupta Neeti Gupta	Management Accounting	Kalyani Publishers	Reprinted 2017, IV Edn

Books for Reference

S.No.	Author Name	Title of the book	Publishers	Year and Edition
1.	Jain and Narang	Cost and Management Accounting	Kalyani Publishers	2020, 21 st Edn
2.	Dr. Maheswari S. N & Dr. S. N. Mittal	Management Accounting	Sultan Chand and Sons	2020, Reprint
3.	Reddy T.S and Reddy H. P	Management Accounting	Margham Publications	2020, VIII Edn

Pedagogy

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

Skill Component

- Identify the financial tools for analyzing the financial reports
- Apply the different types of ratios to income & expenditure and balance sheet statement
- Analyse the working capital position of the company
- Prepare the different types of budgets for any of the business entity
- Calculate the breakeven point for a company

Course Designers

1. Dr. G. Kavitha – Department of Commerce
2. Dr. G. Indrani - Department of Commerce

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
BP23C11/ CM23C12	DIRECT TAXATION	THEORY	88	2	-	4

Preamble

- To gain expert Knowledge of the provisions of the Income Tax Act under different heads of income.

Prerequisite

- No prerequisite Knowledge required

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Define the basic principles of the Income Tax Act	K1
CLO2	Understand the assessment procedure of different heads of incomes	K2
CLO3	Apply the various procedures for submission of income tax return	K3
CLO4	Analyse the taxable income of an assessee	K4

Mapping with Programme Learning Outcomes

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

S- Strong; M-Medium

Syllabus

Unit I

(18 Hrs)

Basic Concepts - Assessment Year, Previous Year, Person, Assessee, Types of Assessee, Income, Gross Total Income, Total Income, Agricultural Income, Exempted Incomes, Incomes which do not form part of Total Income, Tax Rates, Difference between exemption and deduction, ***Capital and Revenue – Receipts, Expenditure, Losses***, - Problems on distinguishing between agricultural and non-agricultural income, capital and revenue- Residential Status and Incidence of Tax - Relationship between residential status and incidence of tax – Simple problems.

Unit II

(18 Hrs)

Income under the head 'Salaries': ***Income under the head 'Salaries': Meaning, Basis of charge, Forms of Salary***, Allowances, Perquisites, Provident Fund, ***Permissible deductions under section 16***, Retirement benefits – ***Death-cum-retirement Gratuity***, Leave Salary, Pension, Commuted pension.

Unit III

(18 Hrs)

Income under the head 'Income from House property': ***Definition of House Property, Basis of charge, Annual Value, Deductions out of annual value***, Income from let-out house property, income from self-occupied house property, unrealized rent, vacancy allowance, interest on loan, pre-construction interest, arrears of rent. ***Profits and Gains of Business or Profession - Meaning of Business or Profession*** - Computation of Profits and Gains of Business or Profession of Individual - Expenses Expressly Allowed –Expense Expressly Disallowed.

Unit IV

(17 Hrs)

Income from Capital Gains - *** Computation of Capital Gains*** - Income from Other Sources - Computation of Income from Other Sources.

Unit V

(17 Hrs)

Set off and Carry Forward Set off losses. Permissible deductions from gross total income: ***Permissible deductions from gross total income 80C, 80CCG, 80D, 80DD, 80DDB, 80E, 80G, 80GG, 80GGA, 80GGB, 80GGC, 80JJA, 80QQB, 80RRB, 80U***. Computation of total income and tax liability- Assessment of Individuals. Old regime vs New regime. ****Assessment: Procedure for Assessment. Filing of Return – Due Dates of Filing – Voluntary Filing. Introduction to e-Filing. Return of Loss – Belated Return – Defective Return – Signing of Return – Permanent Account Number (PAN). e-PAN – Tax credit statement (26 AS) and Annual Information Statement (AIS). ****

Distribution of Marks - Theory 20% and Problems 80%

Text Book

Sl. No.	Author Name	Title of the Book	Publisher	Year and Edition
1.	Gaur V.P. and Narang D.B	Income Tax and Practice	Kalyani Publishers	Current Edn

Books for Reference

Sl. No.	Author Name	Title of the Book	Publisher	Year and Edn
1.	Dinkar Pagare	Income Tax and Practice	Sultan Chand & Sons	Current Edn
2	Mehrothra	Income Tax and Practice	Sultan Chand & Sons	Current Edn

Pedagogy

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

Skill Component

- Identify various sources of incomes that are of revenue and capital in nature.
- To apply various concepts and practical calculations with reference to provisions.
- Collect the list of scientific research institutions under Business/Professions.
- Preparations of Tax statement for sample income.
- Filling of Demo Returns.

Course Designers

1. Dr. B. Thulasipriya– Department of Commerce
2. Dr. S. Sujatha - Department of Commerce

COURSE CODE	COURSE TITLE	Category	L	T	P	Credit
AF23E01	FINANCIAL SERVICES	Theory	73	2	-	5

Preamble

- To acquaint the students by facilitating efficient fund flow and economic growth through various financial markets and instruments.
- To provide knowledge of essential services such as banking, investment, and insurance, governed by regulatory bodies like SEBI, supporting financial inclusion and economic development.

Pre requisite

- Basic Knowledge in Economics and Finance

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Impart knowledge on the role and function of the Indian financial system.	K1
CLO2	Enrich their knowledge on key areas relating to management of financial products and services	K2
CLO3	Familiarize students about Venture Capital, Leasing. To make them understand the Credit Rating system.	K3
CLO4	Provide insights into mutual funds and the operation of NSDL and CSDL.	K4

Mapping with Programme Learning Outcomes

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

S-Strong; M-Medium

Syllabus

UNIT I

(15 Hours)

Introduction to Financial System - Structure of Financial System – Role of Financial System in Economic Development – ***Financial Markets and Financial Instruments*** – Capital Markets – Money Markets – Primary Market Operations – ***Role of SEBI – Secondary Market Operations – Regulation*** – Functions of Stock Exchanges – Listing – Formalities – Financial Services Sector Problems and Reforms.

UNIT II

(15 Hours)

Introduction to Financial Services - Concept, Nature and Scope of Financial Services - Regulatory Frame Work of Financial Services – ***Growth of Financial Services in India*** – Merchant Banking – Meaning - Types – ***Responsibilities of Merchant Bankers – Role of Merchant Bankers in Issue Management*** – Regulation of Merchant Banking in India.

UNIT III

(15 Hours)

Venture Capital – Growth of Venture Capital in India – Financing Pattern under Venture Capital – ***Legal Aspects and Guidelines for Venture Capital, Leasing – Types of Leases*** – Evaluation of Leasing Option Vs. Borrowing.

UNIT IV

(14 Hours)

Mutual Funds – Concept and Objectives, ***Functions and Portfolio Classification***, Organization and Management – De-mat Services - Need and Operations - ***Role of NSDL and CSDL***. Credit Rating – Meaning, Functions – Debt Rating System of CRISIL, ICRA and CARE. Factoring, Forfeiting and Bill Discounting – ***Types of Factoring Arrangements*** – Factoring in the Indian Context.

UNIT V

(14 Hours)

Introduction to Community Orientation and Higher Social Capital - Theoretical Foundations of Social Capital ***Social Networks and Community Cohesion*** - Social Capital and Community Development - Measuring Social Capital - ***The Role of Social Capital in Political and Civic Engagement - Challenges and Criticisms of Social Capital*** - Enhancing Community Orientation and Social Capital - Social Capital and Sustainability - Practical Applications and Case Studies

Text Book

SL.No	Author Name	Title of the Book	Publishers	Year and edition
1.	Gurusamy.S	Financial Services	Tata McGraw Hill, Noida.	2022, 8 th Edn
2.	E. Dharmaraj	Financial Services	S. Chand, New Delhi	2018, 1 st Edn
3.	M.Y. Khan	Financial Services	Tata McGraw Hill, Noida.	2018, 11 th Edn

Reference Books

SL.No	Author Name	Title of the Book	Publishers	Year and edition
1.	C. Rama Gopal	Financial Services	Vikas Publishing house, Noida	2021, 12 th Edn
2.	E. Gordon and K. Natarajan	Financial Market and Services	Himalaya Publishing House, Mumbai.	2018, 7 th Edn
3.	B. Santhanam	Financial Services	Margham Publications, Chennai.	2015, 12 th Edn

Skill Components

- Analyze a real-world financial system case, highlighting the roles of financial markets, instruments, and regulations.
- Prepare a business proposal for a startup, demonstrating how venture capital can be used to fund the venture, including legal aspects.
- Conduct an in-depth research study on the growth and regulation of financial services in India, including a critical analysis of merchant banking practices and their impact on capital markets.
- Create and present a diversified mutual fund portfolio, explaining its objectives, functions, and management strategies.

Pedagogy

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

Course Designers

1. Dr G Rekha
2. Dr S Manasha

COURSE CODE	COURSE TITLE	Category	L	T	P	Credit
CM23E02	BANKING THEORY LAW AND PRACTICE	Theory	73	2	-	5

Preamble

- To understand the legal procedures formulated under Banking Regulation Act, Negotiable Instruments Act and other legal issues
- To provide exposure to the students with the latest developments in the banking field
- To acquire specialized knowledge of law and practice relating to Banking

Prerequisite

- Basic Knowledge in Banking

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Understand and explain the conceptual framework of banking	K1
CLO2	Classify and demonstrate the types of deposit, cheques, loans, and advances	K2
CLO3	Illustrate the various electronic payment methods	K3
CLO4	Analyse the models of E-banking	K4

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	S	S	S
CLO2	S	S	S	S	S
CLO3	S	S	S	S	S
CLO4	S	S	S	S	S

S-Strong

Syllabus

Unit I

(15 Hrs)

Banking: Meaning and Definition- ***Classification of Banks***-Functions of Commercial Banks - Regional Rural banks – Concessions –Progress. Credit Creation – meaning – technique - limitation- Nationalization and Privatizations of banks in India- ***Role of banks in Money Market and Economic Development.***

Unit II

(14 Hrs)

Central Banking: Meaning –Nature - Functions of Central Bank. ***Definition of banker and customer – General relationship*** - Rights and obligations of a banker - Ombudsman Scheme– General Precautions for opening accounts –Types of deposit accounts – Opening Bank Account- Jan Dhan Yojana- Account Statement vs Passbook vs e-statement- Banker Customer Relationship- Special Types of Customers-***KYC Norms***

Unit III (15 Hrs)
Loans and advances: *Principles of sound lending*- style of credit - types of loans – Modes of creating charge - Lien, mortgage, pledge and hypothecation- ***General** principles of secured advances –Advances against goods and advances against document of title to goods*

Unit IV (15 Hrs)
Negotiable Instruments Act: Definition and types. **Endorsement** – meaning, definition and kinds. Cheques - *Crossing of cheques –types* – payment of cheques – *precautions by paying bankers – statutory protection of the paying banker* – collection of cheques – legal status – conversion – RBI instruction to banks. Truncated cheque and electronic cheque.

Unit V (14 Hrs)
Digital Banking: E –banking- Electronic delivery channels – Facets of E-banking – E-banking transactions – Mobile Banking - Inter-bank mobile payment (IMPS) – ***virtual currency*** – Models of E-banking – Advantages – Constraints – Security measures – ***Electronic payment system*** – NEFT, RTGS, SWIFT, WIRE.

Text Book

S.No	Authors	Title	Publishers	Year of Publication
1.	Varshney. P. N	Banking Theory Law and Practice	Sultan Chand & sons	20 th Revised Edn 2020

Books for Reference

S.No	Authors	Title	Publishers	Year of Publication
1.	Dr. S. Gurusamy	Banking Theory, Law and Practice	Vijay Nicole Imprints(p) Ltd	4 th Edn 2016
2.	E. Gordan and K. Natarajan	Banking Theory, Law and Practice	Himalaya publishing house	26 th Revised Edn 2017
3.	Kandasami. K.P	Banking Law and Practices	S Chand & Company	Revised Edn 2010

Pedagogy

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

Skill component

- Analyse the role of public and private sector banks in India
- Collect the guidelines of public and private sector bank for opening of different types of bank accounts
- Collect the different types of cheques and analyse it
- Analyse the documentation procedures for different types of loans offered by commercial banks
- Apply the different types of e payment system in your day-to-day transaction

Course Designers

1. Dr. D. Vijayalakshmi– Department of Commerce
2. Dr. B. Thulasipriya – Department of Commerce

COURSE CODE	COURSE TITLE	Category	L	T	P	Credit
CM23E03	PERFORMANCE MANAGEMENT	Theory	73	2	-	5

Preamble

- To provide an in-depth study of the both financial and non-financial performance measures in management and the difficulties in assessing performance in divisionalised businesses

Prerequisite

- No prerequisite Knowledge required

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Understand the applications of modern techniques of costing in industrial settings	K1
CLO2	Illustrate how a business should be managed and controlled and how information systems can be used to facilitate this	K2
CLO3	Examine the problems surrounding scarce resource, pricing and make or buy decisions.	K3
CLO4	Apply how scarce resource and pricing relates to the assessment of performance	K4

Mapping with Programme Learning Outcomes

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

S- Strong; M-Medium

Syllabus

Unit I

(14 Hrs)

ABC, calculate costs per driver and per unit using ABC, Compare ABC and traditional methods of overhead absorption based on production units, Labour hours or machine hours. ***Target costing*** - Derive a target cost in manufacturing and service industries; Explain the difficulties of using target costing in service industries; ***Suggest how a target cost gap might be closed. Life cycle costing*** - ***Identify the costs involved at different stages of the life-cycle***; Derive a life cycle cost in manufacturing and service industries; Identify the benefits of life cycle costing.

Unit II**(15 Hrs)**

Specialist Management Accounting Techniques – Throughput accounting - Discuss and apply the theory of constraints, Calculate and interpret a throughput accounting ratio (TPAR), Suggest how a TPAR could be improved, ***Apply throughput accounting to a multi-product decision making problem***. Environmental accounting - Discuss the issues business face in the management of environmental costs; ***describe the different methods a business may use to account for its environmental costs***.

Unit III**(15 Hrs)**

Decision Making Techniques – Relevant cost analysis - ***Cost volume profit analysis*** – Limiting Factors Pricing decisions - ***Make-or- buy and other short-term decisions*** - Dealing with risk and uncertainty in decision making.

Unit IV**(15 Hrs)**

Budgeting and Control: Budgetary systems and types of budget - ***Quantitative analysis in budgeting Standard costing*** - ***Material mix and yield variances*** - ***Sales mix and quantity variances*** - Planning and operational variances

Unit V**(14 Hrs)**

Performance Measurement and Control Performance management information systems - ***Sources of management Information*** - ***Management reports*** - Performance analysis in private sector organizations - ***Divisional performance and transfer pricing*** - ***Performance analysis in not***- for - profit organizations and the public sector - ***External considerations*** and behavioral aspects **Distribution of Marks: Theory: 20% Problems: 80%**

Text Books

S. No	Authors	Title	Publishers	Year of Publication
1	Performance Management (ACCA),- Kaplan Publishing			Current Edn

Books for References

S. No	Authors	Title	Publishers	Year of Publication
1.	R K Sahu	Performance Management System	Excel Books	Current Edn
2.	T V Rao	Performance Management: Toward Organizational Excellence	Sage Publications Pvt Ltd	2 nd Edn 2016
3.	Prem Chandha	Performance Management: It's About Performing - Not Just Appraising	Laxmi Publication	2003 Edn

Pedagogy

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

Skill Component

- To Examine about business and financial modelling for Cost Volume and Profit Analysis
- To Interpret about Environmental Cost issues faced by business organization
- To Apply Throughput Accounting to a multi – product decision making problem
- To identify the difficulties of using target Costing in service industries
- To analyse about material mix and yield variances through Budgetary control.

Course Designers

- 1.Dr. G. Kavitha– Department of Commerce
- 2.Dr. B. Thulasipriya – Department of Commerce.

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
DA23CP5	MACHINE LEARNING WITH ARTIFICIAL INTELLIGENCE – PRACTICAL	PRACTICAL	-	-	60	3

Preamble

- To explore and acquire skills in machine learning algorithms using Python

Prerequisite

- Basic knowledge of technological operations

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Enumerate and demonstrate the database in Python/Java	K1
CLO2	Applying Clustering, Classification Algorithms.	K2
CLO3	Understand and apply AI algorithm	K3
CLO4	Demonstrate the process for algorithm with concepts	K4

Mapping with Programme Learning Outcomes

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

S- Strong; M-Medium; L-Low

Syllabus

1. Implement and demonstrate the FIND-S algorithm for finding the most specific hypothesis based on a given set of training data samples. Read the training data from a .CSV file.
2. For a given set of training data examples stored in a .CSV file, implement and demonstrate the Candidate-Elimination algorithm to output a description of the set of all hypotheses consistent with the training examples.
3. Write a program to demonstrate the working of the decision tree based ID3 algorithm. Use an appropriate data set for building the decision tree and apply this knowledge to classify a new sample.
4. Build an Artificial Neural Network by implementing the Backpropagation algorithm and test the same using appropriate data sets.
5. Write a program to implement the naïve Bayesian classifier for a sample training data set stored as a.CSV file. Compute the accuracy of the classifier, considering few test data sets
6. Assuming a set of documents that need to be classified, use the naïve Bayesian Classifier model to perform this task. Built-in Java classes/API can be used to write the program. Calculate the accuracy, precision, and recall for your data set.
7. Write a program to construct a Bayesian network considering medical data. Use this model to demonstrate the diagnosis of heart patients using the standard Heart Disease Data Set. You can use Python ML library classes/API.
8. Apply EM algorithm to cluster a set of data stored in a .CSV file. Use the same data set for clustering using the k-Means algorithm. Compare the results of these two algorithms and comment on the quality of clustering. You can add Java/Python ML library classes/API in the program
9. Write a program to implement k-Nearest Neighbour algorithm to classify the iris data set. Print both correct and wrong predictions. Python ML library classes can be used for this problem.
10. Implement the non-parametric Locally Weighted Regression algorithm in order to fit data Points. Select the appropriate data set for your experiment and draw graphs.
11. Implement Principal Component Analysis (PCA) for dimensionality reduction and visualize Results.
12. Implement Support Vector Machine (SVM) for classification on a dataset and evaluate Performance.
13. Implement the Random Forest algorithm for classification and analyze feature importance.
14. Implement the A priori algorithm for association rule mining on a dataset.
15. Implement a Reinforcement Learning algorithm (Q-Learning) for solving a simple environment.

Pedagogy

- Demonstration through System, Demonstration through PPT

Course Designers

1. Dr N V Brindha
2. Mr B Ziyaudeen

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
DA21SBP2	SAS & SCI LAB PRACTICAL	PRACTICAL	-	4	41	3

Preamble

To explore and acquire skills in Statistical and Numerical Analysis.

Pre requisite

Basic knowledge of Computers

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Show the Statistical Functions	K1
CLO2	Demonstrate the Dataset usage	K2
CLO3	Identify Numerical Computational Package	K3
CLO4	Analyze Logical Operations	K4

Mapping with Programme Learning Outcomes

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

S- Strong; M-Medium; L-Low

Syllabus

SAS

1. Student database: Writing a Basic SAS Program for Accessing Data in SAS Libraries
 - a. Create a SAS program by getting input from the users for name, age, phone, address.
 - b. Give datelines with required variables.
 - c. Enter the print command to display result of student
2. Car database: Reading and Generating CSV Files using Snippets & using the Import Data Utility in SAS Studio
 - a. Import a car database from permanent database from SAS using snippets
 - b. Rename the file name and generate the same csv file.
 - c. By using the import utility option, import an excel file into SAS and display the result.

3. Car Database: Creating a New Column in SAS and Performing Conditional Logic in SAS
 - a. From permanent database take car dataset
 - b. Add new column called Markup by subtracting MDRP with Invoice
4. Iris Database: Create Histogram, Bar Chart and Bar-Line Chart
 - a. Transform the dataset and set analysis variable, categorical variable.
 - b. Apply necessary arguments for the selected graph and display the result
5. Class Database: Perform One Way Frequency and Table Analysis
 - a. Assign a single variable to analyze.
 - b. Apply necessary arguments for the selected graph and display the result.
6. Cars Database: Perform Correlation Analysis, One-Way ANOVA
 - a. Set required variable and give statistic measure to plot the graph
7. Fish Database: Analysis of Covariance & Forecasting Using SAS Studio
 - a. Assign a single variable to analyze.
 - b. Apply necessary arguments for the selected graph and display the result.

Sci Lab

8. Matrix manipulation using Sci lab
9. Least Square Curve Fitting and plotting in sci lab
10. Solve an ODE using Sci lab

Pedagogy

- Demonstration through System, Demonstration through PPT

Course Designers

1. Dr N V Brindha
2. Mr. B Ziyaudeen

COURSE CODE	COURSE TITLE	CREDIT
AF23AC1	INTERNATIONAL TRADE	5

Objectives:

- To understand the meaning and importance of International Trade
- To equip students with knowledge of classical and modern trade theories and their practical implications
- To familiarize students with the structure and functions of international economic institutions and trade regulations

UNIT I

Introduction to International Trade – Meaning – Definition - Difference between Internal and International Trade – Importance of International Trade in the Global context

UNIT II

Theories of International trade: Classical theories - Adam smith's theory of Absolute Advantage – Ricardo's Comparative cost theory - Modern theories of International Trade - Haberler's Opportunity Cost theory – Heckscher –Ohlin's Modern theory – International trade and Factor Mobility Theory – Leontiff's Paradox - International trade and economic growth theory - Immiserating growth theory

UNIT III

Balance of Payments – Components of Balance of Payments - Current account, Capital account & Official settlement accounts - Disequilibrium in BOP -Methods of correcting Disequilibrium - Balance of Payment adjustment Theories - Marshall Lerner mechanism. Balance of Trade – Terms of Trade – Meaning – Definition – Difference between BOP and BOT.

UNIT IV

International Economic Institutions - International Monetary System - Bretton Woods Conference – IMF - Objectives, Organizational structure – Membership – Quotas – Borrowing and Lending Programme of IMF – SDRs – India and IMF -World Bank and UNCTAD.

UNIT V

World Trade Organisation (WTO) – Functions and Objectives – Agricultural Agreements – GATS - TRIPS – TRIMS

Text Books

S. No	Author Name	Title of the Book	Publisher	Year and Edition
1	Francis Cherunilam	International Trade and Export Management	Himalaya Publishing House	2025, 23 rd Edn
2	Paul.R. Krugman and Maurice Obstfeld	International Economics (Theory and Policy)	Pearson Education Asia - Addison Wesley Longman (P) Ltd.	2022, 12 th Edn

Reference Books

S. No	Author Name	Title of the Book	Publisher	Year and Edition
1	Punam Agarwal and Jatinder Kaur	International Business	Kalyani Publications	2021, 11 th Edn
2	Avadhani, V.A.	International Financial Management	Himalaya Publications, Mumbai	2024, 3 rd Edn

Course Designers

1. Ms. M. Pooja
2. Dr S Manasha

COURSE CODE	COURSE TITLE	CREDIT
AF23AC2	MERCHANT BANKING	5

Objectives:

- To introduce the concept, functions, and regulatory framework of merchant banking in the Indian financial system
- To develop an understanding of issue management, book building, and private placement processes
- To equip students with knowledge of various merchant banking services, including portfolio management and advisory functions

UNIT I

Merchant Banking - Introduction – Concept of Merchant Banking – Functions – Qualities required for Merchant Banker - Recent Development & Challenges in Merchant Banking - Legal Regulatory framework of Merchant Banking, SCRA- FEMA – SEBI Guidelines to the Merchant Banker

UNIT II

Issue Management - Pre & Post Issue Management – issue Pricing – Designing of capital Structure, Brokers in Issue Management & Their Responsibilities- Register – Underwriters – Types - Bought out Deals, Best Effort Deal, Underwriting Commission and Underwriting agreement –Devolvement - Assessment of an issue for underwriting – Green shoe option

UNIT III

Book Building - Book building – Meaning and concept – Book Building offer, Fixed price Offer – Alternative book build offers – Lead Managers – Duties, Responsibilities and appointment of lead managers – Role of Merchant Banker as a Lead Manager

UNIT IV

Private Placement - Definition – Categories of private placements – private placement with the purview of merchant banking – market segment for privately placed debts – PSU Bonds, Municipal Bonds, Institutional Bonds, Corporate Bonds, Securitized Debt Instruments – Role of Merchant Banker in private placements.

UNIT V

Merchant Banking Services - Corporate Counseling – Project counseling - Loan Syndication – Portfolio Management –Offshore Finance – NRI Investment and Advisory Services, Leasing services – Concept, Meaning and significance.

Text Books

S. No	Author Name	Title of the Book	Publisher	Year and Edition
1	L Natarajan	Merchant banking and financial services	Margham Publications	2012, 7 th Edn
2	Prof. Anil Agashe	Merchant banking and financial services	Everest Publishing House, Pune	2005, 11 th Edn

Reference Books

S. No	Author Name	Title of the Book	Publisher	Year and Edition
1	Madhuvij, Swati Dhawan	Merchant Banking and Financial Services	McGraw hill, New Delhi	2019, 2 nd Edn
2	Dr Ravichandran Krishnamurthy	Merchant Banking and Financial Services	Himalaya Publishing house, Mumbai	2017, 2 nd Revised Edn

Course Designers

1. Dr. S Manasha
2. Ms. M. Pooja

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
DA23C12	BIGDATA FRAMEWORK	THEORY	88	2	-	5

Preamble

- To introduce students to big data technologies such as Hadoop, Pig, and Hive for managing, processing, and analyzing large datasets.
- To provide insights from Indian Knowledge Systems in knowledge classification and algorithmic thinking, helping students connect traditional methods with modern business analytics practices.

Prerequisite

Basic knowledge of computer systems and programming is desirable, but no specific prerequisite is required.

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Relate Hadoop concepts with datasets and traditional knowledge classification approaches	K1
CLO2	Recognize Hadoop tools, techniques, and parallels with Indian Knowledge Systems	K2
CLO3	Identify various data frames, models, and algorithmic thinking inspired by Indian traditions	K3
CLO4	Apply Map Reduce techniques for data analysis and processing	K4

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PL03	PL04	PL05
CLO1	S	S	M	S	S
CLO2	S	M	S	S	M
CLO3	M	S	S	M	M
CLO4	S	M	S	S	M

S-Strong; M-Medium

Syllabus

BIGDATA FRAMEWORK - DA23C12 – 88 HRS

UNIT - I (17 Hrs)

Meet Hadoop: Data – Data Storage and Analysis – Comparison with other systems – Knowledge classification in Indian Knowledge Systems and its parallels with modern data storage and organization – A brief history of Hadoop – The Apache Hadoop Project – Map Reduce: A weather dataset – Scaling out – Hadoop streaming – Hadoop pipes – Early algorithmic thinking in Indian Knowledge Systems as inspiration for modern data analysis and processing frameworks.

UNIT – II (18 Hrs)

The Hadoop Distributed File System: The design of HDFS – HDFS concepts – The Command Line interface – Hadoop File Systems–The Java Interface–Data Flow–Parallel copying with distcp – Hadoop archives. Hadoop i/o: Data Integrity–Compression–Serialization–File based data structure.

UNIT- III (18 Hrs)

Developing a Map Reduce Application: The Configuration API – Configuring the development environment–Writing a Unit Test–Running locally on test data–Running on a cluster– Tuning a job – Map Reduce work flows. Map Reduce Types and Formats: Map Reduce Types – Input Formats – Output Formats.

UNIT - IV (18 Hrs)

MapReduce Features: Counters – Sorting – Joins – Side Data Distribution – Map Reduce library classes. Setting up a Hadoop Cluster: Hadoop Specification – Cluster setup and installation–SSH Configuration–Hadoop Configuration–Post Installation–Bench marking a Hadoop Cluster–Hadoop in the cloud.

UNIT-V (17 Hrs)

PIG: Features –modes – modes–PIG Latin– Dataset –Commands and Functions – Operators – Evaluation Functions – Batch Mode – Embedded Mode – PIG vs. SQL. SPARK: Features – Architecture – Spark Components – Data Abstractions: RDD – Data frame -- Dataset – Spark SQL and Data Frames – Transformations and Actions – Spark Streaming Basics– Spark vs. MapReduce / Pig.

Text Book

S No.	Author's	Title	Publisher	Year and Edition
1.	Tom White	Hadoop: The Definitive Guide	O'Reilley	2015 and 4 th edn.
2	Bill Chambers & Matei Zaharia	Spark: The Definitive Guide	O' Reilley	2018 and 1 st edn

Reference Books

S No.	Author's	Title	Publisher	Year and edition
1	Mark Kerzner, SujeeManiyam	Hadoop Illuminated	Git-HUB	2016 and 1 st Edn
2	Kapil Kapoor, Michel Danino	Knowledge Traditions and Practices of India	Bharatiya Vidya Bhavan/NIOS	2013

Skill Components

- Understand and critically apply the concepts and methods of business analytics
- Demonstration the various methodologies of mapreduce
- Analyze the modeling uncertainty and data inference
- Evaluate the analytical functions using PIG & Spark

Pedagogy

Power Point Presentation, Quiz, Assignment, Group Discussion, Seminar and Experimental Discussion

Course Designers

1. Dr.N.V. Brindha
2. Mr.B. Ziyaudeen

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
BP23C13/ CM23C14	COST ACCOUNTING	THEORY	88	2	-	4

Preamble

- To provide an in depth study of the Cost Accounting Principles and Techniques for Identification, Analysis and Classification of Cost Components
- To Explain the Basic Concepts and Processes in Determination of Cost of Products and Services
- To Facilitate Managerial Decision Making Process

Prerequisite

- Knowledge on Classification of Material, Labour and Overheads

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Know the areas of Application of Costing Techniques.	K1
CLO2	Understand and Explain the Conceptual Framework of Cost Accounting	K2
CLO3	Apply the Concept and Role of Cost Accounting in the Business Management of Manufacturing and Non-Manufacturing Companies	K3
CLO4	Analyze in detail on Cost Ascertainment	K4

Mapping with Programme Learning Outcomes

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

S- Strong; M-Medium

Syllabus

COST ACCOUNTING - BP23C13/ CM23C14 – 88 HRS

Unit - I (17 Hrs)

Cost Accounting – Definition, Meaning and Scope – Relationship of Cost Accounting with Financial Accounting and Management Accounting – Methods of Costing – Cost Analysis, Concepts and Classifications – Elements of Cost, Preparation of Cost Sheet and Tender – Costing as an Aid to Management – Limitations and Objections Against Cost Accounting - Reconciliation of Costs and Financial Accounts.

Unit - II (18 Hrs)

Materials – Purchasing of Materials, Procedure and Documentation Involved in Purchasing. Requisitioning for Stores – Techniques of Materials Control - Maximum, Minimum and Re-ordering Levels – Economic Order Quantity – Perpetual Inventory. Methods of Valuing Material Issues - FIFO, LIFO, Simple and Weighted Average methods.

Unit - III (18 Hrs)

Labour – concept and treatment of Idle Time - Control Over Idle Time – Labour Turnover- Methods of wage payment - Time Rate, Piece Rate, Taylor's Differential piece rate, Merrick's Multiple piece rate – Incentive Methods - Halsey and Rowan Plan – Group Incentive Scheme

Unit - IV (18 Hrs)

Classification of Overheads - Allocation and Apportionment – Primary Distribution - Secondary Distribution - Reapportionment of Service Department Costs to Production Departments - Direct Method - Reciprocal Methods - Repeated Distribution Method and Simultaneous Equation Method - Absorption of Overheads and Computation of Machine Hour Rate. Activity Based Costing.

Unit - V (17 Hrs)

Process Costing – Features – Process Losses, Waste, Scrap, Normal Process Loss, Abnormal Process Loss, Abnormal Gain and Inter-process Profit (Excluding Equivalent Production) – Accounting for Joint and By-products- Job Costing and Batch Costing (Simple problems only).

Distribution of Marks: Theory 20% and Problems 80%

Text Book

S. No	Authors	Title	Publishers	Year and Edition
1.	Jain and Narang	Cost Accounting	Kalyani Publishers	Reprinted 2024 and 8 th edn.

Reference Books

S. No	Authors	Title	Publishers	Year and Edition
1.	Pillai R.S.N and Bagawathi	Cost Accounting	S Chand & co	Reprinted 2020 and 5 th edn.
2	Maheswari. S N	Principles of Cost Accounting	Sultan Chand & Sons	Reprinted 2023 and 4 th edn.

Skill Components

- Preparation of real time cost sheet and reconciliation of cost and financial statements
- Applications of material and wage system in real time business environment
- Analyze the classification of overheads for products and services.
- To ascertain the cost of production for every process, department, or service of a business

Pedagogy

Lecture, Power Point Presentation, Quiz, Assignment, Group Discussion, Seminar

Course Designers

1. Dr. G. Kavitha
2. Dr. C. Gomathy

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
DA23E01	SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT	THEORY	73	2	-	5

Preamble

- To familiarize the fundamental concept of Securities and Portfolio Management
- To provide knowledge of risk and return involved in the different types of securities

Prerequisite

Basic knowledge of financial markets, investment instruments, and accounting fundamentals.

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 security market and Portfolio	K1
CLO2	Explain the concept of Security Valuation	K2
CLO3	Illustrate the theoretical and practical background in the field of investments	K3
CLO4	Build security value techniques and analyze the application of portfolio	K4

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PL03	PL04	PL05
CLO1	S	L	L	S	S

CLO2	S	S	S	S	S
CLO3	S	M	L	S	S
CLO4	S	S	M	M	M

S-Strong; M-Medium; L-Low

Syllabus

SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT - DA23E01 – 73 HRS

UNIT- I (15 Hrs)

Nature and scope of Investment management: Investment Speculation and Gambling- Factors Favorable for Investment–Investment Media–Features of an Investment Programme –The Investment Process – Stages in Investment - DEMAT–Functions.

UNIT - II (14 Hrs)

Security Valuation: Elements of Investment - Approaches to Investment -Basic Valuation Models*-Bonds, Preference Shares, Common Stock. Returns: Measurement -Traditional Technique - Holding Period – Yield – Probability Distributions - Statistical Methods. Risk: Risk Classification - Systematic, Unsystematic Risk - Standard Deviation.

UNIT - III (15 Hrs)

Fundamental Analysis: Economic Analysis – Industrial Analysis – Company Analysis. Technical Analysis: Assumptions-Dow Theory Charts and Signals–Technical Indicators- Efficient Market Theory: Weak Form – Semi Strong Form - Strong Form - Beta theory – Definition – Determinants of Beta Theory- Experiments and Analysis of Theory- Comparisons with Fundamental and Technical Analysis.

UNIT - IV (14 Hrs)

Portfolio Analysis: Traditional Vs. Portfolio Analysis - Markowitz Theory - Efficient Frontier - Sharp ideal Index - Foreign Security Investment - Portfolio Selection and International Diversification: Types of Investors - Finding Cut off Rate - Internal Diversification - Investment policies of individuals, Tax saving schemes in India.

UNIT -V (15 Hrs)

Techniques of Portfolio Revision: Formula Plans - Constant Rupee Value - Constant Ratio - Variable Ratio – Rupee Cost Averaging. Classification of Investment Companies - Management Performance evaluation - Sharp's Index - Jensen's Index - Treynor's Index – Empirical Tests.

Distribution of Marks Theory 75% Problems 25%

Text Book

S No.	Author's	Title	Publisher	Year and Edition
1.	Preeti Singh	Investment Management	Himalaya Publishing house	2023 and 20 th edn.

Reference Books

S No.	Author's	Title	Publisher	Year and edition
1	Punithavathy Pandian	Security Analysis and Portfolio Management	Vikas Publishing House Pvt.Ltd.	2012 and 2 nd edn.
2	Bhalla.V.K.K	Investment Management	SChand&Co	2019 and 19 th edn.

Skill Components

- Identify and forecast the future prices of securities and stocks by employing the past price trends through various technical indicators.
- Interpret the profit or loss in an investment by using the technical indicators.
- Calculate the holding period and yield of stocks and securities by using the given formulas.
- Manipulate the stocks and securities of the selected companies by using the concepts of Markowitz theory, sharp ideal index model, Treynor's model and Jensen's index.
- Calculate the minimum rate of return earned from the investment.

Pedagogy

Power Point Presentation, Quiz, Assignment, Group Discussion, Seminar and Experimental Discussion

Course Designers

1. Dr. S. Subalakshmi
2. Dr.S. Manasha

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
BP23E04/ CM23C16	BUSINESS TAXATON	Theory	73	2	-	5

Preamble

- To understand the basic concepts, definitions and terms related to taxation
- To understand the concepts and development of different sub structures related to taxation.
- To provide an in-depth study of the various provisions of indirect taxation laws and their impact on business decision-making

Prerequisite

- No prerequisite Knowledge required
-

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Remember and relate the basic principles underlying the Indirect Taxation	K1
CLO2	Interpret the provisions under taxation applicable to different statutes related to business	K2
CLO3	Apply the concepts and procedures for registration, assessment, powers, duties, offences, penalties etc.	K3
CLO4	Analyse the changes in the taxation for Practical exposure in business.	K4

Mapping with Programme Learning Outcomes

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

S-Strong; M-Medium

Syllabus

BUSINESS TAXATION - BP23E04/CM23C16– 73 HRS

Unit - I (14 Hrs)

Assessment of Firms (Including LLP) – Meaning of Partnership, Firm and Partners – New Scheme of Taxation of Firms – Assessment of Firms (Section 184) – Computation of Firm's Business Income – Treatment of Interest, Commission, Remuneration received by partners. Problems on Computation of tax liability. (Theory only)

Unit - II (14 Hrs)

Assessment of Companies – Introduction – Meaning of Company – Types of Companies – Computation of Depreciation u/s 32 – Computation of Taxable Income of Companies – Minimum Alternative Tax (MAT) – Deductions u/s 80G, 80GGB, 80IA, 80 IB and Problems on Computation of Tax Liability. (Theory only)

Unit - III (15 Hrs)

Introduction to Goods and Services Tax (GST) – Objectives and basic scheme of GST, Meaning – Salient features of GST – Subsuming of taxes – Benefits of implementing GST – Constitutional amendments - Structure of GST (Dual Model) – Central GST – State / Union Territory GST – Integrated GST - GST Council: Structure, Powers and Functions. Provisions for amendments (Theory only). Procedure and Levy under GST: Definition- Goods and Services, Aggregate turnover, Business, Place of business, Person, Casual taxable person, Non-resident person, Supply, Composite supply, Mixed supply, Exempt supply, Outward supply, Principal supply.

Unit - IV**(15 Hrs)**

Place of supply, Supplier, Manufacture, Input tax credit, Input service distributor, Forward Charges, Reverse charge, Works contract, Adjudicating authority. Scope of supply, Tax liability on Mixed and Composite supply, Time of supply of goods and services, Value of taxable supply, Inter-state supply, intra-state supply, Zero rates supply, – Computation of taxable value and tax liability. Input tax Credit: eligibility, apportionment, Inputs on capital goods, Distribution of credit by Input Service Distributor (ISD) - Simple Problems on valuation, payment of tax, Input tax credit adjustment. (Simple problems). GST Registration – Procedure – Returns - E- Way Bills.

Unit - V**(15 Hrs)**

Customs Act: Meaning –Features-objective– Types of Custom Duties – Valuation for Customs Duty – Tariff Value – Customs Value – Methods of Valuation for Customs – Problems on valuation and payment of Custom Duty. (Theory only) **Distribution of Marks: Theory 80% Problems 20%**

Text Book

Sl. No.	Author's	Title	Publisher	Year and Edition
1	Gaur V.P and Narang D.B – UNIT I & II	Income Tax and Practice	Kalyani Publishers	Current edn
2	Dr.R.Parameshwaran CA. P. Viswanathan – UNIT III,IV,V	Indirect Taxes GST andCustom Laws	Kavin Publications	Current edn.

Reference Books

Sl.No	Author Name	Title of the book	Publisher	Year and Edition
1	Dr. Vinod K.	Direct Tax Law and	Taxmann	2025 and 70 th edn.

	Singhania and KapilSinghania	Practice	Publication	
2	Dr. Mehrotra and Dr. Goyal	Direct Taxes Law and Practice	Sahitya Bhavan Publication.	2022 and 63 rd edn.
3	Dr. Vandana Bangar, Yogendra Bangar	Indirect Tax Laws	Aadhya Prakashan Allalabad	2024 and 13 th edn.

Skill Component

- Gather the yearly tax tables, instructions, and forms to compute taxes for clients.
- To prepare a sample invoice for different types of Goods and services.
- Preparation of sample tax returns and reports as needed.
- Analyse the procedure for registration and to fill the registration form.
- To calculate input tax credit for a given sample.

Pedagogy

➤ Power point presentations, Group Discussion, Interactive Presentation, Scenario Analysis, Seminar, Quiz , Assignment

Course Designers

1. Dr. B. Thulasi Priya
2. Dr. M. Rajarajeswari

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
DA23CP6	BIGDATA FRAMEWORK PRACTICAL	PRACTICAL	-	-	60	4

Preamble

➤ To explore and acquire skills in Hadoop Programming and Big Data Frameworks.

Prerequisite

➤ Basic knowledge of Computers and basic understanding of databases and programming concepts

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Show the Big Data Framework installation and setup	K1
CLO2	Demonstrate Hadoop features and perform basic file management using various datasets.	K2
CLO3	Apply MapReduce operations on domain-specific	K3
CLO4	Analyze and interpret real-time datasets using Hadoop, Pig, and Spark for insights and visualization.	K4

Mapping with Programme Learning Outcomes

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

S-Strong; M-Medium; L-Low

Syllabus

BIGDATA FRAMEWORK PRACTICAL - DA23CP6 – 60 HRS

1. Perform File Management in Hadoop.
2. Perform HealthCare Analysis using Map Reduce.
3. Perform Word Count in Map Reduce using Politics dataset.
4. Find Maximum temperature using Map Reduce.
5. Perform Inner joins in PIG using Human Resource dataset.
6. Program to perform job tracker, word count using Travel dataset.
7. Perform PIG operations using Telecom dataset.
8. Cross Operation in PIG using Logistics dataset.
9. Order the data by Ascending and Descending operations Retail Dataset using PIG
10. Perform Spark SQL operations on Politics dataset.
11. Sort and Aggregate votes using Spark Data Frame on Politics dataset.
12. Visualize votes using Spark and Matplotlib on Politics dataset.

Skill Components

- Identify and handle large datasets using Hadoop Distributed File System (HDFS) for efficient storage and retrieval.
- Implement MapReduce programs to process and analyze structured and unstructured data.
- Utilize Hive, Pig, or Spark to query, transform, and manage big data for decision-making.
- Perform data cleaning, preprocessing, and visualization to extract meaningful insights.
- Apply big data frameworks to solve real-world problems by integrating analytical models and forecasting techniques.

Pedagogy

Demonstration through System, Demonstration through PPT.

Course Content and Presentation Schedule

Course Designers

1. Dr. N.V. Brindha
2. Mr. B. Ziyaudeen

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
DA21SB01	RESEARCH METHODOLOGY	THEORY	41	4	-	3

Preamble

To explore and acquire skills in Research methodology.

Prerequisite

Basic understanding of business concepts, statistics, and academic writing skills. Familiarity with data collection methods and use of spreadsheets or simple analytical tools will be helpful.

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Define research in social science and its process	K1
CLO2	Demonstrate the various research techniques	K2
CLO3	Identify the usage of data collection and scaling models	K3
CLO4	Analyze Real Time Data sets and writing research reports	K4

Mapping with Programme Learning Outcomes

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

S-Strong; M-Medium; L-Low

Syllabus

RESEARCH METHODOLOGY - DA21SB01 – 41 HRS

UNIT - I

(8 Hrs)

Introduction to Social Science Research -Definition, concepts (Theory-Inductive and Deductive, Data, variables), objectives, Types of research, Scope of social work Research, Social science research process, Research Design. Research-Based Practice: Research-informed practice and practice-informed research.

UNIT – II

(8 Hrs)

Sampling – Population and Sampling: Concepts - Types of Sampling, Sampling Size, Errors in sampling.

UNIT – III**(9 Hrs)**

Data Collection - Primary and Secondary data collection methods. Questionnaire design: process of designing the questionnaire. Secondary data collection: Scoping review and Review of Literature. Measurement and Scaling Techniques: Basic measurement scales. Attitude measurement scale. Problem Formulation in research. Hypothesis: Introduction, Type I Error, Type II Error, Basics of Analysis.

UNIT- IV**(8 Hrs)**

Plan of Analysis – Construction of tools: pre-test and pilot study; Scales: need for Scales. Some prominent scaling procedures; Secondary data: types, uses of secondary data and disadvantages.

UNIT – V**(8 Hrs)**

Report writing and Presentation - Report writing: Importance of report writing, types of the research report, report structure, guidelines for effective documentation. Referencing styles, Plagiarism, Citation and paraphrasing. Writing Social science Research Article, Social Work Research Proposals and Reports

Text Book

Sl. No.	Author's	Title	Publisher	Year and Edition
1	Alston, M., & Bowles, W.	Research for social workers: An introduction to methods.	Rawat Publications	2018 and 4th edn.

Books for Reference

Sl.No.	Author's	Title	Publisher	Year and edition
1	D'Cruz, H., & Jones, M.	Social Work Research: Ethical and Political Contexts	Sage Publications	2013 and 2 nd edn.
2	LalDas, D.K.	Practice of social research: Social work perspective. Rawat Publications Roger, G.	Social research methodology; A critical introduction	2008 and 2 nd edn.

Skill Components

- Formulate clear research problems and hypotheses by applying logical and analytical reasoning.
- Design and execute appropriate sampling techniques and data collection methods.
- Use statistical tools and software (like PSPP/SPSS) for data analysis, interpretation, and hypothesis testing.
- Prepare well-structured research reports and presentations following proper referencing and citation guidelines.

Pedagogy

- Power point presentations, Group Discussion, Interactive Presentation, Scenario Analysis, Seminar, Quiz, Assignment

Course Designers

1. Dr. S. Manasha
2. Dr. D. Sujaritha

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
DA23AC1	KNOWLEDGE MANAGEMENT SYSTEM	Theory	SS	-	-	5

Preamble

- To understand the fundamental concepts, life cycle, and processes involved in managing organizational knowledge effectively.
- To develop skills in designing, capturing, and transferring knowledge using modern tools, systems, and technologies.
- To evaluate the impact of knowledge management practices on organizational performance and decision-making.

Syllabus

KNOWLEDGE MANAGEMENT SYSTEM - DA23AC1 – SELF STUDY

UNIT - I

Knowledge Management: KM Myths – KM Life Cycle – Understanding Knowledge: Data, Information, Knowledge, and Wisdom (DIKW Model) - Knowledge, intelligence – Experience – Common Sense – Cognition and KM – Types of Knowledge: Explicit, Tacit, Implicit – Expert Knowledge and Organizational Knowledge – Human Thinking, Learning, and Knowledge Acquisition.

UNIT - II

Knowledge Management System Life Cycle: Challenge sin Building KM Systems – Conventional Vrs KM System Life Cycle (KMSLS) – Knowledge Creation and Knowledge Architecture – Nonaka’s Model of Knowledge Creation and Transformation. Designing Knowledge Architecture for Organizations.

UNIT - III

Capturing Knowledge: Evaluating the Expert – Developing a Relationship with Experts – Fuzzy Reasoning and the Quality of Knowledge– Knowledge Capturing Techniques, Brain Storming–ProtocolAnalysis–ConsensusDecisionMaking–RepertoryGrid–ConceptMapping–Blackboarding.

UNIT - IV

Information System Success: Expenses and funding - Expenses of knowledge management staff, Benefits of knowledge management initiative, Success of knowledge management systems, User satisfaction, impact on collectives of people, Impact on the Organisation Performance.

UNIT - V

Knowledge Transfer and Sharing: Transfer Methods – Role of the Internet – Knowledge Transfer in-world – KM System Tools–Neural Network–Association Rules – Classification Trees–Data Mining and Business Intelligence – Decision Making Architecture – Data Management–Knowledge Management Protocols – Managing Knowledge Workers.

Text Books

S.No	Author's	Title	Publisher	Year and Edition
1.	Elias.M. Award & Hassan M.Ghaziri	Knowledge Management	Pearson Education	2011. 2nd edn.
2.	Ronald Maier	Knowledge Management System: Information and Communication Technologies for Knowledge Management	Springer Publications	2007, 3rd edn.

Reference Books

S.No	Author's	Title	Publisher	Year and Edition
1	Guus Schreiber, Hans Akkermans, Anjo Anjewierden, Robertde Hoog, Nigel Shadbolt, Walter V and Velde and Bob Wielinga	Knowledge Engineering and Management	Universities Press	2001 and 1st edn.
2	C.W.Hols apple	Handbooks on Knowledge Management	International Handbook On Information Systems	2003 and Vol1 & 2.

Course Designers

1. Dr.S.Subalakshmi
2. Ms. M. Pooja

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
AF23AC3	INFORMATION SYSTEMS FOR BUSINESS	Theory	SS	-	-	5

Preamble

- To gain knowledge of ERP, MIS, SAD, Database and Knowledge management.
- To develop understanding of Information Technology and its uses in Decision Making are as of business environment.

Syllabus

INFORMATION SYSTEMS FOR BUSINESS - AF23AC3 - SELF STUDY

UNIT- I

Management Information systems in a Digital Firm: Concept – Definition – Role of MIS– Impact – MIS and User – Management as a Control System – MIS: support to Management Management effectiveness and MIS-Organization as a System – Organization effectiveness – MIS for a Digital Firm. Decision Making: Concepts – Process – Decision analysis by Analytical Modeling – Behavioral Concepts in Decision Making – Organizational Decision-Making – MIS and Decision Making - Emerging Trends in MIS (AI, Big Data, Cloud-based MIS) - MIS and Competitive Advantage.

UNIT - II

Systems Engineering Analysis and Design: System Concepts – System Control – System Types – Handling System Complexity – Classes of Systems – General Model of MIS –Need for System Analysis System Analysis of Existing system- New Requirement System development Model – SSAD- OOA- OOT-OOSAD. Development Process of MIS: Long Range plans –Ascertaining class of Information – Determining – Development and Implementation of MIS – Management of Information Quality in MIS – Organization for Development of MIS- Development Process Model- Agile and Scrum in MIS Development - Business Process Reengineering (BPR) and MIS - Feasibility Study in MIS Projects

UNIT – III

Decision support system and Knowledge Management: Concept - GDSS –DSS application in Enterprise- Knowledge Management – Knowledge Management Systems – KBES MIS and the benefits of DSS - Artificial Intelligence in DSS - Enterprise Management Systems: EMS-ERP System – ERP Models and Modules – Benefits - ERP Product Evaluation- ERP Implementation – Integration of ERP with Cloud & IoT- SCM - Information Management in SCM – CRM -Customer Experience Management (CXM) - EMS and MIS. Applications in Manufacturing and Service Sector: Personnel management – Financial management – Production management – Material management – Marketing management – Introduction to service sector – Applications in service industry.

UNIT - IV

Information, Knowledge, Business Intelligence: Concepts – Classification–Methods- Value of Information - Business Intelligence - MIS and Information and knowledge. Database and Client Server Architecture: Concepts-Models-Data Models-Database Design- Conceptual Model and Physical Model – RDBMS-Client - Server Architecture – Client - Server Implementation Strategies - MIS and RDBMS.

UNIT - V

Information Security Challenges in e-Enterprises: Introduction-Security Threats and Vulnerability- Controlling Security Threat and Vulnerability-Managing Security Threat in e- Business- Disaster Management-Information Security. Information Technology Impact on Society: Introduction – Impact of IT on Privacy – Ethics – Technical Solutions for Privacy Protection – Intellectual Property, Copyright and Patents – Impact of IT on Workplace- Green IT and Sustainable Computing – Information System Quality and Impact– impact on Quality of Life – Cyber security Frameworks (ISO 27001, NIST)

Text Books

Sl.No.	Author's	Title	Publisher	Year and Edition
1	Jawadekar W. S	Management Information Systems	TMGH, New Delhi	2021 and 8 th edn

Reference Books

Sl.No.	Author's	Title	Publisher	Year and Edition
1	Gordon B Davis and Margethe H Olson	Management Information Systems	TMGH, New Delhi	2020 and 7 th edn
2	Sadagopan	Management Information Systems	Prentice hall of India	2017 and 1 st edn

Course Designers

1. Dr. S.Manasha
2. Dr. D. Suganthi