



PSGR
Krishnammal College for Women



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

DEPARTMENT OF B.COM (CA)

CHOICE BASED CREDIT SYSTEM (CBCS)& LEARNING OUTCOMES-BASED CURRICULAR FRAME WORK (LOCF)

BACHELOR OF COMMERCE WITH COMPUTER APPLICATIONS

2024 – 2027 BATCH



DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS
CHOICE BASED CREDIT SYSTEM (CBCS) &
LEARNING OUTCOMES BASED CURRICULAR FRAME WORK (LOCF)
BACHELOR OF COMMERCE WITH COMPUTER APPLICATIONS
2024-2027 BATCH

Sem	Part	Course Code	Title of the Course	Course Type	Instruction hours/week	Contact hours	Tutorial	Duration of Examination	Examination Marks			Credits	
									CA	ESE	TOTAL		
I	I	TAM2301A/ HIN2301A/ FRE2301A	Tamil Paper I/ Hindi Paper I/ French Paper I	L	4	58	2	3	25	75	100	3	
	II	ENG2301A	English Paper I	E	4	58	2	3	25	75	100	3	
	III	CM23C01	Principles of Accounting	CC	5	73	2	3	25	75	100	3	
	III	BP24C02	e-business Applications	CC	6	88	2	3	25	75	100	4	
	III	TH24A07	Mathematics for Commerce	GE	5	73	2	3	25	75	100	4	
	III	BP24CP1	Financial Forecasting and Analytics Practical	CC	4	60	-	3	15	35	50*	2	
	IV	Non Tamil Students											2
		NME23B1/ NME23A1	Basic Tamil I/ Advanced Tamil I	AEC	2	28	2	-	100	-	100		
		Students with Tamil as Language											
		NME23ES	Introduction to Entrepreneurship	AEC	2	30	-	-	100	-	100		
I-IV	V	COM15SER	Community Service 30 Hours	GC	-	-	-	-	-	--	-	-	

Sem	Part	Course Code	Title of the Course	Course Type	Instruction hours/week	Contact hours	Tutorial	Duration of Examination	Examination Marks			Credits
									CA	ESE	TOTAL	
II	I	TAM2302A/ HIN2302A/ FRE2302A	Tamil Paper II/ Hindi Paper II/ French Paper II	L	4	58	2	3	25	75	100	3
	II	ENG2302A	English Paper II	E	4	58	2	3	25	75	100	3
	III	BP24C03	Object Oriented Programming with C++	CC	6	88	2	3	25	75	100	4
	III	CM23C04	Financial Accounting	CC	5	73	2	3	25	75	100	3
	III	TH24A16	Statistics for Commerce	GE	5	73	2	3	25	75	100	4
	III	BP24CP2	Programming with C++ Practical	CC	4	60	-	3	15**	35**	50	2
	IV	NM24UHR	Universal Human values and Human Rights	AECC	2	30	-	-	100	-	100	2
		*NME23B2 NME23A2	Basic Tamil II/ Advanced Tamil II	AEC	-	-	-	-	100	-	100	Gr
I-II	VI	NM23GAW	General Awareness	AECC	SS	-	-	-	100	-	100	Gr
I-III		COM15SER	Community Service 30 hrs	GC	-	-	-	-	-	-	-	-
I-V		24BONL1 24BONL2 24BONL3	Online Course1 Online Course2 Online Course3	ACC	-	-	-	-	-	-	-	-

Sem	Part	Course Code	Title of the Course	Course Type	Instruction hours/week	Contact hours	Tutorial	Duration of Examination	Examination Marks			Credits
									CA	ESE	TOTAL	
III	I	TAM2303/ HIN2303A/ FRE2303A	Tamil Paper III/ Hindi Paper III/ French Paper III	L	4	58	2	3	25	75	100	3
	II	ENG2403A	English Paper III	E	4	58	2	3	25	75	100	3
	III	BP24C05	Fundamentals of Corporate Accounting	CC	5	73	2	3	25	75	100	4
	III	EC24C06	Relational Database Management System	CC	4	58	2	3	25	75	100	3
	III	BP23A01/ BP24A02/ EC24A01	Business Management and Ethics/ Human Resource Management/ Company Law	GE	5	73	2	3	25	75	100	4
	III	EC24CP3	Database Programming Practical	CC	3	45	-	3	15	35	50*	2
	III	BP24SBP1	Data Analytics with Power BI and Tableau Practical	SEC	3	41	4	-	100	-	100	3
	IV	NM23DTG	Design Thinking	AEC	2	30	-	-	100	-	100	2
I-III	VI	COM15SER	Community Services 30 hrs	GC	-	-	-	-	-	-	-	-
I-V	VI	24BONL1 24BONL2 24BONL3	Online Course I Online Course II Online Course III	ACC	-	-	-	-	-	-	-	-

Se m	Part	Course Code	Title of the Course	Course Type	Instruction hours/week	Contact hours	Tutorial	Duration of Examination	Examination Marks			Credits
									CA	ESE	TOTAL	
IV	I	TAM2304 A/ HIN2304A/ FRE2304A	Tamil Paper IV/ Hindi Paper IV/ French Paper IV	L	4	58	2	3	25	75	100	3
	II	ENG2404A	English Paper IV	E	4	58	2	3	25	75	100	3
	III	BP24C07	Programming with Python	CC	4	58	2	3	25	75	100	4
	III	BP24C08/ CM24C10	Business Finance	CC	5	73	2	3	25	75	100	4
	III	BP23A03 BP23A04 EC23A03	Business Law Banking Theory Law and Practice Business Economics	GE	5	73	2	3	25	75	100	4
	III	BP24CP4	Programming with Python Practical	CC	3	45	-	3	15	35	50*	2
	III	BP24SBCE	Networking Technologies and Information Security	SEC	3	45	-	-	100	--	100	3
	IV	NM23EII	Entrepreneurship and Innovation (IgniteX)	AECC	2	30	-	-	100	--	100	2
	IV	NM24EVS	Environmental Studies	AECC	SS	-	-	-	100	-	100	Gr.
	V	COCOACT	Co-Curricular Activities	GC	--	-	-	--	100	--	100	1
I-V	VI	24BONL1 24BONL2 24BONL3	Online Course I Online Course II Online Course II	ACC	-	-	-	-	-	-	-	-
V	III	BP24C09	Graphical User Interface	CC	5	73	2	3	25	75	100	5
	III	BP23C10/ CM23C11	Management Accounting	CC	5	73	2	3	25	75	100	4

Part	Course Code	Title of the Course	Course Type	Instruction hours/week	Contact hours	Tutorial	Duration of Examination	Examination Marks			Credits
								CA	ESE	TOTAL	
III	BP23C11/ CM23C12	Direct Taxation	CC	6	88	2	3	25	75	100	4
III	BP23E01/ BP23E02/ CM23E03	Research Methodology/ Software Engineering and OOAD/ Performance Management	DSE	5	73	2	3	25	75	100	5
III	BP24CP5	Graphical User Interface Design and Development Practical	CC	4	60	-	3	15	35	*50	2
III	BP24SBP2	Business intelligence with Machine Learning	SEC	3	41	4	-	100	-	100	3
III	BP23AC1/ BP23AC2	Business Communication Introduction to Data Science	ACC	SS	-	-	3	25	75	100	5**
IV	NM21CS1	Cyber Security I	GC	2	30	-	-	100	-	100	Gr.
IV	BP23INST	Field Work/Institutional Training	GC	-	-	-	-	100	-	100	2
VI	BP24COM	Comprehensive Examination	GC	-	-	-	-	100		100	Gr.
VI	24BONL1 24BONL2 24BONL3	Online Course I Online Course II Online Course III	ACC	-	-	-	-	-	-	-	-

LLanguage

CC–Core Courses

GE – Generic Elective

AEC–Ability Enhancement Course

GC-General Course

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

*After class hours

E-English

CA–Continuous Assessment

ESE–End Semester Examination

ACC–Additional Credit Course

AECC-Ability Enhancement Compulsory Courses

SS–Self study

Examination System

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

23-24 Batch on wards

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

Section A	5x 1(No choice)	:	5 Marks
Section B	4x5 (4 out of6)	:	20 Marks (250words)
Section C	2x10 (2 out of 3)	:	20 Marks (500words)
Total			45 Marks

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

CA Question from each unit comprising of

One question with a weightage of 2 Marks

(Internal Choice at the same CLO level) :2x3=6

One question with a weightage of 5 Marks

(Internal Choice at the same CLO level) :5x3=15

One question with a weightage of 8Marks

(Internal Choice at the same CLO level) : 8x3=24

Total: 45Marks

End Semester Examination –Question Paper Pattern and

Distribution of Marks Language and English UG

Section A	10x1(10outof12):	10 Marks
Section B	5 x5(5outof7)	: 25 Marks (250words)
Section C	4x10(4outof6)	: 40 Marks (600-700words)
Total		75 Marks

UG-Core and Allied courses:**ESE Question Paper Pattern:****5x15= 75 Marks****Question from each unit comprising of**

One question with a weightage of 2 Marks: 2x5=10

One question with a weightage of 5 Marks
(Internal Choice at the same CLO level): 5x5=25One question with a weightage of 8Marks
(Internal Choice at the same CLO level): 8x5=40**ESE Question Paper Pattern:(for Accounts Paper) 5 x 15= 75 Mark****Question from each unit comprising of**

One question with a weightage of 2 Marks: 2x5=10

One question with a weightage of 5 Marks: 5x5=25

One question with a weightage of 8Marks
(Internal Choice at the same CLO level) : 8x5=40**Continuous Internal Assessment Pattern Theory****I Year UG (24 Batch)**

CIA Test : 5 Marks (conducted for 45 marks after 50days)

Model Exam : 7 Marks (Conducted for 75 marks after 85 days)

(Each Unit 15 Marks))

Seminar/Assignment/Quiz : 5 Marks

Class Participation : 5 Marks

Attendance : 3 Marks

Total : 25 Marks**Part IV****Introduction to Entrepreneurship /Universal Human values and Human Rights**

Quiz : 50 Marks

Assignment : 25 Marks

Project / Case study : 25 Marks

Total : 100 Marks**Core Practical**

Lab Performance : 7 Marks

Regularity : 5 Marks

Model Exam : 10 Marks

Attendance : 3 Marks

Total : 25 Marks

Skill Based Practical Courses

Test I	:	30 Marks (Conducted for 50 marks and Converted to 30 Marks)
Test II	:	50 Marks
Lab Performance	:	10 Marks
Regularity	:	10 Marks
Total	:	100 Marks

Design Thinking

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

Introduction to Entrepreneurship / Women Studies / Value education / Environmental Studies / Design Thinking

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

Entrepreneurship and Innovation (Ignite X)

3 Quizzes (25 questions in each quiz):	50 Marks
30 Venture Activities (Assignment):	30 Marks
Milestones 3 (pitch Deck Presentations):	20 Marks
Total	: 100 Marks

Environmental Studies

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

Advanced Learners Course

Eligibility- The Students should secure 75% in Part III Subjects till IV Semester (Optional not included for grant total and total credits earned). Extra credit 5 per Paper.

ALC – CIA Test Pattern

Section A (Paragraph Answer) (4 Out of 6) 4*4 :	16 Marks
Section B: (Essay Type) (1 Out of 2) 1* 9:	9 Marks
Total:	25 Marks

ALC – ESE Question Paper Pattern

Section A (Paragraph Answer) (5 Out of 8) 5*5:	25 Marks
Section B: (Essay Type) (5 Out of 8) 5* 10 :	50 Marks
Total	: 75 Marks

Field Work /Institutional Training

Internship for a period of 21 days at the end of the semester IV during the vacation and report to be submitted in Semester V which will be evaluated for 100 marks divided as follows:

Evaluation

Attendance	:	10 Marks
Work dairy	:	15 Marks
Report	:	50 Marks
Viva Voce	:	25 Marks
Total	:	100 Marks

MAPPING OF PLOs WITH CLOs

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

COURSE–CM23C04					
CLO1	S	S	M	M	S
CLO2	S	S	M	M	S
CLO3	S	S	S	S	M
CLO4	S	S	S	S	M
COURSE–BP24CP2					
CLO1	S	S	M	M	M
CLO2	S	M	S	M	M
CLO3	S	M	M	S	L
CLO4	M	S	M	S	L
COURSE–BP24C05					
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–EC24C06					
CLO1	M	S	S	S	M
CLO2	S	M	S	S	M
CLO3	S	S	S	L	M
CLO4	M	S	M	M	M
COURSE–BP23A01					
CLO1	S	S	S	S	S
CLO2	S	S	S	M	S
CLO3	S	S	M	S	S
CLO4	S	S	M	M	M
COURSE–BP24A02					
CLO1	S	S	S	S	M
CLO2	S	S	S	S	M
CLO3	S	S	S	S	M
CLO4	S	S	S	S	M

COURSE–EC24A01					
CLO1	S	L	S	S	M
CLO2	M	S	M	S	S
CLO3	S	S	S	S	S
CLO4	S	S	S	S	S
COURSE–EC24CP3					
CLO1	S	S	S	S	L
CLO2	S	S	S	S	L
CLO3	S	S	S	S	L
CLO4	S	S	S	S	L
COURSE–BP24SBP1					
CLO1	S	S	S	S	M
CLO2	S	S	S	L	L
CLO3	S	S	M	S	S
CLO4	S	S	S	L	M
COURSE - BP24C07					
CLO1	S	S	M	S	S
CLO2	M	S	S	M	M
CLO3	S	M	S	M	S
CLO4	M	S	M	L	L
COURSE -BP24C08 / CM24C10					
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 - 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 - BP23A04					
CLO1	S	S	S	S	M
CLO2	S	S	S	S	M
CLO3	S	S	S	S	M
CLO4	S	S	S	S	M
COURSE - EC23A03					
CLO1	S	M	S	S	S
CLO2	S	S	S	S	L
CLO3	S	M	S	M	S
CLO4	S	M	S	M	S
COURSE - BP24CP4					
CLO1	S	S	M	M	M
CLO2	S	M	S	M	M
CLO3	M	M	M	S	S
CLO4	M	S	M	S	L
COURSE - BP24C09					
CLO1	S	S	M	S	S
CLO2	M	S	S	M	M
CLO3	S	M	S	M	S
CLO4	M	S	M	L	L
COURSE - BP23C10					
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					
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– BP23E01					
CLO1	S	S	S	S	M
CLO2	S	S	S	S	M
CLO3	S	S	S	S	M
CLO4	S	S	S	S	L
COURSE – BP23E02					
CLO1	M	S	S	S	M
CLO2	S	M	S	S	M
CLO3	S	S	S	L	M
CLO4	M	S	M	M	M
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 – BP24CP5					
CLO1	S	S	S	S	M
CLO2	S	S	S	S	M
CLO3	S	S	S	S	M
CLO4	S	S	S	S	M
COURSE – BP24SBP2					
CLO1	M	S	M	S	M
CLO2	S	M	S	S	S
CLO3	S	S	S	L	S
CLO4	M	S	M	S	M

S-Strong; M-Medium; L-Low

SEMESTER I

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

Preamble

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

Prerequisite

- Basic Knowledge in Financial Statements

Course Learning Outcomes

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

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

Mapping with Programme Learning Outcomes

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

S-Strong; M-Medium;

Syllabus**PRINCIPLES OF ACCOUNTING - CM23C01 (73Hours)****Unit I****(14 Hours)**

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

Unit II**(14 Hours)**

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

Unit III**(15 Hours)**

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

Unit IV**(15 Hours)**

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

Unit V**(15 Hours)**

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

Text Book

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

Reference Books

S. No	Authors	Title	Publishers	Year of Publication
1.	R LGupta & Radhasamy	Advanced Accountancy (VolII)	Sultan Chand & Sons.	2018, 13 th Edition
2.	JainS.P & NarangK.L	Principles of Accountancy	Kalyani Publishers	2018, 7 th Edition.
3.	M C Shukla, T.S.Grewal & S.C. Gupta	Advanced Accountancy	S.Chand & sons	2016, 19 th Edition.

Skill Components

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

Pedagogy

Lecture through Power Point presentations, Discussion, Assignment, Quiz, and Seminar

Course Designers

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

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

Preamble

To enable the students

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

Prerequisite

- Basic Knowledge in E-commerce

Course Learning Outcomes

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

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

Mapping with Programme Learning Outcomes

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

S-Strong; M-Medium;

e-BUSINESS APPLICATIONS–BP24C02 (88Hrs)

Syllabus

UNIT –I

(18Hours)

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

UNIT –II

(17Hours)

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

UNIT–III

(18Hours)

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

UNIT –IV

(18Hours)

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

UNIT –V**(17Hours)**

E- Business Communication – Importance of E – Technology. SSL protocol – Legal Aspects of E-Business, Internet frauds–Cyber Laws. Introduction to Industry 4.0-****Need–Reasons for Adopting Industry 4.0****- Definition–Goals and Design Principles–Technologies of Industry 4.0- Skills required for Industry 4.0- ****Advancements in Industry 4.0****– Impact of Industry4.0on Society, Business, Government and People - ****Introduction to 5.0.****

Highlighted Content offered in Blended Mode*TextBook**

S.No	Author Name	Title of the Book	Publisher	Year and Edition
1	R. SaravanaKumar, R. Parameswaran T.Jayalakshmi(unitI)	Atextbookof Information Technology	S.Chand&Coltd New Delhi	16 th Edition 2016.
2	RayuduC.S (unitII-IV)	ECommerce–E- Business	HimalayaPublishing House.	1 st Edition 2015.
3	KennethC.Laudonand Carol Guercio Traver (Unit V)	E-Commerce2022	PearsonPublications	1 st Edition 2022.

ReferenceBooks

S.No	AuthorName	Title oftheBook	Publisher	Yearand edition
1	JosephPT,	E Commerce, an Indian Perspective	Margham Publications	5 th Edition2015
2	MurthyCSV	E Commerce–Concepts, Models, Strategies	Himalaya Publishing House.	1 st Edition2016

Pedagogy

- Lecture, Assignment, Group Discussion, Power Point Presentation and Seminar.

CourseDesigner

1. Dr.S.NithyaSumathi
2. Mrs.L.Mahalakshmi

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

Preamble

To enable the students

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

Course Learning Outcomes

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

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

Mapping with Programme Learning Outcomes

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

S-Strong; M-Medium;

FINANCIAL FORECASTING AND ANALYTICS-BP24CP1 (60 Hours)

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

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

Pedagogy

Lecture, Demo in System

Course Designer

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

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

Unit 1 (6Hours)

Introduction:

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

Unit 2 (6Hours)

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

Unit 3 (6Hours)

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

Unit 4 (6Hours)

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

Unit 5 (6Hours)

Project Preparation

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

Text Books

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

Reference Books

Sl. No.	Author(s)	Title of the Book	Publisher	Year of Publication
1.	Kolb Bonita M	Entrepreneurship for the Creative and cultural industries	Routledge	2015
2.	P.T.Vijayashree & M.Alagammai	Entrepreneurship and Small Business Management	Margham	2020

SEMESTER II

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
BP24C03	OBJECTORIENTED PROGRAMMINGWITH C++	THEORY	88	2	-	4

Preamble

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

Prerequisite

- Basic Computer Skills, Basic Math Skills

Course Learning Outcomes

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

CLOs	CLO Statement	Knowledge Level
CLO1	Define key concepts and principles of OOP's, C++syntax, and file Handling.	K1
CLO2	Associating the significance and functionality of OOP features and C++ constructs.	K2
CLO3	Use OOP's, C++features, and file management techniques for developing a program	K3
CLO4	Evaluate and compare programming paradigms, inheritance types, and run time features.	K4

Mapping with Programme Learning Outcomes

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

S-Strong; M-Medium; L-Low

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

UNIT I

(17 Hours)

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

UNIT II

(18 Hours)

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

UNIT III

(17 Hours)

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

UNIT IV

(18 Hours)

Polymorphism: ***Virtual Base Classes***–Abstract classes–***Constructors in Derived Classes***. Function over riding- Pure virtual function– Templates: **Function templates– Overloading a function template**– Class templates. Exception Handling: Exceptions– try, catch, throw–Re throwing an exception– Restricting exceptions -**Handling exceptions in derived classes.**

UNIT V

(18 Hours)

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

***Highlighted Content offered in Blended Mode**

Text Books

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

Reference Books

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

Pedagogy

Lecture through Power Point presentations, Discussion, Assignment, Quiz, and Seminar

Course Designers

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

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

Preamble

- 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 indifferent situations, Insurance claims and Insolvency Accounts	K4

Mapping with Programme Learning Outcomes

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

S-Strong; M-Medium

Syllabus

FINANCIAL ACCOUNTING -CM23C04- 73 HOURS

Unit I (15 Hours)

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

Unit II (14 Hours)

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

Unit III (15 Hours)

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 (15 Hours)

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

Unit V (14 Hours)

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

Text Book

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

Reference Books

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

Skill Component

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

Pedagogy

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

Course Designers:

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

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

Preamble

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

Course Learning Outcomes

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

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

Mapping with Programme Learning Outcomes

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

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

Syllabus

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

Pedagogy

- Lecture, Demo in System

Course Designers

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

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

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

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

Unit I: Introduction to value Education: (5 Hours)

Education system in India, value erosion at various levels-personal, family, society, national and international, Values-concept and need, Types of values-personal, family and society, importance of value education, Incorporating Universal HumanValues in Higher Education.

Unit II: Introduction to Universal Values (6 Hours)

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

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

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

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

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

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

Unit III: Promoting Universal Human Values (6 Hours)

Harmony in the Human Being: Understanding the Human Being as Co-existence of Self ('I') and Body, Discriminating between the Needs of the Self and the Body, The Body as an Instrument of 'I', Underst and Harmony in the Self ('I'), Harmony of the Self ('I') with the Body.

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

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

Unit IV Holistic Well-Being

(7 Hours)

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

Unit V: Indian Constitutional Values

(6 Hours)

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

REFERENCES:

- **Choudhary,T.,&Madnawat, A. (2017).** Spirituality and compassionate love in psychiatrists and psychiatric social workers. *Indian Journal of Positive Psychology*, 8(1), 79. Fisher,J.(2011).
- **Narayan,R.S.,** A Text Book on Professional Ethics and Human Values, New Age International Publishers, New Age International(P) Ltd, New Delhi,2006.
- **Norman,R.,** The Moral Philosophy An Introduction to Ethics, Oxford University Press, Oxford, 1 998.
- **Nicotera,N., & L aser-Maira,J.A. (2017).** *Innovative Skills to Support Well-Being and Resiliency in Youth.* Oxford University Press.
- **PradeepKumar, RamanCharla,** Human Values & Professional Ethics , Paramount Publishing House, Hyderabad, 2013.
- **Susairathinam,A.A. (2020).** Lived experiences of separated women in Tamil Nadu , India: Psychological well-being. *Indian Journal of Positive Psychology*,11(2), 93 104.

Activities:

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

SEMESTER III

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
BP24C05	FUNDAMENTALS OF CORPORATE ACCOUNTING	THEORY	73	2	-	4

Preamble

- ❖ To explore a comprehensive understanding of corporate accounting principles, focusing on key areas such as share issuance, forfeiture, redemption, financial statements, business reconstruction, and company liquidation.
- ❖ It emphasizes legal and regulatory compliance in line with the Companies Act.

Prerequisite

- Basic Knowledge in Company Accounts

Course Learning Outcomes

On the successful completion of the course, students will be able to understand the accounting procedures and the key role in business operations.

CLO Number	CLO Statement	Knowledge Level
CLO1	Recall fundamental concepts and legal provisions related to issue, forfeiture, reissue, redemption, and liquidation of shares and debentures as per the Companies Act.	K1
CLO2	Explain the principles and regulatory framework of corporate Financial transactions including right issue, bonus issue, Underwriting, amalgamation, and internal reconstruction.	K2
CLO3	Apply accounting procedures to prepare final accounts of Companies and compute financial statements in compliance with Schedule III of the Companies Act, 2013	K3
CLO4	Analyze various methods of amalgamation and internal Reconstruction to evaluate their impact on company structure and shareholder interests	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

FUNDAMENTALS OF CORPORATE ACCOUNTING -BP24C05 – (73 HOURS)

Unit I (14Hours)

Issue, Forfeiture and Reissue of shares: – Pro-rata Allotment – Right Issue – Bonus Issue- Underwriting of Shares and Debentures – Underwriting Commission - Types of Underwriting.

Unit II (14Hours)

Issue and Redemption of Preference Shares and Debenture: – Provisions of Companies Act–Capital - Redemption Reserve – Minimum Fresh Issue – Redemption at Premium. Debentures: Issue and Redemption (Basic problems only).

Unit III (15 Hours)

Final Accounts of Companies: - Introduction – Form and Contents of Financial Statements as Per Schedule III of Companies Act 2013 – Part I Form of Balance Sheet – Part II Form of Statement of Profit and Loss – Ascertaining Profit for Managerial Remuneration.

Unit IV (15 Hours)

Amalgamation and Internal Reconstruction: - Amalgamation – Meaning - Purchase Consideration - Lump Sum Method, Net Assets Method, Net Payment Method, Intrinsic Value Method - Types of Methods of Accounting for Amalgamation -The Pooling of Interest Method - The Purchase Method (Excluding Inter-Company Holdings) Internal Reconstruction – Conversion of Stock – Increase and Decrease of Capital – Reserve Liability

Unit V (15 Hours)

Liquidation of Companies: Types of Liquidation - Preparation of Liquidators Final Statement of Accounts – Order of Payment – Liquidator's Remuneration – Calculation of Preferential Creditors (Excluding Statement of Affairs). Indian Accounting Standards (AS 1-6, 10-15, 20-23) - Elementary Introduction to International Financial Reporting Standard. (Theoretical Aspects only)

Distribution of Marks: Theory 20% Problem 80%

Text book

S.No	Authors	Title	Publishers	Year and Edition
1	Reddy.TS and Murthy.A	Corporate Accounting	Margham Publications	2023,7 th Edn, Reprint

Books for Reference

S.No	Author Name	Title	Publishers	Year and Edition
1	S.P.Jain & K.L.Narang	Corporate Accounting	Kalyani Publishers	2018, 19 th Edn
2	Gupta.RL and.Radhasamy.M	Corporate Accounting Vol-II	SultanChand & Sons	2021,14 th Edn
3	Pillai.RSN, Bhagavathy and Uma.S	Advanced Accountancy Vol-II	S Chand Publisher	2016,2 nd Edn

Pedagogy

Power Point Presentations, Group Discussion, Seminar, Quiz
Assignment, Experience Discussion, Brainstorming, Activity, Case
Study

Course Designers

1. Dr.M.Deepalakshmi
2. Dr.R.Eswari

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
EC24C06	RELATIONAL DATABASE MANAGEMENT SYSTEM	THEORY	58	2	-	3

Preamble

- ❖ To provide comprehensive knowledge about relational database management system
- ❖ To enlighten prominent commands used in structured query language

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	Interpret about DBMS, Relational database management Concepts and normalization	K1
CLO2	Develop the tables using normalization and knowledge About Key relationships, Demonstrate PL/SQL built in functions	K2
CLO3	Demonstrate PL/SQL built in functions, know the basic Storage database structure and extract database using data Warehouse and data mart.	K3
CLO4	To understand the architecture, data distribution, query optimization, and advanced features of Distributed and Object-Oriented Database Management Systems.	K4

Mapping with Programme Learning Outcomes

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

S-Strong; M-Medium; L-Low

RELATIONAL DATABASE MANAGEMENT SYSTEM- EC24C06- 58Hours

Unit I

(12 Hours)

Data, Databases, Database Management System – Components of Database – Data Dictionary – Architecture: Overall Architecture of DBMS, Three level architecture. Data Models Types of Database models: Hierarchical Database Model, Network Database Model. Introduction Relational Database Management System: Relational Database Model, E-R model: Entities - Attributes – Relationships – E-R diagram – Samples.

Unit II

(11 Hours)

CODD's rules – Components of DBMS – Table Structure – Records, rows, tuples, attributes. Keys: Primary key, foreign key, composite key. Metadata – Data Dictionary – Data Integrity – Data constraints and validation – Types of constraints. Normalization Benefits – Normal forms: 1st Normal form, 2nd Normal form, 3rd Normal form.

Unit III

(12 Hours)

Introduction to SQL: SQL data types - Data Definition Commands – Data Manipulation Commands– Data retrieval commands. MySQL Operators and Expressions Types of Operators – Arithmetic, Comparison and logical operators –Pattern matching.

Unit IV

(11 Hours)

Built-in Functions Single row functions– Aggregate functions–Conversion functions. Querying the table selecting rows using Where, Order by, group by & having clauses. Sub-queries – correlated sub-queries. Introduction to PL/SQL- user defined Functions-Trigger and Stored Procedures. Introduction to Data warehousing and Datamining– Applications–Data marts. Big Data: Definition– Characteristics – Various Technologies used – Applications.

Unit I V

(12 Hours)

Distributed Database Management Systems (DDBMS) – Components, Architecture, and Data Distribution – Data Fragmentation, Replication, and Allocation – Distributed Query Processing & Optimization – Concurrency Control & Transaction Management – Parallel Databases: Query Execution, Load Balancing – Sorting & Indexing in DDBMS – Object-Oriented Databases: Features, Data Modeling, and Real-World Applications.

Text Book

S.No	Authors	Title	Publishers	Year and Edition
1	RamonAMata-Toledo Pauline KCushman	Database Management System	Tata Mc Graw- Hill Publishing company limited, New Delhi.	2010, 2 nd Edn.
2	Riktesh Sri Vastava,Rajita SriVatsava	Relational Database Management	New Age International Publications	January2014, 1 st Edn.

Books for Reference

S.No	Authors	Title	Publishers	Year and Edition
1	Ramakrishnan & Gehrke	Database Management Systems	Tata McGraw Hill	2009, 8 th Edn.
2	NileshShah	Database Systems using Oracle	PHI learning Pvt Ltd	2014, 2 nd Edn.
3.	Spectrumallin One	Relational Database Management System	SIA Publishers and Distributors	2021, 2 nd Edn.

Pedagogy

Power Point Presentation, Lecture, Assignment, Group Discussion and Seminar.

Course Designers

1. Mrs.T.Subamathi, Department of Bcom (e-Com) & (SF)
2. Mrs.A.Sasikala, Department of Bcom (CA)

COURSE CODE	COURSE TITLE	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	Analyse the process of management functions and evaluate the social responsibility and ethical issues in business situations	K4

Mapping with Programme 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

BUSINESS MANAGEMENT AND ETHICS- BP23A01 (73 HOURS)

UNIT I

(15 Hours)

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

(15 Hours)

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 Hours)

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 - Decentralization- Staffing- Case study

UNIT IV

(14 Hours)

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*- Casestudy

UNIT V

(14Hours)

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.

***Highlighted Content offered in Blended Mode (Link Provided)**

Text Books

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

Reference Books

S. No	Authors	Title	Publishers	Year& Edition
1.	Dr. C. N. Sontakkai	Principles of Management	Kalyani Publishers,	2016 reprint – 1 st Edn.
2.	P. C. Tripathi & P. N. Reddy	Principles of Management	Tata McGraw Hill Publishing Co Ltd	2017 ed. – 1 st Edn.
3.	Robbins, DeCenzo, & Coulter.	Fundamentals of Management	Pearson Education Ltd	2017, 10th Edn.

Pedagogy

➤ PPT presentation, Quiz, Group Discussion, Seminar, Quiz, Assignment, Experience Discussion, Brainstorming, Activity, Case Study

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 organization
- Select any company and prepare SWOT analysis
- Prepare a report of CSR activities followed in an organisation

Course Designers

1. Dr. A. Meenakshi - Department of B com (CA)
2. Dr. Nithya Ramadass – Department of B com (CA)

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
EC24A01	COMPANY LAW	THEORY	73	2	-	4

Preamble

- ❖ To familiarize the fundamental concepts of Companies, Act 2013
- ❖ To provide an insight into the different types of Companies and their provisions
- ❖ To familiarize with various documents involved in a Joint Stock Company

Prerequisite

- Basic Knowledge on Joint Stock Companies

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Acquire knowledge on basics in Joint Stock company and its documentation procedures for incorporation.	K1
CLO2	Examine the legal norms relating to the internal affairs of the company.	K2
CLO3	Elucidate the corporate legal framework relating to business operations in compliance with Companies Act 2013.	K3
CLO4	Critically think and apply the provisions that are prevailing in the current trends of corporate governance.	K4

Mapping with Programme Learning Outcomes

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

S-Strong; M-Medium; L-Low

COMPANY LAW - EC24A01- 73 HRS

Unit I (15 Hrs)

Company – Definition & Features - *Distinction between Company and Partnership – Kinds of Companies – Difference between Private and Public Company – Incorporation of a Company– Documents to be filed* – Memorandum of Association– Doctrine of Ultra vires.

Unit II 15 Hrs)

Articles of Association –Doctrine of Constructive Notice & Indoor Management– Alteration of Article – Prospectus – Contents – Misstatements – Liability for Misstatements – Certificate of Commencement of Business.

Unit III (15Hrs)

*Shares – Debentures – Allotment – Valid Allotment – Irregular Allotment *– Transfer and Transmission of Shares–Membership of Company.

Unit IV (14 Hrs)

Company Management – Board of Directors – Appointment – Qualifications – Powers – Duties –Liabilities–Managing Director & Manager– Managerial Remuneration– Due Diligence in Managerial Remuneration - *Company Secretary–Appointment, Qualification, Due Diligence in Defining Powers and Duties. *

Unit V (14 Hrs)

Company Meetings–Kinds–Statutory Meeting, Annual General Meeting–Extraordinary General Meeting – Board Meeting - Resolutions, Minutes, Quorum and Proxy – *Winding up – Modes*. Corporate Governance in Indian Scenario– need– importance-Due Diligence in corporate governance – Clause49 (listing requirements) National Company Law Tribunal and Appellate Tribunal.

***Highlighted Content offered in Blended Mode (Link Provided)**

Text Book

S.No	Authors	Title	Publishers	Year and Edition
1	Kapoor N.D	Company Law & Secretarial Practice	Sultan Chand & Sons, New Delhi	2020, 31 st Edn.
2	Gogna P.P.S	A Textbook of Company Law	Sultan Chand & Sons, New Delhi	2016, 11 th Edn.

Books for Reference

S. No	Authors	Title	Publishers	Year and Edition
1	Bahi J.C	Secretarial Practice in India	N.M. Tripathi(p) Ltd	2016, 6 th Edn.
2	Ravi Puliani & Mahesh Puliani	Companies Act, 2013 (As amended by the Companies Amendment Act 2015)	Jain Book Agency	2016, 23 rd Edn.

Pedagogy

➤ Lecture, Assignment, Group Discussion, PowerPoint Presentation and Seminar

Course Designers

- 1.Dr.M.Deepalakshmi
- 2.Dr.R.Lakshmi Priya

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
BP24A02	HUMAN RESOURCE MANAGEMENT	THEORY	73	2	-	4

Preamble

- To emphasize the skill, knowledge, ability and ethics required for the work force to work efficiently.
- To acquire specialized knowledge in new possibilities for optimizing recruitment, enhancing employee engagement, enabling data-driven decision-making through AI technologies.

Prerequisite

- No Basic 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 concepts of human resource management, framework, analysis, evaluation, performance appraisal and placement induction Play a key role in effective business administration.	K1
CLO2	Interpret the elements relate to various aspects of HRM, such as Using A recruitment, placement, evaluation, compensation and employee welfare.	K2
CLO3	Identify the importance of HRM and organizational outcomes, recruitment, appraisal and stress management system to outline the Practical situations.	K3
CLO4	Analyze the issues, strategies and welfare, performance, induction and Incentives to develop man power resources for effective human resource.	K4

Mapping with Programme Learning Outcomes

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

HUMANRESOURCE MANAGEMENT- BP24A02- (73 HOURS)

Unit I (14 Hours)

Human Resource Management - Introduction - Characteristics - scope of HRM- Objectives -***System approach to HRM - Importance and Functions of HRM - Qualities of human resource manager*** – Role of human resource manager. Human Resource Planning – Concept – Objective-Need and Importance – Process – Levels – Problems- ***Guidelines for effective human resource planning. ***

Unit II (14 Hours)

Job analysis- introduction, objectives- Significance– Process– techniques–Job description– Job specification– Role analysis. Job Design– Concept– Approaches- Methods. ***Recruitment: Introduction– Automated Screening and Shortlisting– Candidate Matching -Automated Interviews– Sourcing- AI- driven chatbots– Selection– Introduction– Steps– *Testing and Competency Mapping. ***

Unit III (15 Hours)

Placement and Induction- Concept of placement and induction –objectives –advantages- induction in Indian industries – Contents – Steps to make induction effective. ***Using AI in Employee Training:** Objectives - Types – AI Tools in Employee Training – Benefits – Challenges –Evaluating training effectiveness. Career Planning and Development – Meaning – Objective – Process – Advantages – Limitations – ***Making career planning successful – Career Development. *** Case Studies.

Unit IV (15 Hours)

Performance Appraisal– Concept – Objective – Importance – Process – Problems – Essentials – Methods – ***Performance appraisal through MBO – 360-degree appraisal techniques- Performance Management. *** Job Evaluation – Concept – Objectives – Process – Advantages – Limitations –Essentials– Methods. Incentive Compensation – Meaning– ***Essentials – Types–wages incentives in India. ***Case Studies

Unit V (15 Hours)

Employee Welfare- Meaning–Significance – Agencies – Types –Statutory provisions for employee welfare. Social Security – Concept –Scope – ***The workmen’s compensation – State insurance – Provident fund – Maternity benefit*** – Payment of Gratuity – Group life insurance. Job Satisfaction – Concept – Measurement – Determinants. Quality of work life – Concept–Measure–Dimension–Principles.ManagementofStress–Concept–Sources– ***Consequences–Coping with stress–Methods of stress management. ***

***Highlighted Content offered in Blended Mode (Link Provided)**

Text Book

S. No	Authors	Title	Publishers	Year and Edition
1	GuptaC.B	Human Resource Management	SultanChand & Sons	2017, 16 th Edn.

Books for Reference

S. No	Authors	Title	Publishers	Year and Edition
1	DwivediR.S	Human Resource Management	VikasPub House–Noida	2009, 6 th Edn.
2	GaryDessler	Human Resource Management	Prentice Hall Of India	2020, 16 ^h Edn.
3	RaoV.S.P	Human Resource Management	Excel Books	2020, 4 th Edn.

Pedagogy

- Power point presentations, Group Discussion , Seminar, Quiz, Assignment, Experience Discussion, Brainstorming, Activity, Case Study

Skill Components

- Gain basic understanding of human resource management and its essential role in contemporary organizations
- Plan a role play on job analysis for placing right candidate at their right place
- Creation of ideas for induction and retention of employees
- Preparation of a sample frame work forwarding and rewarding the employees based on performance appraisal
- Analyze the various strategies to cope up stress among employees in an organisation.

Course Designers

1. Dr.J.Rini Mercy
2. Ms.R. Sangeetha

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDI T
EC24CP3	DATABASE PROGRAMMING PRACTICAL	PRACTICAL	-	-	45	2

Preamble

- To enhance practical knowledge in Database Management

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Relate the database application environment and queries using built-in functions and operators	K1
CLO2	Enumerate and demonstrate the database using SQL	K2
CLO3	Illustrated at a definition and manipulation languages in SQL	K3
CLO4	Analyse constraints and queries on a data base using RDBMS	K4

Mapping with Programme Learning Outcomes

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

S-Strong; M-Medium; L-Low

DATABASE PROGRAMMING PRACTICAL- EC24CP3- (45 HOURS)

1. Data Definition Language

Table: Student

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

Queries:

- To create a table
- To describe a table
- To alter a table
- To drop a table
- To truncate a table

2. Data Manipulation Language

Table: Student

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

Queries:

- To insert values
- To retrieve records
- To update records
- To delete record

3. Create an Employee table with following field.

Table: Employee

E no	number(5)primarykey
Ename	varchar2(20)notnull
Dept no	number(2)notnull
Desig	char(10)notnull

Sal	number(9,2)notnull
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—Gl
- List the names having— Ilas the second character
- List the names of employees whose designation are—Analystll and —Sales manll
- List the different designation available in the Employee table without duplication (distinct)

4. Create a table "Company" with the following fields and insert the values for 10 employees.

Table: Company

Compid	number(6)primarykey
Compname	varchar2(15)notnull
Proprietor	varchar2(15)notnull
Address	varchar2(25)notnull
Sup name	varchar2(15)
Noofemploy	number(4)
GPPercent	number(6,2)

Queries:

- Display all the records of the company which are in ascending order of GP Percent.
 - Display the name of the company whose supplier name is—Telcoll.
 - Display the details of the company whose GP Percent is greater than 20 & order by GP Percent.
 - Display the details of the company having the employee ranging from 300 to 1000.
 - Display the name of the company whose supplier is same as the—Tatal.
5. Create a table "Product" with the following fields and insert the values

Table: Product

Prodno	number(6)
Prodname	varchar2(15)
Unit ofmeasure	varchar2(15)
Qty	number(6,2)

Rate perunit	number(8,2)
Tot amt	number(8,2)

Queries:

- a. Using update statements calculate the total amount and then select the record.
 - b. Select the records whose unit of measure is Kg
 - c. Select the records whose quantity is greater than 10 and less than or equal to 20.
 - d. Calculate the entire total amount by using sum operation.
 - e. Calculate the number of records whose unit price is greater than 50 with count operation.
6. Create the table Payroll with the following fields and insert the values:

Table: Payroll

Empno	number(8)
Empname	varchar2(8)
Dept	varchar2(10)
Basicpay	number(8,2)
HRA	number(6,2)
DA	number(6,2)
PF	number(6,2)
Netpay	number(8,2)

Queries:

- a. Update the records to calculate the net pay.
- b. Arrange the records of the employees in ascending order of the inter pay.
- c. Display the details of the employees whose department is Sales.
- d. Select the details of employees whose HRA $\geq$ 1000 and DA $\leq$ 900.
- e. Select the records in descending order.

7. Create a table Deposit and Loan with the following fields:

Table: Deposit

Acc no	number(3)
Account Type	varchar2(6)
Branch Name	varchar2(15)
Cust name	varchar2(20)
Balanceamt	varchar2(10)

Table: Loan

Loanno	number(5)
Bname	varchar2(15)
Custname	varchar2(30)
Loanamt	number(10)

Queries:

- Insert the records into the table.
 - Describe the structure of the table.
 - Display the records of Deposit and Loan.
 - Find the number of loans with amount between 10000 and 50000.
 - List in the alphabetical order the names of all customers who have a loan at the Coimbatore branch.
 - Find the average account balance at the Coimbatore branch.
 - Update deposits to add interest at 5% to the balance.
 - Arrange the records in descending order of the loan amount.
 - Find the total amount of deposit in—Trichy branch.
8. Create the course and batch table with following fields

Table: Course

Courseno	number(5)primarykey
Course name	varchar2(20)
Fees	Number(8,2)

Table: Batch

Batchno	number(5)primarykey
Course no	number(5)foreignkey
Start date	Date
Duration	varchar2(15)

Queries:

- Insert values and display the records
- Display the records from batch table whose Course no is —9
- Display the Course no, Course name for the batch starting from—25 June 2000
- List Batch no for the batch starting before—30th June 2001 and after —December 2001
- List the details of the batch who have joined before the end of—September 2001

9. Create Employee and Department table with following fields

Table: Employee

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

Table: Department

Deptno	varchar2(15)primarykey
Deptname	varchar2(15)

Queries:

- Display the details of department table
- List the name, salary and PF amount of all the employees
(PF is calculated as 10% of salary)
- List the department numbers and number of employees in each department (Group by)
- List the average salary from each job excluding managers
- List the jobs and the number of employees in each job. The result should be in descending order of the number of employees
- List the employees who are eligible for 5% commission whose salary >25000
- List the names of the employees who are not managers

10. Create Employee Salary and Department table with following fields

Table: Employee Salary

Eno	number(5)primary key
Ename	varchar2(20)notnull
Deptno	number(2)notnull
Desig	char(10)notnull
Sal	number(9,2)notnull
Comm.	number(7,2)null
Shift	Varchar2(15)

Table: Department

Deptno	varchar2(15)primarykey
Deptname	varchar2(15)

Queries:

- List the department number and the total salary payable in each department
- List the total salary, maximum and minimum salary and the average salary of employees designation wise
- Display the emp no, name whose shift is—FN
- List average salary for all departments employing more than five people
- List jobs of all the employees where maximum salary is greater than or equal to 5000 (having)
- Raise employee salary by 0.15 for the employees working as— programmers
- Delete the records where commission is—null
- List the average salary and number of employees working in the department — 20

11. Create Library with the following

Fields Table: Library

Bookno	number(5)
Booknm	varchar2(10)
Authornm	varchar2(10)
Price	number(3,8)
Status	varchar2(5)
Category	varchar2(5)

Queries:

- Display the author name, price of tax book
- Display the price of book banking
- Display the count of category—commerce
- List the book details in ascending order of price (order by)
- List the book details in descending order of book no and price(order by)

12. Create a simple student marks processing using parallel- style logic on two separate tables

a) Com_Student – tablename

Student_id	UNSIGNED,INT,AUTOINCREMENT, PRIMARY KEY
First_name	VARCHAR(60)
Last_name	VARCHAR(60)
Marks	INT(5)

b) IT Student- tablename

Student_id	FOREIGNKEYreferstouser_idfieldofuser table
First_name	VARCHAR(60)
Last_name	VARCHAR(60)
Marks	INT(5)

a. SELECT all the users along with their marks to calculate Parallel-style
Query (Combine & Calculate Average)

b. List the students who scored more than 80 in any department using Parallel – Style Filter.

13. Sales in Multiple Regions (East & West) using Distributed Database style.

Table: East_region

Sales_id	INTPRIMARYKEY
Product_name	VARCHAR(20)
City	VARCHAR(20)
Amount	Numeric(12,2)

Table: West_region

Sales_id	INTPRIMARYKEY
Product_name	VARCHAR(20)
City	VARCHAR(20)
Amount	Numeric(12,2)

Queries:

- Retrieve the Query: Show All Sales from Both Branches.
- Retrieve all the Sales Above ₹10,000 from both the regions.
- Find the Highest Sale in Each Region.

Pedagogy

Lecture, Demo in System

Course Designers

1. Mrs.T.Subamathi, Department of B com (e-Com)&(SF)
2. Mrs.A.Sasikala, Department of B Com (CA)

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
BP24SBP1	DATA ANALYTICS WITH POWER BI AND TABLEAU PRACTICAL	PRACTICAL	-	4	41	3

Preamble

- To impart practical knowledge in Power BI and Tableau

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 workings of Power BI and Tableau to perform basic statistical analyses.	K1
CLO2	Understand the importance of data visualization of business intelligence and decision making.	K2
CLO3	Apply basic data wrangling techniques including filtering, grouping, and handling nulls.	K3
CLO4	Interpret dashboard results to support data- driven decision-making.	K4

Mapping with Programme Learning Outcomes

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

S-Strong; M-Medium; L-Low

DATA ANALYTICS WITH POWER BI AND TABLEAU PRACTICAL-BP24SBP1 - (41 HOURS)

Power BI

1. Import of data from various data sources and cleaning of data for visualisation
2. Creation of production efficiency tracker using various data filters and statistical measures
3. Creation of visualization- Company's sales performance dashboard.
4. Evaluate company's individual sales person performance.
5. Creation of overall business dashboard and sharing with other stake holders.

Tableau

6. Connection of data and Basic data preparation of data for visualisation
7. Application of data aggregation and statistical function for visualisation.
8. Creation of worksheet containing sales report of different region.
9. Creation of interactive Geo maps using the business report of a company.
10. Creation of company's dash board by summarization of work sheet.

Pedagogy

Lecture, Demo in System

Course Designers

1. Dr.C.Esakkiammal
2. Dr.A.Meenakshi

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
NM23DTG	DESIGN THINKING	THEORY	30	-	-	2

Preamble

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

Course Learning Outcomes

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

Mapping with Programme Learning Outcomes

CLOs	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
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

DESIGN THINKING - NM23DTG –(30 Hrs)

Syllabus

UNIT – 1

(6 Hours)

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

UNIT – II

(6Hours)

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 -Story Telling - Cautions and Pitfalls - Best Practices

Text Books

S.No.	Author(s)	Title of the Book	Publisher	Year of Publication
1.	Christian Mueller-Roterberg	Handbook of Design Thinking Tips& Tools for how to design thinking	Amazon Kindle Version	2018
2	Gavin AmbrosePaul 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 of Publication
1	Maurício Vianna YsmarVianna 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

SEMESTER IV

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
BP24C07	PROGRAMMING WITH PYTHON	THEORY	58	2	-	4

Preamble

The course covers Python programming, data structures, and OOP concepts. It enables students to develop applications using modular design and web operations.

Prerequisite

- Basic Computer Skills, Basic Math Skills

Course Learning Outcomes

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

CLOs	CLO Statement	Knowledge Level
CLO1	Recognize the fundamentals of Python programming, data structures, and OOP concepts.	K1
CLO2	Understand the concept of decision-making, looping, and functions to develop modular Python programs.	K2
CLO3	Implement object-oriented principles, file handling, and exception handling in Python applications.	K3
CLO4	Analyze and design Python-based web applications and GUI programs using Tkinter.	K4

Mapping with Programme Learning Outcomes

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

S- Strong; M-Medium; L – Low

PROGRAMMING WITH PYTHON - BP24C07 (58 HOURS)

UNIT I

(12 Hours)

Python Programming Language: Features - Setting Up the Environment - IDE - Pycharm - Anaconda - Jupyter – Spyder. Keywords - Variables and Identifiers - Literals - Input Output Statements – Data Types – Operators: Arithmetic Operators - Comparison Operators, Logical Operators, Assignment Operators, Bitwise Operators, Identity Operators, Membership Operators – Expressions. Boolean Algebra and Logic Gates: Truth Tables, Logical Expressions, and Bitwise Operations in Python Decision Making & Branching Statements - Conditional Checking & Looping Statements.

UNIT II

(12 Hours)

Data Structures: Lists - Tuples - Set - Dictionaries –Strings. Functions: Functions Program Routines- Defining Functions- More on Functions: Calling Value-Returning Functions- Calling Non-Value-Returning Functions- Parameter Passing - Keyword Arguments in Python - Default Arguments in Python-Variable Scope. Recursion: Recursive Functions- Lambda.

UNIT III

(11 Hours)

Object Oriented Programming: Classes and Objects – Constructors – Destructors Getter and Setter Methods – Encapsulations – Inheritance – Polymorphism – Abstract Classes and Interfaces.

UNIT IV

(11 Hours)

Modular Design: Modules - Top-Down Design - Python Modules. Files: Introduction - File Path - Opening and Closing Files - Reading and Writing Files - Pickle and Unpickle - Exception Handling - Create User Defined Exception.

UNIT V

(12 Hours)

Web Operations in Python: Basic Web Application Structure – Templates – Web Forms – Web Scrapping in Python. Introduction to AI with Python: Basics of AI - Machine Learning Concepts. Introduction to GUI Programming with Tkinter: Features of Tkinter – Creating a basic Tkinter Window – Widgets in Tkinter – Creating simple business applications with Tkinter.

Text Books

S.No	Author	Title of the Book	Publisher	Year & Edition
1	Wesley J. Chun	Core Python Applications Programming	Pearson Education.	2016 and 3 rd Edn.

Reference Books

S.No	Author	Title of the Book	Publisher	Year & Edition
1	Martin C Brown	Python Complete Reference	MC Graw Hill Publication	2001 and 1 st Edn.
2	Mcgrath Mike	Python in Easy Steps	MC Graw Hill Publication	2013 and 1 st Edn.
3	Timothy A. Budd	Exploring Python	Tata MC Graw Hill Education Private Limited	2011 and 1 st Edn.
4	Kenneth A Lambert	Fundamentals of Python	Cengage Learning Publications	2019 and 2 nd Edn.

Skill Components

- Understanding Python syntax, data types, variables, and operators is essential for writing efficient and structured code.
- Mastering loops, conditional statements, and data structures like lists, tuples, sets, and dictionaries enhances problem-solving skills.
- Learning functions, recursion, lambda functions, file handling, and exception handling improves modularity and code reliability.
- Understanding Object-Oriented Programming (OOP), modular design, web operations, and GUI programming helps in building scalable and interactive applications.

Pedagogy

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

Course Designer

- 1.Ms.L.Mahalakshmi
- 2.Ms.A.Sasikala

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
BP24C08 / CM24C10	BUSINESS FINANCE	THEORY	73	2	-	4

Preamble

- ❖ To enable the students to Understand the Concepts of Business Finance and their Applications for Managerial Decision Making, to analyze the short term and long-term decision-making techniques and to examine the various determinants of dividends.

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	Analyze 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.

BUSINESS FINANCE - BP24C08 / CM24C10 (73 HOURS)

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.

(15 Hours)

UNIT II

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)

Capitalization: Concept – Need- Theories of Capitalization – 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- Global Perspectives on Dividend Policy.

Distribution of Marks : Theory 40 % Problems 60 %

Text Books

S.No	Author	Title of the Book	Publisher	Year & Edition
1	Shashi. K. Gupta Sharma R. K	Financial Management	Kalyani Publishers	2018 and 10 th edn..

Reference Books

S.No	Author	Title of the Book	Publisher	Year & Edition
1	Ravi. M. Kishore	Financial Management Problems and Solutions	Taxmann Publications Pvt Ltd	2023 and 9 th edn.
2	M .Y.Khan & P.K. Jain	Financial Management	Tata McGraw Hill	2018 and 8 th edn.
3	Maheshwari S. N	Financial Management	SultanChand& Sons	2024 and 14 th edn.

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 Designer

1. Dr. B. Thulasi Priya
2. Dr.S.Sujatha

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
BP23A03	BUSINESS LAW	THEORY	73	2	-	4

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

S- Strong; M-Medium; L - Low

BUSINESS LAW- BP23A03 – (73 HOURS)

UNIT I

(15 Hours)

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

UNIT II

(15 Hours)

Free Consent – Unlawful Agreements – Quasi Contracts - Different Modes of Discharge of Contract – Remedies of Breach.

UNIT III

(14 Hours)

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

UNIT IV

(15 Hours)

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. Law of Agency – Kinds of Agency – Rights & Liabilities of Principal and Agent.

UNIT V

(14 Hours)

Contract of Insurance - Nature and Fundamental Principles of Insurance – Life Insurance – Fire insurance – Marine Insurance - Policy claims.

Text Book:

S.No	Authors	Title	Publishers	Year and Edition
1.	Kapoor N.D	Business Law	Sultan Chand & sons	2022 and 23 rd Revised Edn.

Books for Reference:

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

Pedagogy

Power Point presentations, Group Discussion, Seminar, Quiz, Assignment, Experience Discussion, Brainstorming, Activity, Case Study

Course Designers

1. Dr. R. Jayasathya.
2. Mrs. R. Sangeetha

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
BP23A04	BANKING THEORY LAW AND PRACTICE	THEORY	73	2	-	4

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 prepare and present information regarding banking and technologies used

CLO Number	CLO Statement	Knowledge Level
CLO1	Define and Relate the conceptual framework of banking, central banking, cheques, Loans and advances and E-banking.	K1
CLO2	Classify and Explain the types of banks, deposit, cheques, E-banking services, loans and advances	K2
CLO3	Identify the functions of banks, Central bank, cheques ,lending policies and procedures, e-banking application	K3
CLO4	Analyse the various roles of commercial banks, central bank, negotiable instruments, cheques and e-banking/mobile banking	K4

Mapping with Programme Learning Outcomes

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

S- Strong; M-Medium;

BANKING THEORY LAW AND PRACTICE- BP23A04 – (73 HOURS)

Unit I

(15Hours)

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

(15Hours)

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 – KYC Norms - Types of deposit accounts - Negotiable Instruments Act – Definition and types . Endorsement – meaning, definition and kinds.

Unit III

(14Hours)

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 IV

(14Hours)

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 V

(15 Hours)

E –banking- Electronic delivery channels – Facets of E-banking – E-banking transactions – applications- Inter-bank mobile payment (IMPS) – virtual currency – Models of E-banking – Advantages – Constraints – Security Mobile Banking – Need and importance of Mobile banking - Key benefits of Mobile Banking measures – Electronic payment system – NEFT, RTGS, SWIFT, WIRE

Text Book:

S. No.	Authors	Title	Publishers	Year and Edition
1.	Varshney. P. N and <u>Sundharam K.P.M.</u>	Banking Theory Law and Practice	Sultan Chand & sons	2019, 20 th Revised Edn.

Books for Reference

S. No	Authors	Title	Publishers	Year and Edition
1.	Dr. S. Gurusamy	Banking Theory, Law and Practice	Vijay Nicole Imprints(p) Ltd	2017, 4 th Edn
2	E.Gordan and K.Natarajan	Banking Theory, Law and Practice	Himalaya publishing house	2023, 29 th Revised Edn.
3.	Kandasami. K.P Natarajan S. & Parameswaran	Banking Law and Practices	S Chand & Company	2020, 4 th Revised Edn.

Skill Components

- Recent Amendments by RBI In Banking Sector.
- New Technologies and Recent Trends In Banking Sector.
- Suppose If you Get Student Loan Of Rs 1,00,000 From Any One Of The Public Sector Bank In Order To Meet Your College Expenses. If You Are Repaying It After 8 Yrs, Calculate Interest For 8 Yrs.
- Analyze the Recent Technologies In Banking Till 2020, If Suppose New Technology For Banking To Be Introduced In Recent Coming Years. What Will Be Additional Features Needed And Explain Why It Is Needed.
- **Pedagogy**
 - Power point presentations, Group Discussion, Seminar, Quiz, Assignment, Experience Discussion, Brain storming, Activity, Case Study.

Course Designers

1. Dr.C.Esakkiammal
2. Dr. R.Eswari

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
EC23A03	BUSINESS ECONOMICS	THEORY	73	2	-	4

Preamble

- To introduce micro economic and macroeconomic concepts
- To familiarize 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 be able to

CLO Number	CLO Statement	Knowledge Level
CLO1	Define and understand the various laws and concepts of economics	K1
CLO2	Demonstrate and interpret different market structure, utility, production and pricing methods	K2
CLO3	Identify and develop economic theories and public finance system.	K3
CLO4	Analyze the functioning of economy at the macro level.	K4

Mapping with Programme Learning Outcomes

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

S- Strong; M-Medium; L-Low

BUSINESS ECONOMICS - EC23A03 – 73 HOURS

Unit I

(14 Hours)

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 – Time and Discounting Principles – Concept of Efficiency.

Unit II

(14 Hours)

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 Hours)

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 Hours)

National Income- Gross National Product- Net National Product– Gross Domestic 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 - Effect of taxation on production and distribution - Deficit financing system

Unit V

(15 Hours)

Monetary and Fiscal Policies– Measures of money stock – Policy and money supply – Instruments of monetary policy–Fiscal policy–The union budget– State budgets– Finances of the union and the states –The Finance commission – Importance of the budget.

Text Book

Sl. No	Author Name	Title of the book	Publisher	Year and Edition
1	Sundharam K P M Sundharam E N	Business Economics (Unit I-IV)	Sultan Chand & Sons -New Delhi – 02.	2022 and 5 th Edition
2	Shankaran S	Business Economics (Unit IV)	Margham Publications Ch -17	2020, 3 rd Edition
3	Francis Cherunilam	Business Environment (Unit V)	Himalaya Publishing House, Mumbai – 04	2023, 31 th 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 and 1 st Edition
2	Mehta P.L	Managerial Economics–Analysis, Problems & Cases	Sultan Chand & Sons - New Delhi – 02.	2018 and 14 th Edition

Skill Components

- Understanding of core economic principles including opportunity cost, marginal analysis, production possibility frontiers, and time value of money concepts.
 - Ability to analyze demand and supply functions, apply elasticity concepts, and evaluate consumer behaviour using utility and indifference curve approaches.
 - Skills in assessing production processes, cost structures, break-even analysis, and pricing strategies under various market conditions such as monopoly and oligopoly.
 - Proficiency in interpreting macroeconomic indicators such as GDP, GNP, national income, and applying concepts of consumption, savings, investment, and employment.
- Knowledge of fiscal and monetary policy tools including taxation, budgeting, deficit financing, money supply measures, and the role of public financial institutions.

Course Designers

1. Dr.A. Karthika
2. Dr.S. Yesodha

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
BP24CP4	PROGRAMMING WITH PYTHON PRACTICAL	PRACTICAL	-	-	45	2

Preamble

To enable the students to enhance practical knowledge in Python Programming.

Course Learning Outcomes

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

CLO Number	CLO STATEMENT	Knowledge Level
CLO1	Understand the basic concepts of Python programming.	K1
CLO2	Apply Python concepts to solve basic business and commerce problems.	K2
CLO3	Use data structures, functions, and classes to develop Python applications.	K3
CLO4	Apply Python skills to design and implement practical solutions effectively.	K4

Mapping with Programme Learning Outcomes

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

S- Strong; M-Medium; L – Low

PROGRAMMING WITH PYTHON PRACTICAL - BP24CP4 (45 HOURS)

1. Program to convert the given temperature from Fahrenheit to Celsius and vice versa depending upon user's choice.
2. Program to calculate total marks, percentage and grade of a student. Marks obtained in each of the five subjects are to be input by user. Assign grades according to the following criteria:
Grade A: Percentage ≥ 80 Grade B: Percentage ≥ 70 and < 80
Grade C: Percentage ≥ 60 and < 70 Grade D: Percentage ≥ 40 and < 60 .
Grade E: Percentage < 40 .
3. Develop a program to input the quantity and price of 5 products and calculate the total bill with GST using arithmetic and logical operators.
4. Write a Python program to maintain a list of sales amounts for 7 days and compute the average, maximum, and minimum sales.
5. Create a program using dictionaries to store employee details (ID, name, salary) and display the details of employees whose salary is greater than a given threshold.
6. Define a function to calculate income tax payable based on slabs (use default arguments for tax-free limit).
7. Write a recursive function to calculate the total sales of n days where each day's sales value is entered by the user.
8. Create a class Bank Account with methods for deposit, withdrawal, and balance enquiry. Implement inheritance for a Savings Account and Current Account.
9. Write a program using classes and objects to represent products in a store. Include methods to calculate discount price and demonstrate polymorphism for different product categories.
10. Implement an abstract class Employee with subclasses Manager and Salesperson. Override a method to compute their monthly incentives differently.
11. Write a Python program to read customer data from a text file, process it, and display only those customers who purchased goods worth more than ₹10,000.
12. Develop a program to maintain a sales record using pickle: store sales data in binary format and retrieve it later.
13. Write a program to handle exceptions in a bill calculation system, raising a custom exception if the quantity entered is negative.
14. Create a Tkinter-based billing system for a small shop where the user enters item name, quantity, and price, and the total bill is displayed with GST.
15. Write a Python program to perform web scraping to extract and display the current stock prices of at least three companies from a financial website.

Skill Component:

1. Applying arithmetic operations, control structures, and recursive functions to solve real-world business problems.
2. Managing and analyzing structured data using Python collections, file handling, and persistent storage techniques.
3. Designing modular and reusable programs using functions, exception handling, and custom error mechanisms.
4. Implementing object-oriented programming concepts such as inheritance, polymorphism, and abstraction for business applications.

Pedagogy

- Lecture, Demo in System

Course Designers

1. Ms.L.Mahalakshmi
2. Ms.A.Sasikala

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
BP24SBCE	NETWORKING TECHNOLOGIES AND INFORMATION SECURITY	THEORY	45	-	-	3

S.No	Course Name	Course Link	No. Of Hours
1	Introduction to Networking and Storage	https://www.coursera.org/learn/introduction-to-networking-and-storage?utm_source	10
2	Introduction to Cloud Computing	https://www.coursera.org/learn/introduction-to-cloud?utm_source	9
3	Computer Networks and Network Security	https://www.coursera.org/learn/network-security-database-vulnerabilities?utm_source	13
4	Hardware and Network Troubleshooting -	https://www.coursera.org/learn/core1-hardware-and-network-troubleshooting?utm_source	13

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

Course Learning Objectives

1	Inspire; develop entrepreneurial mind-set and attributes; entrepreneurial skill sets for venture creation and intra preneurial 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 cont

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
NM24EVS	Environmental Studies	Theory	-	-	-	Grade

Unit I - Multidisciplinary Nature of Environmental studies (3 Hours)

Prologue, Definition, Scope and Significance, Need for public awareness.

Unit II - Natural resources (3 Hours)

Renewable and non-renewable resources, Natural resources and associated problems. Forest resources, Water resources, Mineral resources, Food resources, Energy resources, Land resources, Role of an individual in conservation of natural resources and Equitable use of resources for sustainable lifestyles.

Unit III – Ecosystems (3 Hours)

Concept of an ecosystem, Structure and function of an ecosystem, Producers, consumers and decomposers, Energy flow in the ecosystem, Food chains and food webs, Ecological pyramids, Ecological succession, Types of ecosystems

Unit IV - Biodiversity and its conservation (3 Hours)

Introduction, Levels of biodiversity - genetic, species and ecosystem, Biogeographical classification of India, Value of biodiversity, Biodiversity at global, National and local levels, India as a mega diversity nation, Hotspots of biodiversity, Threats to biodiversity, Endangered and Endemic species of India, Conservation of biodiversity.

Unit V - Environmental Pollution (3 Hours)

Definition – Air, Water, Soil, Marine, Noise and Thermal pollution, Nuclear hazards, Solid waste management, Disaster management, Role of an individual in pollution management, Case studies

Unit VI - Social issues and the environment (3 Hours)

From unsustainable to sustainable development, Urban problems related to energy, Water conservation, Climatic changes, Wasteland reclamation, Consumerism and waste products, Environment protection Acts, Air Act, Water Act, Wildlife Protection Act, Forest Conservation Act, Enforcement of environment legislation, Public awareness

Unit VII - Human population and the environment (4 Hours)

Population growth and explosion, Family Welfare programme, Environment and human health, Human Rights, Value Education, HIV/AIDS, Women and child welfare, Role of information technology in Environment and human health

Unit VIII- Environmental Management (3 Hours)

Constitutional Provisions in India, Environmental Management System: ISO 14001, Emerging Concepts in Environmental Management, Environmental audit and impact assessment, Ecolabeling / Ecomark scheme

Unit IX - Field work (5Hours)

Topics for field work and project, Guidelines for field work and project, Project report.

Reference books

S.No	Authors	Title	Publishers	Year & Edition
1	Agarwal, K.C.	Environmental Biology	Nidi Publ. Ltd.,	2001& 2 nd Edn.
2	Bharucha, Erach	The Biodiversity of India	Mapin Publishing Pvt. Ltd.,	2000 & 1 st Edn.
3	Brunner, R.C.	Hazardous Waste Incineration	McGraw Hill Inc.	1989 & 1 st Edn.
4	Clark, R.S.	Marine Pollution	Cl&erson Press, Oxford	1992 & 5 th Edn.
5	Cunningham, V.P., Cooper, T.H., Gorhani, E. & Hepworth, M.T.	Environmental Encyclopedia	Jaico Publ. House,	2001 & 2 nd Edn.
6	De, A.K.	Environmental Chemistry	Wiley Eastern Ltd.	1990 & 4 th Edn.
8	Gleick, H.P.	Water in Crisis	Pacific Institute / Stockholm Env. Institute, Oxford Univ. Press	1993 & 1 st Edn.
9	Hawkins, R.E.	Encyclopedia of Indian NaturalHistory	Bombay Natural SHistory Society	1986 & 1 st Edn.
10	Heywood, V.H. & Watson, R.T.	Global Biodiversity Assessment	Cambridge Univ. Press	1995 & 1 st Edn.
11	Jadhav, H. & Bhosale, V.M.	Environmental Protection & Laws	Himalaya Publ. House,	1995 & 1 st Edn.
12	Mekinney, M.I. & Schoeh, R.M.	Environmental Science: Systems & Solutions	Jones & Bartlett Learning	1996 & 1 st Edn.
13	Mhaskar, A.K.	Matter Hazardous	Techno-Science Pub	1990 & 1 st Edn.
14	Miller, T.G. Jr.	Environmental Science	Wadsworth Publishing Co.	2000 & 9 th Edn.
15	Odum, E.P.	Fundamentals of Ecol.	W.B. Saunders Co., USA	1971 & 3rd Edn.
16	Rao, M.N. & Datta, A.K.	Waste Water Treatment	Oxford & IBH Publ. Co. Pvt. Ltd.	1987 & 2 nd Edn.
17	Sharma, B.K.	Environmental Che.	Goel Publ. House	2001 & 5 th Edn.
19	Townsend, C., Harper, J. & BegonM.	Essentials of Ecology	Blackwell Science	1998 & 2 nd Edn.
20	Trivedi, R.K.	Hand book of Environmentalaws, Rules, Guidelines, Compliances & St&ards (Vol. I & II)	Enviro Media	2000 & 1 st Edn.
21	Trivedi, R.K. & Goel, P.K.	Introduction to Air Pollution	Techno-Science Publications	1986 & 1 st Edn.
22	Wagner, K.D.	Environmental Management	W.B. Saunders Co., Philadelphia, USA	1998 & 1 st Edn.

SEMESTER –V

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
BP24C09	GRAPHICAL USER INTERFACE DESIGN AND DEVELOPMENT	THEORY	73	2	-	5

Preamble

- To provide knowledge about the implementation of vb.net concepts into Programming
- To enlighten about prominent commands used in visual basic language

Prerequisite

- Basic Computer Skills, Basic Math Skills

Course Learning Outcomes

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

CLOs	CLO Statement	Knowledge Level
CLO1	Define the concepts of VB.Net and its functions	K1
CLO2	Demonstrate the various elements of VB.Net and settings to develop programs using them	K2
CLO3	Solve the real world problems using looping, boolean, branching and objects	K3
CLO4	Simplify Menus and Toolbar, Dialog Boxes, Procedures by developing programs using AI Tools.	K4

Mapping with Programme Learning Outcomes

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

S- Strong; M-Medium

GRAPHICAL USER INTERFACE DESIGN AND DEVELOPMENT
BP24C09 - (73 Hrs)

UNIT I (15 Hrs)

Introduction to .NET Framework ,Evolution and Architecture of .NET ,Common Language Runtime (CLR),.NET Framework Class Library (FCL),Introduction to Visual Basic .NET. Visual Studio IDE: Creating and Opening Projects-Solution Explorer-Toolbox-Properties Window-Standard Toolbar-Auto Hide and Window Management. Windows Forms Application Development-Placing Controls on a Form-Selecting and Resizing Forms and Controls-Setting Properties of Forms and Controls-Writing Event Procedures-Setting Start up Object-Executing and Debugging Applications

UNIT II (15Hrs)

Overview of Windows Forms Controls-Label Control-Text Box Control-Button Control-Radio Button Control-Check Box Control-List Box Control-Combo Box Control-Group Box Control-Picture Box Control-Timer Control-Horizontal and Vertical Scroll Bar Controls-ToolTip and Error Provider Controls-Event-Driven Programming Concepts-Basic Form Validation Techniques

UNIT III (14 Hrs)

Variables and Constants-Data Types-Operators -Arithmetic, Relational, Logical-Type Conversion Functions-Decision Making Statements-If...Then...Else-Select Case-Looping Statements-For...Next-While...End While-Do...Loop (While/Until)-Nested Loops-Arrays (Single and Multidimensional)-Procedures and Functions-Parameter Passing Methods-Control Arrays-Exception Handling -Try...Catch...Finally.

UNIT IV (15 Hrs)

Built-in Functions-Mathematical Functions-String Functions-Date and Time Functions-Msg Box()Function-Input Box() Function-Menu-Driven Applications-Menu Strip-Context Menu Strip-Creating and Modifying Menus-Popup Menus-MDI Forms-Toolbars and Status Strip-Boolean Algebra and Logical Operations-Option Strict and Option Explicit

UNIT V (14 Hrs)

Overview of ADO.NET Architecture-Connection Object-Command Object- Execute Non Query ()-Execute Scalar ()-Execute Reader()-Data Reader-Data Set-Data Adapter-Data Binding-CRUD Operations -Insert, Update, Delete, Select-Introduction to Chat bots-Applications of Chat bots in Business and Education

Text Books

S.No	Author	Title of the Book	Publisher	Year of Publication & Edition
1	ShirishChavan	Visual Basic .Net	Pearson Education, Pvt. Ltd	2010,4 th Edn.

Reference Book

S.No	Author	Title of the Book	Publisher	Year of Publication & Edition
1.	Thearon Willis, Bryan Newsome	Beginning Microsoft Visual Basic 2010	Wrox	2011, 1 st Edn.
2.	Kogent Solutions Inc	Visual Basic 2008 In Simple Steps	Dreamtech Press	2009, 3 rd Edn.

Skill Components

- Applying various control structures in VB.Net.
- Used to develop form-based applications, Web based applications and Web services.
- Designed to Build applications which could run on the Windows platform

Pedagogy

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

Course Designer

1. Mrs A.Sasikala
2. Mrs L.Mahalakshmi

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

CLOs	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	Analyze 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 Book

Sl.No.	Author Name	Title of the Book	Publishers	Year and Edition
1	Sharma R.K Sashi K.Gupta Neeti Gupta	Management Accounting	Kalyani Publishers	2017and 4 th Edn.

Books for Reference

Sl.No.	Author Name	Title of the Book	Publishers	Year and Edition
1	Jain nd Narang	Cost and Management Accounting	Kalyani Publishers	2020 and 21 st Edn.

2	Dr. Maheswari S. N & Dr. S. N. Mittal	Management Accounting	Sultan Chand and Sons	2020 and Reprint
3	Reddy T.S and Reddy H. P	Management Accounting	Margham Publications	2020 and 8 th Edn.

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

Pedagogy

Chalk and talk, PPT, Quiz, Assignment, Group Discussion, Seminar

Course Designer

1. Dr. G. Kavitha
2. Dr. G. Indrani

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

Preamble

To gain expert Knowledge of the provisions of Income tax Act under different heads of incomes.

Prerequisite

Basic Knowledge in taxation

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 – Set off and Carry Forward Set off losses. Computation of total income and tax liability- Assessment of Individuals. Introduction to e-Filing, Computation of Total Income – Individual. Computation of Total Income - Tax Liability of an 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%

**** Theory Only**

Text Book

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

Reference Book

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

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.

Pedagogy

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

Course Designers

1. Dr. B. Thulasipriya
2. Dr. S. Sujatha

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
BP23E01	RESEARCH METHODOLOGY	THEORY	73	2	-	5

Preamble

- ❖ To understand the basics of Business Research
- ❖ To equip students with principles of quantitative and qualitative research.
- ❖ To acquaint about the fundamentals of research methods and statistical techniques

Prerequisite

- Basic knowledge in research

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Define and describe the various conceptual knowledge associated with the research framework.	K1
CLO2	Outline the research problem, sampling design and scale techniques to be used for the analysis and interpretation.	K2
CLO3	Apply the interpretation techniques on the research problems using various statistical tools	K3
CLO4	Analyse the research process by identifying the appropriate sampling design and make inferences on the research problem using research techniques and list the report of the research	K4

Mapping with Programme Learning Outcomes

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

S- Strong; M-Medium; L-Low

RESEARCH METHODOLOGY- BP23E01 (73 Hrs)

UNIT I

(14 Hrs)

Introduction to Business Research: Definition – Objectives of Research- Types of Research – Significance of research- Process of Research – Criteria of good research-Research Problem-Selecting the Problem-Necessity of defining the problem-Technique involved in defining a problem

UNIT II

(15 Hrs)

Research Design: Meaning-Need for Research Design-Features of a good design- Types of research designs- Sampling Design: Steps in Sampling design- Criteria of selecting a sampling procedure- Characteristics of a good sample design- Types of sample design- Sample size and its determination

UNIT III

(15 Hrs)

Measurement scales: Nominal scale-Ordinal scale-Interval scale-Ratio scale- Scaling technique: Likert type scale- Methods of data collection: Primary and secondary data- Sources: Observation, Interview, Questionnaire, Schedules - Internet Sources-Data base- other methods. Data Processing: Fieldwork validation – Data Editing – Coding – Classification and Tabulation of Data.

UNIT IV

(15 Hrs)

Statistical Techniques: -Frequencies – Descriptive – Cross tab –Multiple Response - Chi-square test – Compare Mean: one sample t-test, Independent sample t-test, One-way ANOVA, Correlation analysis – (includes simple problems)

UNIT V

(14 Hrs)

Interpretation and Report writing: Technique of interpretation-Precautions in interpretation-Significance of Report writing -Layout of the Research report-Types of reports-Mechanics of writing research report- Precautions for writing research report.

Textbook

S.No	Author Name	Book Name	Publisher	Year and Edition
1	C.R.Kothari	Research methodology Methods and Techniques	New Age International Publishers	2019, Second Revised Edition
2	C.Murthy	Research Methodology	Vrinda publication	Reprint2013

Books for Reference

S.No	Author Name	Book Name	Publisher	Year and Edition
1	Uma Sekaran and Roger Bougie	Research Methods for Business	Wiley	2016, 7 th Edition
2	Donal.R.Cooper	Business Research Methods	TataMcGraw Hill	2018, 12 th Edition
3	Gupta S. P	Statistical Methods	Sultan Chand & Sons	2021, 46 th Edition

Pedagogy

- ❖ Lecture, PPT Presentation, Quiz, Group Discussion, Seminar, Think, Pair and Share, One Minute Paper, Chain Notes, Pro-Con Grids, Quescussion, Assignment

Course Designers

1. Dr. C. Esakkiammal
2. Ms. R. Sangeetha

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
BP23E02	SOFTWARE ENGINEERING AND OOAD	THEORY	73	2	-	5

Preamble

- ❖ To provide principles, methodologies, and best practices required for building high-quality software
- ❖ To explore key areas such as software design, including architectural and modular design, risk management, software maintenance, and testing techniques.

Prerequisite

No Prerequisite required

Course Learning Outcome

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Recall basic concepts and tools in software engineering like development, design, maintenance, testing, and OOP	K1
CLO2	Explain software engineering concepts like development, design, maintenance, testing, and agile practices	K2
CLO3	Apply software engineering principles to develop, design, maintain, and test software using OOP and agile methods	K3
CLO4	Analyze software engineering models and tools for development, design, maintenance, testing, and OOP systems..	K4

Mapping with Programme Learning Outcomes

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

S-Strong; M-Medium; L-Low

SOFTWARE ENGINEERING AND OOAD - BP23E02 (73 HOURS)

UNIT I

(14 Hrs)

Basics of Software Engineering: Need for Software Engineering –Definition – Software Characteristics – Software Myths – Program versus Software Products. Software Development Life Cycle Models, Advantages and Disadvantages, Comparison of various models. Software Requirement Analysis (SRS): Value of good SRS- developing SRS from Business Requirements- Desirable Characteristics of SRS- Components of an SRS- Structures of a requirement documents, creating a backlog in agile model.

UNIT – II

(15 Hrs)

Software Design: Definition, Objectives, Process, Architectural design, Modular design, Structure chart, Coupling and Cohesion, Design of Human Computer Interface, Software Planning: Software metrics - Definition – Types of metrics - Software project estimation – Steps for estimation, Reason for poor and inaccurate estimation, Project estimation guidelines, Models for estimation, COCOMO Model– Automated tools for estimation – Sprint planning in agile. CASE and its scope- Architecture of CASE environment, Building blocks for CASE, Objectives of CASE – Characteristics, List of CASE tools, Categories, Advantages and advantages.

UNIT – III

(15 Hrs)

Software Maintenance: Software as an evolution entity – Software configuration management activities, Change control process, Software version control, Software configuration management – Need – Categories of maintenance , Factors affecting the effort.Risk management: Definition of risk – Basics for different types of software risks – Monitoring of risks – Risk management – Risk avoidance – Risk detection – Risk control – Risk recovery –Sources of risks – Types of risks, Project scheduling: Introduction – Factors affecting the task set for the project – scheduling methods – Work breakdown structure – Flow graph – Gant chart - PERT - Setting up Sprint burn down charts for Agile model

UNIT – IV

(15 Hrs)

Software Testing : Introduction ,Testing principles , Fault, Error, Failure, Test cases – Black box and white box testing – Advantages and disadvantages – Methods for Block box testing strategies – Methods for white box testing strategies – Testing activities– Test plan – Tracking defects. Levels of testing: Debugging, Definition, Characteristics of bugs, Life cycle of a Debugging task, debugging approaches. Software Testing Tools: Need, Classification of tools Functional/Regression Testing tools, Performance/Load Testing Tools, Testing process management Tools , Benefits of tools, Risk Associated with tools , Selecting tools ,categories of tools , Examples for commercial software testing tool.

UNIT V**(14 Hrs)**

Object Orientation, System development, Review of objects, Inheritance, Object relationship Dynamic binding, OOSD life cycle, Process, Analysis, Design, prototyping ,Implementation Testing-Overview of Methodologies Ram Baugh methodology, OMT , Booch methodology, Jacobson methodology , patterns, Unified approach, UML , Class diagram , Dynamic modeling, Role of AI in software engineering.

Text Books

S. No.	Author Name	Book Name	Publisher	Year and edition
1.	Ian Sommerville	Software Engineering	Pearson Education	2011 and 9 th Edn
2.	Rajib Mall	Fundamentals of Software Engineering	PHI Learning Pvt Limited, New Delhi	2018 and 5 th Edn.

Reference Books

S. No.	Author Name	Book Name	Publisher	Year and edition
1.	Roger S. Pressman	Software Engineering - A Practitioner's Approach	McGraw Hill	2010 and 7 th Edn.
2.	Pankaj Jalote	An Integrated Approach to Software Engineering	Narosa Publishing House	2011 and 3 rd Edn.

Pedagogy

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

Course Designers

- Mrs. A. Sasikala
- Mrs. L. Mahalakshmi

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 divisionalized businesses

Prerequisite

Basic Knowledge in Management principles and HRM

Course Learning Outcomes

On the successful completion of the course, students will 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

PERFORMANCE MANAGEMENT - CM23E03 – 73 Hrs

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

Textbook

S.No	Authors	Title	Publishers	Year and Edition
1	Performance Management(ACCA)		Kaplan Publishing	Current Edition

Books for Reference

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

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
BP24CP5	GRAPHICAL USER INTERFACE DESIGN AND DEVELOPMENT PRACTICAL	PRACTICAL	-	-	60	2

Preamble

To enhance practical knowledge in Visual Basic.Net.

Course Learning Outcomes

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

CLO Number	CLO STATEMENT	Knowledge Level
CLO1	Relate the VB.Net controls and their application.	K1
CLO2	Demonstrate VB applications with full functionality and a graphical user interface using data controls.	K2
CLO3	Construct the database to develop VB projects.	K3
CLO4	Examine database access utilizing Visual Basic ADO control and components such as data environment designer and Chatbot	K4

Mapping with Programme Learning Outcomes

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

S- Strong; M-Medium

GRAPHICAL USER INTERFACE DESIGN AND DEVELOPMENT PRACTICAL BP24CP5 - 60 Hrs

1. Write a program to generate prime numbers
2. Write a program for calculator using VB.Net
3. Write a VB.Net application to calculate Simple Interest
4. Write a VB.Net application to implement the font style properties like changing the font color, font size, bold, italic and underline formatting options using check box and text box
5. Write a VB.Net program to implement For....Next loop for displaying only even numbers from given numbers
6. Write a VB.Net program to implement do ... while loop for validating the age of vote for given number of persons
7. Write a VB.Net program to implement Menu Editor for displaying

different types of shapes and its formulas

8. Write a VB.Net program to implement String Functions
9. Write a VB.net program to display the given date with different format
10. Create an Electricity Bill using VB.Net
11. Create a Student database with following fields
(Table Name: student_details): Regno varchar
(7) primary key

Studname varchar (20)

Gender varchar (6)

Dept varchar (15)

Address varchar (40)

Insert few records into student_details table using VB.Net application
and update student detail based on Regno

12. Creating a chatbot in Visual Basic using basic keyword matching.

Skill Component:

1. Program creates highly creative and interactive web applications
2. Analysing wide range of applications with control variables
3. Applying various control structures in VB.Net
4. Understanding Client-side technologies like HTML, CSS, and JavaScript
5. Understand VB application environment and event driven programming
6. Analyse various control constructs, arrays and collections used in VB

Pedagogy

- Lecture, Demo in System

Course Designers

1. Dr. A. Meenakshi
2. Dr. J. Rini Mercy

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
BP24SBP2	BUSINESS INTELLIGENCE WITH MACHINE LEARNING	PRACTICAL	-	4	41	3

Preamble

- Business Intelligence (BI) and Machine Learning (ML) together enable data-driven Decision-making
- The focus is on practical skills using BI tools and ML techniques.

Prerequisite

- Basic understanding of statistics, programming (preferably Python), SQL, and data Handling tools like Excel.

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Understand the fundamentals of Business Intelligence and Machine Learning.	K1
CLO2	Explain key concepts, tools, and techniques used in BI and ML for data analysis	K2
CLO3	Apply BI tools and ML algorithms to analyze and interpret business data	K3
CLO4	Evaluate BI and ML solutions to support data-driven decision-making and strategic planning.	K4

Mapping with Programme Learning Outcomes

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

S-Strong; M-Medium; L-Low

BUSINESS INTELLIGENCE WITH MACHINE LEARNING BP24SBP2 (41 HOURS)

1. Develop a Python program to load the house_prices.csv dataset and analyze the relationship between house prices, number of bedrooms, and square footage using visualizations and correlation. Use libraries like pandas, matplotlib, and seaborn for exploration.
2. Build a linear regression model in Python to predict house prices using number of bedrooms and square footage as predictors. Split the dataset into training and testing sets and print the model coefficients.
3. Use Python to evaluate the house price prediction model by testing it on the test dataset. Calculate performance metrics such as mean squared error and R^2 score to assess the model's predictive accuracy.
4. Develop a Python program to load the customer_data.csv dataset and apply K-Means clustering with $k=3$ to segment customers. Use appropriate pre-processing techniques if needed before clustering.
5. Use Python to visualize the resulting customer clusters from customer_data.csv using a scatter plot based on two relevant demographic features. Use different colors to distinguish between clusters for better clarity.
6. Use Python to analyze the customer segmentation model for customer_data.csv by interpreting the centroids and feature distributions of each cluster. Summarize the distinct characteristics of customers in each group based on demographic differ.
7. Develop a Python program to load the movie_reviews.csv dataset and pre-process the text data by cleaning, tokenizing, and vectorizing the reviews. Use techniques such as lowercasing, stop word removal, and TF-IDF transformation.
8. Using Python, split the pre-processed data from movie_reviews.csv into training and testing sets and apply K-Means clustering to group reviews into sentiment-based clusters.
9. Use Python to evaluate the clustering performance for movie reviews by comparing predicted clusters with actual sentiment labels using accuracy. Interpret how effectively the model separates positive and negative reviews.
10. Develop a Python program using the book_ratings.csv dataset to build a recommendation system for books. Implement a collaborative filtering model, generate personalized book recommendations for a given user, and evaluate the system's performance using suitable metrics.

Pedagogy

- Lecture, Demo in System.

Course Designers

1. Mrs. A. Sasikala
2. Mrs. L. Mahalakshmi

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
BP23AC1	BUSINESS COMMUNICATION	THEORY		SELF-STUDY		5**

Objective

- Acquire the basic concept of business communication.
- Exposed to effective business letter
- Paraphrase the concept of various correspondences.
- Prepare Secretarial Correspondence like agenda, minutes and various business reports.
- Acquire the skill of preparing an effective resume

BUSINESS COMMUNICATION-BP23AC1

UNIT I

Introduction to Business Communication: Definition – Meaning – Importance of Effective Communication – Modern Communication Methods – Principles of Communication – Formal and Informal Communication – Upward, Downward, Lateral and Diagonal Communication – Communication network- Barriers to Communication.

UNIT II

Business Letters: Need - Functions – Essentials of Effective Business Letters – kinds of a business letter- AI Tools for Drafting Business Letters -Planning Business message- Lay out.

UNIT III

Business Correspondence: Trade Enquiries – Orders and their Execution – Complaints and Adjustments – Collection Letters – Sales Letters – Circulars.

UNIT IV

Banking & Insurance Correspondence: Banking Correspondence – Types– Elements of a Good Banking Correspondence – Banking letters – Insurance – Meaning and Types – Insurance Correspondence – Insurance letters.

UNIT V

Secretarial Correspondence & Interview Preparation: Company Secretarial Correspondence – Introduction - Agenda and Minutes of Report writing – Introduction – Types of Reports – Preparation of Report Writing - Interview: Meaning – Objectives and Techniques of Various Types of Interviews -Application Letters – AI-based Resume Screening -Preparation of Resume.

Text Book

S.No	Authors	Title	Publishers	Year and Edition
1.	Rajendra Pal & J.S. Korlahalli	Essentials of Business Communication	Sultan Chand & Sons, New Delhi	2006, 9 th Edn, Reprint
2.	Gupta and Jain	Business Communication	Satyabhama Publication, New Delhi.	2024, Revised

Books for Reference

S.No	Author Name	Title	Publishers	Year and Edition
1.	Jain Omprakash V.K.Biyani	Business Communication	Sultan Chand & Company Ltd, New Delhi	2009, 1 st Edn, Reprint
2.	Pillai R.S.N. & Bagavathi	Modern Commercial Correspondence	Sultan Chand & Company Ltd, New Delhi	2006, 1 st Edn, Reprint
3.	Uma Narula	Business Communication practices- Modern trends	Atlantic Publishers and distributors	2006, 1 st Edn.

Course Designers

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2. Ms. R. Sangeetha

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDITS
BP23AC2	INTRODUCTION TO DATA SCIENCE	THEORY		SELF-STUDY		5**

Objectives

- To introduce the concepts, techniques and tools in Data Science.
- To understand the various facets of data science practice, including data collection and integration, exploratory data analysis, predictive modelling, descriptive modelling and effective communication.

INTRODUCTION TO DATA SCIENCE - BP23AC2

Unit I

Introduction: Benefits and uses – Facets of data – Data science process – Big data ecosystem and data science

Unit II

The Data science process: Overview – research goals - retrieving data - transformation – Exploratory Data Analysis – Model building - Data Visualization

Unit III

Algorithms: Machine learning algorithms – Modelling process – Types – Supervised – Unsupervised - Semi-supervised

Unit IV

Introduction to Hadoop: Hadoop framework – Spark – replacing Map Reduce– NoSQL – ACID – CAP – BASE – types

Unit V

Case Study: Prediction of Disease - Setting research goals - Data retrieval – preparation - exploration - Disease profiling - presentation and automation.

Text Book

Sl.No	Author	Title	Publishers	Year and Edition
1	Davy Cielen, Arno D. B. Meysman, Mohamed Ali	Introducing Data Science	Manning publications	2016, 1 st Edn.
2	MurtazaHaider	Getting Started with Data Science – Making Sense of Data with Analytics	IBM press, E-book	E-book

Books for Reference

S.No	Author	Title	Publishers	Year and edition
1.	Davy Cielen, Arno D.B. Meysman, Mohamed Ali	Introducing Data Science: Big Data, Machine Learning, and More, Using Python Tools	Dream tech Press	2016, 1 st Edn.
2	Annalyn Ng, Kenneth Soo	Numsense! Data Science for the Layman: No Math Added	Shroff Publishers and Distributors Private Limited	2015, 1 st Edn.
3	Cathy O'Neil, Rachel Schutt	Doing Data Science Straight Talk from the Frontline	O'Reilly Media	2013, 1 st Edition
4	Lillian Pierson	Data Science	For Dummies	2015, 2 nd Edn.

Course Designers

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2. Dr. J. Rini Mercy