

(For Candidates admitted from the academic year 2023-24 onwards)



**HOLY CROSS COLLEGE (AUTONOMOUS)
TIRUCHIRAPPALLI-620 002
SCHOOL OF MANAGEMENT STUDIES
CHOICE BASED CREDIT SYSTEM
LEARNING OUTCOMES-BASED CURRICULUM
FRAMEWORK (LOCF)**

**B. COM. WITH SPECIALISATION IN COMPUTER APPLICATIONS
Programme Outcomes (POs)**

Upon completion of the B.Com. Degree Programme, the graduate will be able to

PO 1 - Demonstrate ability and attitude to acquire knowledge and skills in the advancing global scenario to apply them effectively and ethically for professional and social development.

PO2- Involve in research and innovative endeavors and share their findings for the wellbeing of the society.

PO3 – Work effectively in teams and take up leadership in multi-cultural milieu.

PO4 – Act with moral, ethical and social values in any situation.

PO5- Excel as empowered woman to empower women

PO6 –Participate in activities towards environmental sustainability goals as responsible citizens.

PO7 – Pursue higher studies in the related field of sciences and humanities.

PO8 - Exhibit business and accounting skills effectively for the betterment of business and economic environment.

PO9 – Establish the role of different business organizations and its challenges with progressive attitude to pursue higher education and research.

Programme Specific Outcomes (PSOs)

Upon completion of these courses the learner would

PSO 1 - Recognize the concepts associated to different phases of Commerce and Computer applications in global insights.

PSO2- Promote professional thinking skills to take up the role as business analysts and professionals in accounting, incorporate theoretical information with real-world experience to fulfil the industry requirements.

PSO3- Apply analytical skills to scrutinize and interpret data to resolve multifaceted business problems, to execute logical and strict analytics with organized and indefinite data.

(For Candidates admitted from June 2023 onwards)
HOLY CROSS COLLEGE (AUTONOMOUS) TIRUCHIRAPPALLI - 2
UG COURSE PATTERN (2023-2024 ONWARDS) – TANSCH
SCHOOL OF MANAGEMENT STUDIES
COMMERCE WITH SPECIALISATION IN COMPUTER APPLICATIONS

Semester	Part	Subject	CODE	Hours	Credits	
I	I	Language – General Tamil/ Hindi/ French	U23TL1GEN01/ U23HN1HIN01/ U23FR1FRE01	6	3	
	II	General English	U23EL1GEN01	6	3	
	III	Core Course I: Financial accounting1		U23CC1CCT01	5	5
		Core Course II: Principles of Management		U23CC1CCT02	5	5
		Elective -I (Generic) : Programming in C and Lab / Python Programming and Lab		U23CC1ECT01/ U23CC1ECT02	4	3
		SEC I (NME I): Fundamentals of Marketing		U23CC1SET01	2	2
		Foundation Course: Computer Applications in Business		U23CC1FCT01	2	2
	Value Education			-	-	
Total				30	23	
II	I	Language – General Tamil/ Hindi/ French	U23TL2GEN02/ U23HN2HIN02/ U23FR2FRE02	6	3	
	II	General English	U23EL2GEN02	6	3	
	III	Core Course III: Financial Accounting II		U23CC2CCT03	5	5
		Core Course IV: Business Law		U23CC2CCT04	5	5
		Elective II (Generic): Office Automation and Lab/ Programming in C++ and Lab		U23CC2ECT03/ U23CC2ECT04	4	3
	IV	SEC II (NME II): Principles of Management		U23CC2SET02	2	2
		SEC III: Rural Development and student social responsibility		U23RE2SET03	2	2
		Massive Open Online Course (MOOC)		U23EX2ONC01	-	2 Extra Credits
Value Education			-	-		
Total				30	23 + 2	
III	I	Language – General Tamil/ Hindi/ French	U23TL3GEN03/ U23HN3HIN03/ U23FR3FRE03	6	3	
	II	General English	U23EL3GEN03	6	3	
	III	Core Course V: Corporate Accounting I		U23CC3CCT05	5	5
		Core Course VI: Business Mathematics and Statistics		U23CC3CCT06	5	5
		Elective III (Generic): Programming in JAVA and Lab/ Web Technology(PHP) and Lab		U23CC3ECT05/ U23CC3ECT06	4	3
	IV	SEC IV (Entrepreneurial Skill): Entrepreneurship Development		U23CC3SET04	1	1
		SEC V: Industrial Relations		U23CC3SET05	2	2
		EVS			1	-
Massive Open Online Course (MOOC)		U23EX3ONC02		2 Extra Credits		
Value Education			-	-		
Total				30	22+2	
	I	Language – General Tamil/ Hindi/ French	U23TL4GEN04/ U23HN4HIN04/ U23FR4FRE04	6	3	
	II	General English	U23EL4GEN04	6	3	
	III	Core Course VII : Corporate Accounting II	U23CC4CCT07	5	5	

IV		Core Course VIII: Company Law	U23CC4CCT08	5	5
		Elective IV (Generic): Relational Database Management System/ Introduction to Data Science	U23CC4ECT07/ U23CC4ECT08	3	3
	IV	SEC VI: Business Software Tally	U23CC4SET06	2	2
		SEC VII: Introduction to SPSS	U23CC4SET07	2	2
		EVS	U23ES4EVS01	1	2
	Total		30	25	
V	III	Core Course IX: Cost Accounting	U23CC5CCT09	5	4
		Core Course X: Banking Law and Practice	U23CC5CCT10	5	4
		Core Course XI: Income Tax Law and Practice I	U23CC5CCT11	5	4
		Core Course XII: Auditing and Corporate Governance	U23CC5CCT12	6	4
		Elective V: Financial Management / Indirect Taxation	U23CC5ECT09/ U23CC5ECT10	4	3
		Elective VI: Software Engineering+(UML Lab)/ Object oriented Analysis and Design+(UML Lab)	U23CC5ECT11/ U23CC5ECT12	4	3
		Value Education	U23VE5LVE01 U23VE5LVC01 U23VE5LVB01	1	1
		Summer Internship – 30 Hours (15 hrs. in the I year summer vacation and 15 hrs. in the II Year summer vacation)	U23EC5INT01	-	2
		Massive Open Online Course (MOOC)	U23EX5ONC03		2 Extra Credits
			Total		30
VI	III	Core Course XIII: Cost Accounting - II	U23CC6CCT13	6	4
		Core Course XIV: Income Tax Law and Practice II	U23CC6CCT14	6	4
		Core Course XV: (Project with Viva Voce)	U23CC6CCT15	5	4
		Elective VII: Entrepreneurial Development / Human Resource Management	U23CC6ECT13/ U23CC6ECT14	5	3
		Elective VIII: R Language/ Practical Tally	U23CC6ECP15/ U23CC6ECP16	5	3
	IV	SEC VIII: Professional Competency Skill Enhancement Course 1: Gender studies for competitive Examinations	U23CC6SET08	2	2
		Extension Activity	U23EA6SOC01	-	1
		Value Education	U23VE6LVE02 U23VE6LVC02 U23VE6LVB02	1	1
		RESCAPES	U23EX6RES01	-	4 Extra Credits
		Total		30	22+4
	Grand Total		180	140+10	

Course Title	MAJOR CORE 1 - FINANCIAL ACCOUNTING-I
Code	U23CC1CCT01
Course type	Theory
Semester	I
Hours/Week	6
Credits	4
Marks	100

CONSPECTUS

To enable the students to understand and apply the principles of double entry system of accounting in the preparation of final accounts of sole trader and rectification of errors and bank reconciliation statement and to provide basic knowledge of accounting for bills of exchange, accounts of royalty and fire insurance claims.

COURSE OBJECTIVES

1. To understand the basic accounting concepts and standards.
2. To know the basis for calculating business profits.
3. To familiarize with the accounting treatment of depreciation.
4. To learn the methods of calculating profit for single entry system.
5. To gain knowledge on the accounting treatment of royalty and insurance claims.

UNIT – I FUNDAMENTALS OF FINANCIAL ACCOUNTING 18 HRS

Financial Accounting - Meaning, Definition, Objectives, Basic Accounting Concepts and Conventions- Journal, Ledger Accounts– Subsidiary Books - Trial Balance – Classification of Errors - Rectification of Errors - Preparation of Suspense Account- Need and Preparation - Bank Reconciliation Statement.

Extra Reading/Keywords: *Double entry system, Rectification after preparation of final accounts.*

UNIT- II FINAL ACCOUNTS 18 HRS

Final Accounts of Sole Trading Concern- Capital and Revenue Expenditure and Receipts- Preparation of Trading, Profit and Loss Account and Balance Sheet with Adjustments.

Extra Reading/Keywords: *Branches of accounting, Deferred Revenue Expenditure*

UNIT III DEPRECIATION AND BILLS OF EXCHANGE 18 HRS

Depreciation - Meaning – Objectives – Accounting Treatment Depreciation -Types – Straight Line Method – Diminishing Balance method – Conversion method- Annuity Method – Depreciation Fund Method – Insurance Policy Method – Revaluation Method – Depletion Method – Sum of Digits Method – Machine Hour Rate Method.

Bills of Exchange – Definition – Specimens – Discounting of Bills – Endorsement of Bill – Collection – Noting – Renewal – Retirement of Bill under rebate – Insolvency of Acceptor – Accommodation.

Extra Reading/Keywords: *Sinking Fund Method, Accommodation bills.*

UNIT IV ACCOUNTING FROM INCOMPLETE RECORDS 18 HRS

Incomplete Records -Meaning and Features - Limitations - Difference between Incomplete Records and Double Entry System - Methods of Calculation of Profit - Statement of Affairs Method - Preparation of final statements by Conversion method- Average Due Date and

Account Current.

Extra Reading/Keywords: *Difference between statement of affairs and balance sheet.*

UNIT V: ROYALTY AND INSURANCE OF CLAIMS

18 HRS

Meaning – Minimum Rent -Short Working – Recoupment of Short Working –Lessor and Lessee-Sublease – Accounting Treatment. Insurance Claims – Calculation of Claim amount- Average clause (Loss of Stock only)

Extra Reading/Keywords: *Accounting entries for fire insurance claims*

Theory - 20% Problem: 80%

Note: Extra Reading/Keywords must be tested only through assignment and seminar.

TEXT BOOKS

1. Reddy T.S. & Murthy A. (2018). *Financial Accounting*. Chennai: Margham Publishers.
2. Jain S.P. & Narang K.L., (2016) *Principles of Accountancy*. New Delhi: Kalyani Publishers.

SUGGESTED READINGS

1. Shukla M.C. & Grewal T.S. (2017). *Advanced Accounts. Volume 1*, New Delhi: S .Chand.
2. Gupta R.L. & Radhaswamy M. (2018). *Advanced Financial Accounting*. Sultan Chand & Sons. New Delhi:
3. Charles T Horngren, Gary L Sundern, John A Elliott, Danna R Philbrick. (-2017). *Introduction to Financial Accounting*. New Delhi: Pearson.
4. Tulsian P.C. & Bharat Tulsian. (2016). *Financial Accounting*. New Delhi: S.Chand.

WEB REFERENCES

1. Fundamentals of Accounting. Student Portal. ICAI. https://www.icaai.org/post.html?post_id=17825
2. Principles and Practice of Accounting. <https://www.icaai.org/post/sm-foundation-p1-may2021onwards>.
3. IFRS. <https://www.ifrs.org>.

Note: Learners are advised to use latest edition of books

COURSE OUTCOMES

The learners

CO. No	Course Outcomes	Cognitive levels
CO1	Remember the basic concepts relating to financial accounting and various accounting records and final accounts of sole trading, rectification of errors and bank reconciliation statement.	K1
CO2	Discuss the accounting principles and the accounting procedure for transactions relating to bills, depreciation, royalty accounts, fire insurance claims and preparation of financial statements for incomplete records.	K2
CO3	Apply the accounting principles in presenting the accounting information and financial statements.	K3
CO4	Examine the accounting records and final accounts to verify the correctness of accounting entries and procedures.	K4

(K1=Remember, K2=Understand, K3=Apply, K4=Analyze)

PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO-1	H	M	H	H	L	L	H	H	H
CO-2	H	M	H	H	M	L	H	H	H
CO-3	H	M	H	H	M	L	H	H	H
CO-4	H	H	H	H	L	L	H	H	H

PSO – CO MAPPING

CO/PSO	PSO 1	PSO 2	PSO 3
CO-1	H	M	H
CO-2	H	M	H
CO-3	H	M	H
CO-4	H	M	H

Course Title	MAJOR CORE-2- PRINCIPLES OF MANAGEMENT
Code	U23CC1CCT02
Course type	Theory
Semester	I
Hours/Week	6
Credits	4
Marks	100

CONSPECTUS

The course aims to equip the learners with the basic knowledge of concepts, principles, tools and techniques of marketing and to provide knowledge about various developments in marketing.

COURSE OBJECTIVES

1. To understand the basic management concepts and functions
2. To know the various techniques of planning and decision making
3. To familiarize with the concepts of organisation structure
4. To gain knowledge about the various components of staffing
5. To enable the students in understanding the control techniques of management

UNIT I: INTRODUCTION TO MANAGEMENT

18 HRS

Meaning- Definitions – Nature and Scope - Levels of Management – Importance - Management Vs. Administration - Management: Science or Art - Evolution of Management Thoughts - F. W. Taylor, Henry Fayol, Peter F. Drucker, Elton Mayo - Functions of Management - Trends and Challenges of Management. Managers – Qualification – Duties & Responsibilities.

Extra Reading / Keywords: *Scientific management, POSDCORB*

UNIT II: PLANNING

18 HRS

Planning – Meaning – Definitions – Nature – Scope and Functions – Importance and Elements of Planning - Planning Types – Planning Process - Tools and Techniques of Planning – Management by Objective (MBO) - Decision Making: Meaning – Characteristics – Types - Steps in Decision Making – Forecasting.

Extra Reading / Keywords: *Management by Wandering Around (MBWA)*

UNIT III: ORGANIZING

18 HRS

Meaning - Definitions - Nature and Scope – Characteristics – Importance - Types - Formal and Informal Organization – Organization Chart - Organization Structure: Meaning and Types

- Departmentalization– Authority and Responsibility – Centralization and Decentralization
- Span of Management.

Extra Reading / Keywords: *Span of Attention*

UNIT IV: STAFFING

18 HRS

Introduction - Concept of Staffing- Staffing Process – Recruitment – Sources of Recruitment – Modern Recruitment Methods - Selection Procedure – Test- Interview– Training: Need - Types– Promotion –Management Games - Performance Appraisal - Meaning and Methods – 360 Performance Appraisal – Work From Home - Managing Work From Home [WFH].

Extra Reading / Keywords: *Manpower planning, Determination of remuneration*

UNIT V: DIRECTING, CO-ORDINATION AND CONTROL

18 HRS

Motivation –Meaning - Theories – Communication – Types - Barriers to Communications – Measures to Overcome the Barriers - Leadership – Nature - Types and Theories of Leadership – Styles of Leadership - Qualities of a Good Leader – Successful Women Leaders. Supervision - Co-ordination – Meaning - Techniques of Co-ordination - Control - Characteristics - Importance – Stages in the Control Process - Requisites of Effective Control and Controlling Techniques – Management by Exception [MBE].

Extra Reading / Keywords: *Performance Indicator, Social Cognitive Theory*

Note: Texts given in the Extra Reading /Keywords must be tested only through assignment and seminar.

TEXT BOOK

1. Prasad L.M., (2021) *Principles of Management*, Sultan Chand and Sons, New Delhi.

SUGGESTED READINGS

1. Dinkar Pagare, (2018) *Business Management*, Sultan Chand and Sons, New Delhi.
2. Peter F. Drucker (2020). *Management Challenges for the 21st Century*: HarperCollin Publishers Inc., New York, 10022.
3. Prakash Chandra Tripathi, (2017) *Principles of Management*, Tata McGraw Hill Publishing Company, New Delhi.
4. Harold Koontz, Heinz Weihrich, and Mark V. Cannice (2020), *Essentials of Management – Innovation and Leadership Perspective*, Tata McGraw Hill Education, New Delhi.
5. Paul Hoang, (2022), *Business Management*, IBID Press, Australia.
6. Mishra. N., and Gupta .O.P., (2022) *Business Management*, SBPD Publishing House, New Delhi.

WEB REFERENCES

1. <https://www.shiksha.com>
2. <https://www.lpude.in/academics/online-study-material-for-management.php>
3. https://oms.bdu.ac.in/ec/admin/contents/86_16CCCCA3_2020052911264994.pdf

Note: Learners are advised to use latest edition of books.

COURSE OUTCOMES

CO No.	Course Outcomes	Cognitive Level
CO-1	Summarise the various functions of management and contributions by Taylor and Henry Fayol.	K1
CO-2	Construct and develop appropriate planning strategy to accomplish the given task.	K2
CO-3	Compare and contrast the various types of organisation structures.	K3
CO-4	Analyse the need for good communication and motivation and evaluate the various leadership styles.	K4

(K1- Remember; K2- Understand; K3 – Apply; K4 – Analyse)

PO – CO MAPPING

CO/PO	PO1	PO 2	PO3	PO4	PO 5	PO 6	PO7	PO 8	PO9
CO 1	M	H	H	M	H	M	H	M	H
CO 2	H	H	M	M	H	M	H	H	H
CO 3	H	M	H	M	M	M	H	H	H
CO 4	H	H	H	M	H	M	H	M	H

PSO – CO MAPPING

CO/PSO	PSO 1	PSO 2	PSO 3
CO 1	H	H	M
CO 2	H	H	H
CO 3	H	M	H
CO 4	H	H	H

Course Title	MAJOR ELECTIVE - I: PROGRAMMING IN C AND LAB
Code	U23CC1ECT01
Course type	Theory
Semester	I
Hours/Week	4
Credits	3
Marks	100

CONSPECTUS

To enable the students to learn the syntax, concepts of C language and to write the solution for problems.

COURSEOBJECTIVES

1. Describe the core syntax and semantics of C programming language.
2. Discover the need for working with the strings and functions.
3. Illustrate the process of structuring the data using matrix, struct.
4. Demonstrate the use of IDE and C Compiler.
5. Develop programs using C Programming Language.

UNIT I

12 HRS

Introduction to C Language:C Language Introduction-Features of C Language-Benefits of C over other languages-Compilation of C Program-First Program in CPre-processor in CPre-processor directives

Extra Reading/Keywords: *Develop Algorithms for real time applications.*

UNIT II

12 HRS

Variables, Data Types & Operators:Variables and Keywords in C-Scope rules in C-Data Types in C-Operators & Its Types-Typecasting in C

Extra Reading/Keywords: *Basic I/O and Control operations*

UNIT III

12 HRS

Control Flow Statements:Decision Making Statements-Switch Statement in C-C Loops & Control Structure Practice problems-Continue Statement , Break StatementArray & String Handling in C:Arrays in C-Strings in C

Extra Reading/Keywords: *Develop programs using decision making and branching statement*

UNIT IV

12 HRS

Multidimensional Arrays in C-String functions in C- Practice problems Functions in C: Function Prototype-Parameter Passing Techniques in C-Storage Classes in C-Recursion Concept- Functions in C Practice problems

Extra Reading/Keywords: *Create Programs using functions.*

UNIT V

12 HRS

Pointers, Structures, and Unions:Pointers in C-Structures- Union - Enumeration (or enum) in C- Pointer vs Array in C – C application programs (Sorting, Matrix manipulations, student's mark list preparation)

Extra Reading/Keywords: *File Concepts*

Note: Texts given in the Extra Reading/Keywords must be tested only through assignment and seminar.

TEXTBOOK

E. Balaguruswamy, "Programming in ANSI C", 8th Edition, 2019, McGraw Hill Education, ISBN:978-93-5316-513-0.

SUGGESTED READINGS

1. Yashavant P. Kanetkar, "Let Us C", 16th Edition, 2019, BPB Publications, ISBN: 978- 93-8728-449-4.
2. Jacqueline A Jones and Keith Harrow, "Problem Solving with C", Pearson Education. ISBN: 978-93-325-3800-9.
3. Dr. GuruprasadNagraj, "C Programming for Problem Solving", Himalaya Publishing House. ISBN-978-93-5299-361-1.
4. Kernighan B.W and Dennis M. Ritchie, "The C Programming Language", 2nd Edition, 2015, Pearson Education India, ISBN: 978-93-3254-944-9.
5. PradipDey, ManasGhosh, "Programming in C", 2nd Edition, 2018, Oxford University

WEBREFERENCES

1. <http://elearning.vtu.ac.in/econtent/courses/video/BS/14CPL16.html>
2. <https://nptel.ac.in/courses/106/105/106105171/>

Note: Learners are advised to use latest edition of books.

COURSE OUTCOMES

CONo.	Course Outcomes	Cognitive Level
CO-1	Apply the concept of Control Structures to solve any given problem.	K1
CO-2	Apply the concept of single and multi-dimensional arrays to solve problems related to searching, sorting and matrix operations.	K2
CO-3	Apply the concept of Strings for writing programs related to character array.	K3
CO-4	Write programs using concept of user defined and recursive functions.	K4

(K1- Remember; K2- Understand; K3 Apply; K4 –Analyse)

PO-COMAPPING

CO/PO	PO1	PO 2	PO3	PO4	PO 5	PO 6	PO7	PO 8	PO9
CO1	M	H	H	M	H	M	H	M	H
CO2	H	H	M	M	H	M	H	H	H
CO3	H	M	H	M	M	M	H	H	H
CO4	H	H	H	M	H	M	H	M	H

PSO – COMAPPING

CO/PSO	PSO 1	PSO 2	PSO 3
CO1	H	H	M
CO2	H	H	H
CO3	H	M	H
CO4	H	H	H

List of Programs

1. Write a C program to find roots of a Quadratic equation.
2. Write a C program to find the total no. of digits and the sum of individual digits of a positive integer.
3. Write a C program to generate the Fibonacci sequence of first N numbers.
4. Write a C program to sum the series $S=1 - x + (x^2/2!) - (x^3/3!) + \dots + (x^n/n!)$
5. Write a C program to arrange the elements of an integer array using Bubble Sort algorithm.
6. Write a C program to input two matrices and perform matrix multiplication on them
7. Write a C program to check whether the given string is palindrome or not without using Library functions.
8. Write a C program to count the number of lines, words and characters in a given text.
9. Write a C program to generate Prime numbers in a given range using user defined function.
10. Write a C program to find factorial of a given number using recursive function.
11. Write a C program to maintain a record of n student details using an array of structures with four fields - Roll number, Name, Marks and Grade. Calculate the Grade according to the following conditions.

Marks Grade

≥ 80 A

≥ 60 B

≥ 50 C

≥ 40 D

< 40 E

Print the details of the student, given the student Roll number as input.

Course Title	MAJOR ELECTIVE - I: PYTHON PROGRAMMING AND LAB
Code	U23CC1ECT02
Course type	Theory
Semester	I
Hours/Week	4
Credits	3
Marks	100

CONSPECTUS

To provide comprehend basic Python programming concepts and develop programming solutions for the problems.

COURSEOBJECTIVES

1. Describe the core syntax and semantics of Python programming language
2. Discover the need for working with the strings and functions.
3. Illustrate the process of structuring the data using lists, dictionaries, tuples and sets.
4. Understand the usage of packages and Dictionaries
5. Represent compound data using Python lists, tuples, dictionaries etc.

UNIT I

12HRS

Introduction: Computer algorithms-Computer Hardware-Computer Software-Python programming language - Literals - Variables and Identifiers - Operators - Expressions and Data types, Input / output

Extra Reading/Keywords: *Python Arrays*

UNITII

12HRS

Control Structures: Boolean Expressions - Selection Control - If Statement- Indentation in Python- Multi-Way Selection -- Iterative Control- While Statement- Infinite loops- Definite vs. Indefinite Loops- Boolean Flag. String, List and Dictionary, Manipulations Building blocks of python programs,Understanding and using ranges.

Extra Reading/Keywords: Assert Statement and Command Line Arguments

UNITIII 12HRS

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

Extra Reading/Keywords: *Python Packages*

UNITIV

12HRS

Objects and their use: Software Objects - Turtle Graphics – Turtle attributes-Modular Design: Modules - Top-Down Design - Python Modules

Extra Reading/Keywords: *Standard library modules*

UNIT

12 HRS

Dictionaries and Sets: Dictionary type in Python - Set Data type. Text Files: Opening, reading and writing text files – Exception Handling

Extra Reading/Keywords: *Handling Multiple Exceptions*

Note: Texts given in the Extra Reading/Keywords must be tested only through assignment and seminar.

TEXT BOOK

Charles Dierbach, “Introduction to Computer Science using Python - A computational Problem-solving Focus”, Wiley India Edition, 2015.

SUGGESTED READINGS

1. Timothy A. Budd, “Exploring Python”, Tata MCGraw Hill Education Private Limited 2011, 1st Edition.
2. John Zelle, “Python Programming: An Introduction to Computer Science”, Second edition, Course Technology Cengage Learning Publications, 2013, ISBN 978- 1590282410
3. Michel Dawson, “Python Programming for Absolute Beginners” , Third Edition, Course Technology Cengage Learning Publications, 2013, ISBN 978-1435455009

WEBREFERENCES

https://onlinecourses.swayam2.ac.in/cec22_cs20/preview

Note: Learners are advised to use latest edition of books.

COURSE OUTCOMES

CO No.	Course Outcomes	Cognitive Level
CO-1	Develop and execute simple Python programs	K1
CO-2	Write simple Python programs using conditionals and looping for solving problems	K2
CO-3	Decompose a Python program into functions	K3
CO-4	Represent compound data using Python lists, tuples, dictionaries etc.	K4

(K1- Remember; K2- Understand; K3 Apply; K4 –Analyse)

PO –COMAPPING

CO/PO	PO1	PO 2	PO3	PO4	PO 5	PO 6	PO7	PO 8	PO9
CO1	M	H	H	M	H	M	H	M	H
CO2	H	H	M	M	H	M	H	H	H
CO3	H	M	H	M	M	M	H	H	H
CO4	H	H	H	M	H	M	H	M	H

PSO – CO MAPPING

CO/PSO	PSO 1	PSO 2	PSO 3
CO1	H	H	M
CO2	H	H	H
CO3	H	M	H
CO4	H	H	H

List of Programs

1. Program to convert the given temperature from Fahrenheit to Celsius and vice versa depending upon user's choice.
2. Write a Python program to construct the following pattern, using a nested loop

```
*
**
***
****
*****
****
***
**
*
```

3. 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

4. Program, to find the area of rectangle, square, circle and triangle by accepting suitable input parameters from user.
5. Write a Python script that prints prime numbers less than 20.
6. Program to find factorial of the given number using recursive function.
7. Write a Python program to count the number of even and odd numbers from array of N numbers.
8. Write a Python class to reverse a string word by word.
9. Read a file content and copy only the contents at odd lines into a new file.
10. Create a Turtle graphics window with specific size.

Course Title	SEC 1: NON MAJOR ELECTIVE 1- FUNDAMENTALS OF MARKETING
Code	U23CC1SET01
Course type	Theory
Semester	I
Hours/Week	2
Credits	2
Marks	100

CONSPECTUS

The course aims to equip the learners with the basic knowledge of concepts, principles, tools, and techniques of marketing and to provide knowledge about various developments in marketing.

COURSE OBJECTIVES

1. To remember the marketing concepts and recent trends, bases of segmentation and positioning strategies.
2. To understand the product life cycle, new product development, product policy and market segmentation.
3. To outline the pricing policies and compare the various promotional forms.
4. To analyze the distribution channels and examine the factors controlling its selection.
5. To apply digital skills in marketing through website designing.

UNIT –I INTRODUCTION

6 HRS

Marketing: Meaning, Importance and Functions of Marketing - Marketing Mix
Recent trends in Marketing –Market segmentation: Bases

Extra Reading / Keywords: *Unique selling point, Value proposition*

UNIT –II PRODUCT

6 HRS

Concept, Product classifications, attributes – Branding, Packaging and labeling
New product development – Product life cycle.

Extra Reading / Keywords: *Innovation in products development, Co-branding*

UNIT – III PRICING AND PROMOTION

6 HRS

Pricing-Pricing objectives - Factors influencing pricing.

Promotion - Promotion Mix: Advertising, Sales Promotion, Personal selling and Public relations.

Extra Reading / Keywords: *Pricing of consumer goods. Promotional activities of products in the market.*

UNIT – IV CHANNELS OF DISTRIBUTION

6 HRS

Channels of Distribution - Channel Functions - Factors influencing Channel Decisions
Middlemen - Wholesalers – Retailers.

Extra Reading / Keywords: *Logistics and Supply chain management*

UNIT – V DIGITAL MARKETING

6 HRS

Introduction to online digital marketing- meaning- features- importance

Traditional Vs Digital Marketing Types of Digital Marketing

Extra Reading / Keywords: *On line business applications*

Note: Texts given in the Extra Reading /Keywords must be tested only through Assignment and Seminars.

TEXT BOOKS

1. Rajan Nair, (2018) *Marketing*, New Delhi: Sultan Chand and Sons.
2. Pillai & Bhagavathi (2018) *Marketing Management*, New Delhi: Sultan Chand and Sons.

SUGGESTED READINGS

1. Philip Kotler, (2016) *Marketing: An Introduction*, New York: Prentice Hall, Englewood Cliffs.
2. Kotler Philip & Armstrong Gary, (2017) *Principles of Marketing*, New Delhi: Prentice- Hall of India.
3. Ryan, D. (2020). *Understanding Digital Marketing: Marketing Strategies for Engaging the Digital Generation*, Kogan Page Limited.
4. Pulizzi, J. (2013) *Epic Content Marketing*, McGraw Hill Education.

WEB REFERENCES

1. <https://studentzone-ngasce.nmims.edu> > content >
2. <https://www.studocu.com/>
3. <https://cdn2.hubspot.net/>

Note: Learners are advised to use latest edition of books.

COURSE OUTCOMES

The learners

CO No.	Course Outcomes	Cognitive Level (K1-K4)
CO-1	Recall the marketing concepts and philosophies with the environmental conditions affecting marketing decisions of a firm;	K1
CO-2	Relate the product line and mix decisions with the process of new product development.	K2
CO-3	Develop an understanding on the process of value creation through marketing decisions involving product pricing and promotion mix	K3
CO-4	Examine the various channels of distribution to identify efficient logistics practices; and the fundamentals in digital marketing	K4

(K1=Remember, K2=Understand, K3=Apply, K4=Analyze)

PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO 1	H	H		H	M	M	H	M	H
CO 2		H	M	H	H			H	H
CO 3	M	M	H		M	M		H	H
CO 4	H	H	H	M	H	M		M	H

PSO – CO MAPPING

CO/PSO	PSO 1	PSO 2	PSO 3
CO 1	H		M
CO 2	H	H	H
CO 3	H	M	
CO 4	H	H	H

Course Title	FOUNDATION COURSE COMPUTER APPLICATIONS IN BUSINESS
Code	U23CC1FCT01
Course Type	Theory
Semester	II
Hours/Week	2
Credits	2
Marks	100

CONSPECTUS

To make the students familiar with fundamentals of computer and to equip the students with practical skills to use computers.

COURSE OBJECTIVES

1. To understand the components, importance and roles of computer in business fields
2. To understand the working of MS-WORD and apply it in creating and editing documents
3. To explain the features of Excel environment and create worksheets
4. To develop power point presentation with multimedia effects
5. To develop the skill of students in making posters for advertisements

UNIT I - INTRODUCTION TO COMPUTER

6 HRS

Evolution of Computers - Generations, Types of computers, Computer system characteristics

Basic components of a Digital Computer - Control unit, ALU, Input/ Output functions and memory, Memory addressing capability of a CPU.

Extra Reading/ Keywords: *Generations of computer*

UNIT II - DRAFTING A BUSINESS LETTER USING MS –WORD

6 HRS

Basics - Working with Word documents – Working with Text –Drafting a business letter - Using Spelling and Grammar Dialog Box - Using Auto Correct- Using Synonyms and Thesaurus. Adding Graphics and Drawing Objects – Mail Merge in business.

Extra Reading/ Keywords: *Exporting word document*

UNIT III - MS-EXCEL IN BUSINESS

6 HRS

Spread Sheet Using Microsoft Excel 2007: Excel Environment –Entering Data – Navigating Through Cells – Naming And Renaming Cells – Editing A Worksheet – Cut-Copy, Paste Functions - Functions and Formulas - Using Auto Sum - Creating and Inserting a Chart and Transporting to Word and PowerPoint Documents- using statistical formula for financial transactions.

Extra Reading/ Keywords: *Import Excel to analysis tools*

UNIT IV - DRAFTING BUSINESS PRESENTATION

6 HRS

PowerPoint Environment – Creating a Business presentation using Design Templates - Working with Different Views- Working with Slides – Working with Text – Formatting the Text - Graphics and Adding Multimedia Animation - Inserting Pictures and Tables from Other Office Products – Running Slides.

Extra Reading/ Keywords: *Presentation with Hyperlink and Animation.*

UNIT V - CREATING ADVERTISEMENT

6 HRS

Basic of content writing – advertising appeals - working with Canva – adding texts and images – adding Multimedia Animation- audio and video in digital posters – creating an invitation, advertisement posters and pamphlets.

Extra Reading/ Keywords: *Creating posters in postermywall*

Note: Texts given in the Extra Reading /Key words must be tested only through Assignment and Seminars.

TEXT BOOKS

1. R. Parameswaran, “Computer Applications in Business”, S.Chand & Company Ltd. New Delhi.

SUGGESTED READINGS

1. V. Rajaraman, “Introduction to Information Technology”, PHI Learning Pvt Ltd, New Delhi.
2. Leon, “Introduction to Computers”, Vikas Publishing House Pvt Ltd.
3. Srinivasavallaban SV, “Computer In Business”, Sultan Chand and Sons, New Delhi..

WEB REFERENCES

1. https://www.tutorialspoint.com/computer_concepts
2. <https://connect.comptia.org/blog/emerging-trends-in-information-technology>
3. https://www.tutorialspoint.com/word/excel/powerpoint/ms_access

Note: Learners are advised to use latest edition of books.

COURSE OUTCOMES (CO)

CO No.	Course Outcomes	Cognitive Level
CO-1	Remember the fundamentals of computers, Operating Systems, MS-Office and its applications in business	K1
CO-2	Understands the components, the terminologies of Operating System and working of Microsoft Office applications	K2
CO-3	Apply MS- Office tools to organize, manage and present information, data and figures.	K3
CO-4	Analyze the needs and construct solutions to solve the real world problems by using Word, to create and share documents; Excel, to analyze and visualize data; PowerPoint, to create, collaborate, and effectively present ideas	K4

(K1- Remember, K2 - Understand, K3 - Apply, K4 - Analyse)

PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO 1	M	M	M	H	H	H	M	M	M
CO 2	M	M	M	H	H	H	M	M	M
CO 3	H	H	H	H	H	H	M	H	H
CO 4	H	H	H	H	H	H	M	M	M

PSO - CO MAPPING

CO/PSO	PSO 1	PSO 2	PSO 3
CO 1	M	M	M
CO 2	M	M	M
CO 3	H	H	M
CO 4	H	H	M

Course Title	CORE COURSE 3: FINANCIAL ACCOUNTING – II
Code	U23CC2CCT03
Course Type	Theory
Semester	II
Hours/Week	5
Credits	5
Marks	100

CONSPECTUS

To provide basic knowledge of procedure for depreciation accounting, branch and hirepurchase system of accounting and to develop skills in the preparation of partnership accounts.

COURSE OBJECTIVES

1. To prepare different kinds of accounts such as hire purchase and Installment System.
2. To understand the allocation of expenses under departmental account.
3. To gain an understanding about partnership accounts relating to Admission and retirement
4. To provide knowledge to the learners regarding Partnership Accounts relating to dissolution of firm
5. To know the requirements of international accounting standards.

UNIT I - HIRE PURCHASE AND INSTALMENT SYSTEM

15 HRS

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

Extra Reading / Keywords: *Installment purchase system, Hire purchase trading account*

UNIT II - BRANCH AND DEPARTMENTAL ACCOUNTS

15 HRS

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

Extra Reading / Keywords: *Whole sale branch system, Independent branches, Foreign branches.*

UNIT III - PARTNERSHIP ACCOUNTS – I

15 HRS

Partnership Accounts: –Admission of a Partner – Treatment of Goodwill - Calculation of Hidden Goodwill –Retirement of a Partner – Death of a Partner.

Extra Reading / Keywords: *Admission, Retirement of two or more Partners*

UNIT IV – PARTNERSHIP ACCOUNTS – II

15 HRS

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

Extra Reading / Keywords: *Dissolution procedures*

UNIT V ACCOUNTING STANDARDS FOR FINANCIAL REPORTING (THEORY ONLY)

15 HRS

Objectives and Uses of Financial Statements for Users-Role of Accounting Standards – Development of Accounting Standards in India. Role of IFRS- IFRS Adoption vs Convergence Implementation Plan in India- Ind AS- An Introduction -Difference between Ind AS and IFRS.

Extra Reading / Keywords: CAS

Theory - 20% Problems- 80%

Note: Texts given in the Extra Reading /Key words must be tested only through Assignment and Seminars.

TEXT BOOKS

1. Reddy T.S. and Murthy A. (2023). *Financial Accounting*. Chennai: Margham Publishers.

SUGGESTED READINGS

1. Shukla M.C. and Grewal T.S. (2017), *Advanced Accounts. Volume 1*, New Delhi: S .Chand.
2. Jain S.P. and Narang K.L., (2016), *Principles of Accountancy*. New Delhi: KalyaniPublishers.
3. Gupta R.L. and Radhaswamy M. (2018), *Advanced Financial Accounting*. New Delhi:Sultan Chand and Sons.
4. Charles T Horngren, Gary L Sundern, John A Elliott, Danna R Philbrick. (2017),
5. *Introduction to Financial Accounting*. New Delhi: Pearson.
6. Tulsian P.C. & Bharat Tulsian. (2016), *Financial Accounting*. New Delhi: S.Chand.

WEB REFERENCES

1. Fundamentals of Accounting. Student Portal. ICAI.https://www.icaai.org/post.html?post_id=17825
2. Principles and Practice of Accounting. <https://www.icaai.org/post/sm-foundation-p1-may2021onwards>.
3. IFRS. <https://www.ifrs.org>.

Note: Learners are advised to use latest edition of books.

COURSE OUTCOMES (CO)

CO No.	Course Outcomes	Cognitive Level
CO-1	Recall the terms and concepts of depreciation and insurance claims and branch, hire purchase and partnership accounts.	K1
CO-2	Understand the accounting procedure for depreciation, insurance claim, branch, hire purchase and partnership accounts.	K2
CO-3	Apply the acquired knowledge in the preparation of accounts relating to branch, hire purchase and partnership accounts.	K3
CO-4	Examine the different procedures relating to preparation of financial accounts of branch, hire purchase and partnership accounts.	K4

(K1- Remember, K2 - Understand, K3 - Apply, K4 - Analyse)

PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO 1	H	M	M	H	M	L	H	H	L
CO 2	H	M	M	H	M	L	M	H	M
CO 3	H	M	H	H	M	M	H	H	M
CO 4	H	M	H	H	M	M	M	H	M

PSO - CO MAPPING

CO/PSO	PSO 1	PSO 2	PSO 3
CO 1	H	H	H
CO 2	H	H	M
CO 3	H	H	H
CO 4	H	M	M

Course Title	CORE COURSE 4: BUSINESS LAW
Code	U23CC2CCT04
Course Type	Theory
Semester	II
Hours/Week	5
Credits	5
Marks	100

CONSPECTUS

The course provides an understanding of the fundamental concepts and the necessary analytical skills to solve issues arising in real life situations relating to the Indian Contract Act, Sale of Goods Act and The Limited Liability Partnership Act.

COURSE OBJECTIVES

1. To know the nature and objectives of Mercantile law and the essentials of valid contract
2. To gain knowledge on performance contracts
3. To be acquainted with the rules of Indemnity and Guarantee
4. To make aware of the essentials of Bailment and pledge
5. To understand the provisions relating to sale of goods

UNIT I - ELEMENTS OF CONTRACT

15 HRS

Indian Contract Act 1872: Definition of Contract, Essentials of Valid Contract, Classification of Contract, Offer and Acceptance.- Consideration – Capacity to Contract - Free Consent - Legality of Object – Contingent Contracts – Void Contract

Extra Reading /Keywords: *Aleatory contract*

UNIT II - PERFORMANCE OF CONTRACT

15 HRS

Meaning of Performance, Offer to Perform, Devolution of Joint liabilities & Rights, Time and Place of Performance, Reciprocal Promises, Assignment of Contracts - Remedies for Breach of contract - Termination and Discharge of Contract - Quasi Contract.

Extra Reading /Keywords: *Case studies relating to agreements opposed to public policy.*

UNIT III - CONTRACT OF INDEMNITY AND GUARANTEE

15 HRS

Contract of Indemnity and Contract of Guarantee - Extent of Surety's Liability, Kinds of Guarantee, Rights of Surety, Discharge of Surety

Extra Reading /Keywords: *Essentials of Guarantee*

UNIT IV – BAILMENT AND PLEDGE

15 HRS

Bailment and Pledge – Bailment – Concept – Essentials - Classification of Bailments, Duties and Rights of Bailor and Bailee – Law of Pledge – Meaning – Essentials of Valid Pledge, Pledge and Lien, Rights of Pawner and Pawnee.

Extra Reading /Keywords: *Validity of lien*

UNIT V - SALE OF GOODS ACT, 1930

15 HRS

Definition of Contract of Sale – Formation - Essentials of Contract of Sale - Conditions and Warranties - Transfer of Property – Contracts involving Sea Routes - Sale by Non-owners - Rights and duties of buyer - Rights of an Unpaid Seller

Extra Reading /Keywords: *Auction sale.*

Note: Texts given in the Extra Reading /Key words must be tested only through Assignment and Seminars.

TEXT BOOKS

1. Kapoor N.D. (2021), Business Law, Sultan Chand and Sons, New Delhi.

SUGGESTED READINGS

1. Kuchhal M.C., Vivek Kuchhal. (2018), Mercantile Law, New Delhi: Vikas Publishing House.
2. Gulshan S.S., Kapoor G. K. (2018), Business Law Including Company Law, New Delhi: New Age International Publishers
3. T.R.Desai (2016), Law relating to Tenders and Government contracts, New Delhi, Universal Law Publishing Company.
4. Sushma Arora, (2022), *Business Law*, Taxmann Publisher
5. Balachandran .V and Thothadri .S, (2021), *Business Law*, Vijay Nicole Imprints Pvt.Ltd., Chennai
6. Kuchhal M.C and Vivek Kuchhal, (2022), *Business Law*, S.Chand and Co. Ltd., Noida
7. Tejpal Sheth, (2017), *Business Law*, Pearson Education, Chennai.

WEB REFERENCES

1. <https://legislative.gov.in>
2. www.mca.gov.in
3. <https://rti.gov.in>
4. <https://icmai.in>
5. <https://www.icai.org>
6. https://onlinecourses.swayam2.ac.in/cec21_mg02/preview

Note: Learners are advised to use latest edition of books.

COURSE OUTCOMES (CO)

CO No.	Course Outcomes	Cognitive Level
CO-1	Recall the basic definitions in Indian Contract Act, Sale of Goods Act, LLP Act and RTI Act.	K1
CO-2	Explain the provisions relating to essentials of a valid contract, sale of goods, RTI and LLP.	K2
CO-3	Apply the provisions relating to business law to solve problems in real life situations.	K3
CO-4	Examine the issues relating to contracts and right to information.	K4

(K1 - Remember, K2 - Understand, K3 - Apply, K4 - Analyse)

PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO 1	H	L	M	L	M	L	H	M	H
CO 2	H	L	M	M	M	M	H	M	H
CO 3	H	L	M	H	M	H	H	H	H
CO 4	H	L	M	H	M	H	H	H	H

PSO - CO MAPPING

CO/PSO	PSO 1	PSO 2	PSO 3
CO 1	H	L	M
CO 2	H	L	M
CO 3	H	M	M
CO 4	H	M	M

Course Title	ELECTIVE COURSE II: OFFICE AUTOMATION AND LAB
Code	U23CC2ECT03
Course Type	Theory
Semester	II
Hours/Week	4
Credits	3
Marks	100

CONSPECTUS

This course provides the fundamental knowledge of MS Word, MS Excel and Power point.

COURSE OBJECTIVES

- 1.The major objective in introducing the Computer Skills course is to impart training for students in Microsoft Office which has different components like MS Word, MS Excel and Power point.
- 2.The course is highly practice oriented rather than regular class room teaching
- 3.To acquire knowledge on editor, spread sheet and presentation software

UNIT I

12 HRS

Introductory concepts: Hardware and Software, Memory unit CPU-Input Devices: Key board, Mouse and Scanner. Output devices: Monitor, Printer. Introduction to Operating systems
Introduction to Programming Languages.

Extra Reading/Keywords: *Writer, Reader*

UNIT II

12 HRS

Word Processing: File menu operations. Editing text – tools, formatting, bullets and numbering
Spell Checker - Document formatting – Paragraph alignment indentation, headers and footers,
printing – Preview, options, merge.

Extra Reading/Keywords: editors, paraphrase.

UNIT III

12 HRS

Spreadsheets: Excel – opening, entering text and data, formatting, navigating;
Formulas – entering, handling and copying

Extra Reading/Keywords: aggregation, filters

UNIT IV

12 HRS

Charts – creating, formatting and printing analysis tables, Preparation of financial statements-
Introduction to data analytics

Extra Reading/Keywords: Graphical tools, Visualization tools

UNIT V

12 HRS

Power point: Introduction to Power point – Features - Understanding slide typecasting & viewing slides –
creating slide show - Applying special object – including objects & pictures – Animation effects, audio
inclusion, timers.

Extra Reading/Keywords: Video effect, Themes.

Note: Texts given in the Extra Reading /Key words must be tested only through Assignment and Seminars.

TEXT BOOKS

1. Peter Norton, “Introduction to Computers” –Tata McGraw-Hill..

SUGGESTED READINGS

1. Jennifer Ackerman Kettel, Guy Hat-Davis, Curt Simmons, “Microsoft 2003”, Tata McGraw- Hill.

WEB REFERENCES

1. Web content from NDL / SWAYAM or open source web resources

Note: Learners are advised to use latest edition of books.

COURSE OUTCOMES (CO)

CO No.	Course Outcomes	Cognitive Level
CO-1	Understand the basics of computer systems and its components.	K1
CO-2	Understand and apply the basic concepts of a word processing package.	K2
CO-3	Understand and apply the basic concepts of electronic spreadsheet software.	K3
CO-4	Understand and apply the basic concepts of database management system.	K4

(K1- Remember, K2 - Understand, K3 - Apply, K4 – Analyse, K5 - Evaluate)

PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO 1	M	M	H	M	M	M	M	H	M
CO 2	M	M	L	M	H	M	M	H	H
CO 3	H	M	H	M	H	L	H	L	H
CO 4	H	H	M	M	M	M	H	H	H

PSO - CO MAPPING

CO/PSO	PSO 1	PSO 2	PSO 3
CO 1	H	M	H
CO 2	M	H	M
CO 3	M	M	H
CO 4	H	M	H

Course Title	PROGRAMMING IN C++ AND LAB
Code	U23CC2ECT04
Course Type	Theory
Semester	II
Hours/Week	4
Credits	3
Marks	100

CONSPECTUS

To understand the basic concepts of C++ programming and apply the concepts to solve problems of different domains.

COURSE OBJECTIVES

1. To describe the procedural and object oriented paradigm with concepts of streams, classes, functions, data and objects.
2. To understand dynamic memory management techniques using pointers, constructors, destructors, etc.
3. To describe the concept of function overloading, operator overloading, virtual functions and polymorphism.
4. To classify inheritance with the understanding of early and late binding, usage of exception handling, generic programming.
5. To demonstrate the use of various OOPs concepts with the help of programs.

UNIT I:

12 Hrs

Principles of Object-Oriented Programming: Basic Concepts of Object Oriented Programming – Benefits of OOP – Object-Oriented Languages - Applications of OOP.

Beginning with C++: A simple C++ Program - More C++ statements - Structure of C++ Program Tokens, Expressions and Control Structures - Reference Variables – Scope Resolution Operator – Member Dereferencing Operators – Memory Management Operators – Type Cast Operator. **Functions in C++:** Function Prototyping – Call by Reference – Return by reference - Inline functions – Function Overloading.

Extra Reading /Key words: Data Conversion.

UNIT II:

12 Hrs

Classes and Objects: Introduction – Specifying a Class – Defining Member Functions – Making an outside Function Inline – Nesting Of Member Functions – Private Member Functions – Array within a Class – Memory Allocation for Objects – Static Data Members – Static Member Functions – Arrays Of Objects – Objects as Function Arguments – Friendly Functions. **Constructors and Destructors:** Introduction – Constructors – Parameterized Constructors – Multiple Constructors in a class – Constructors with Default Arguments – Dynamic Initialization of Objects – Destructors.

Extra Reading /Key words: Additional Programs using Arrays and Strings in C++.

UNIT III:

12 Hrs

Operator Overloading and Type Conversions: Introduction – Defining Operator Overloading – Overloading Binary Operators – Rules for Overloading Operators.

Inheritance - Extending Classes: Introduction – Defining Derived Classes – Single Inheritance – Multilevel Inheritance – Multiple Inheritance – Hierarchical Inheritance – Hybrid Inheritance – virtual base classes.

Extra Reading /Key words: Member classes, Nesting of classes

UNIT IV:

12 Hrs

Pointers, Virtual Functions and Polymorphism: Introduction – Pointers – Pointers to Objects – this Pointer – Pointers to Derived Classes – Virtual Functions.

Templates: Introduction – Class Templates – Class Templates with Multiple Parameters - Function Templates

– Function Templates with Multiple Parameters.

Extra Reading /Key words: Local Classes.

UNIT V:

12 Hrs

Working with Files: Introduction – Classes for File Stream Operations – Opening and Closing a File – Detecting End-of-File– Error Handling during File operations.

Exception Handling: Introduction – Basics of Exception Handling – Exception Handling Mechanism – Throwing Mechanism – Catching Mechanism – Re-throwing an Exception – Specifying Exceptions.

Manipulating Strings: Introduction – Creating (String) Objects – Manipulating String Objects.

Extra Reading /Key words: Member function Templates, Non-Type Template Argument.

Note: Texts given in the Extra Reading /Key words must be tested only through Assignment and Seminars.

EXERCISES

1. Write a C++ program to demonstrate function overloading
2. Write a C++ program to implement the concepts of Default Arguments
3. Write a C++ program to implement the concepts of Inline function.
4. Write a C++ program to demonstrate Class and Objects.
5. Write a C++ program to demonstrate the concept of Passing Objects to Functions.
4. Write a C++ program to demonstrate the Friend Functions.
5. Write a C++ program to demonstrate Constructor and Destructor.
7. Write a C++ program to implement the concepts of Multiple Inheritance
8. Write a C++ program to implement the concepts of Hierarchical Inheritance
9. Write a C++ program to demonstrate the concepts of Exception Handling
10. Write a C++ program to demonstrate the concepts of String Manipulation

COURSE OUTCOMES

The Learner will be able to:

CO No.	Course Outcomes	Cognitive Level (K1-K4)
CO-1	Remember the program structure of C with its syntax and semantics.	K1
CO-2	Understand the programming principles in C(datatypes, operators, branching and looping, arrays, functions, structures, pointers and files)	K2
CO-3	Apply the programming principles learnt in real- Time problems	K3
CO-4	Analyze the various methods of solving a problem and choose the best method.	K4

(K1=Remember, K2=Understand, K3=Apply, K4=Analyze)

TEXT BOOK

1. E. Balagurusamy, “Object-Oriented Programming with C++”, 7th Edition, Tata Mc Graw Hill Publications, 2017.

SUGGESTED READINGS

1. E. Balagurusamy, “**Object-Oriented Programming with C++**”, 8th Edition, Tata McGraw Hill, 2020
2. Behrouz A. Forouzan, Richard Gilberg, “**Loose Leaf for C++ Programming: An Object-Oriented Approach**”, 2019
3. Grimes, Richard, “**Beginning C++ Programming**”. United Kingdom, Packt Publishing, 2017.
4. Lospinoso, Josh., “**C++ Crash Course: A Fast-Paced Introduction**”, United States, No Starch Press, 2019.
5. Kanetkar Yashavant Kanetkar, Aditya, and Kanetkar, Aditya. “**Challenges In C++ Programming**”, India, BPB Publications, 2017.

WEB REFERENCES

1. <https://alison.com/course/introduction-to-c-plus-plus-programming>
2. <http://www.cplusplus.com>
3. <http://www.stroustrup.com/C++11FAQ.html>.
4. <https://www.learncpp.com/>
5. <https://www.geeksforgeeks.org/c-plus-plus/>

Note: Learners are advised to use latest edition of books.

PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO 1	H	M	M	M	M	L	H	H	M
CO 2	M	M	M	M	M	L	H	H	M
CO 3	H	H	H	M	M	L	H	H	M
CO 4	H	H	H	H	H	L	H	H	H

PSO – CO MAPPING

CO/PSO	PSO1	PSO2	PSO3
CO-1	H	H	H
CO-2	H	L	H
CO-3	H	H	H
CO-4	H	H	L

Course Title	SEC II (NON- MAJOR ELECTIVE – 2) COMPUTER APPLICATIONS IN BUSINESS
Code	U23CC2SET02
Course Type	Theory
Semester	II
Hours/Week	2
Credits	2
Marks	100

CONSPECTUS

To make the students familiar with fundamentals of computer and to equip the students with practical skills to use computers.

COURSE OBJECTIVES

6. To understand the components, importance and roles of computer in business fields
7. To understand the working of MS-WORD and apply it in creating and editing documents
8. To explain the features of Excel environment and create worksheets
9. To develop power point presentation with multimedia effects
10. To develop the skill of students in making posters for advertisements

UNIT I - INTRODUCTION TO COMPUTER

6 HRS

Evolution of Computers - Generations, Types of computers, Computer system characteristics

Basic components of a Digital Computer - Control unit, ALU, Input/ Output functions and memory, Memory addressing capability of a CPU.

Extra Reading/ Keywords: *Generations of computer*

UNIT II - DRAFTING A BUSINESS LETTER USING MS –WORD

6 HRS

Basics - Working with Word documents – Working with Text –Drafting a business letter - Using Spelling and Grammar Dialog Box - Using Auto Correct- Using Synonyms and Thesaurus. Adding Graphics and Drawing Objects – Mail Merge in business.

Extra Reading/ Keywords: *Exporting word document*

UNIT III - MS-EXCEL IN BUSINESS

6 HRS

Spread Sheet Using Microsoft Excel 2007: Excel Environment –Entering Data – Navigating Through Cells – Naming And Renaming Cells – Editing A Worksheet – Cut-Copy, Paste Functions - Functions and Formulas - Using Auto Sum - Creating and Inserting a Chart and Transporting to Word and PowerPoint Documents- using statistical formula for financial transactions.

Extra Reading/ Keywords: *Import Excel to analysis tools*

UNIT IV - DRAFTING BUSINESS PRESENTATION

6 HRS

PowerPoint Environment – Creating a Business presentation using Design Templates - Working with Different Views- Working with Slides – Working with Text – Formatting the Text - Graphics and Adding Multimedia Animation - Inserting Pictures and Tables from Other Office Products – Running Slides.

Extra Reading/ Keywords: *Presentation with Hyperlink and Animation.*

UNIT V - CREATING ADVERTISEMENT

6 HRS

Basic of content writing – advertising appeals - working with Canva – adding texts and images – adding Multimedia Animation- audio and video in digital posters – creating an invitation, advertisement posters and pamphlets.

Extra Reading/ Keywords: *Creating posters in postermywall*

Note: Texts given in the Extra Reading /Key words must be tested only through Assignment and Seminars.

TEXT BOOKS

2. R. Parameswaran, “Computer Applications in Business”, S.Chand & Company Ltd. New Delhi.

SUGGESTED READINGS

4. V. Rajaraman, “Introduction to Information Technology”, PHI Learning Pvt Ltd, New Delhi.
5. Leon, “Introduction to Computers”, Vikas Publishing House Pvt Ltd.
6. Srinivasavallaban SV, “Computer In Business”, Sultan Chand and Sons, New Delhi..

WEB REFERENCES

1. https://www.tutorialspoint.com/computer_concepts
2. <https://connect.comptia.org/blog/emerging-trends-in-information-technology>
3. https://www.tutorialspoint.com/word/excel/powerpoint/ms_access

Note: Learners are advised to use latest edition of books.

COURSE OUTCOMES (CO)

CO No.	Course Outcomes	Cognitive Level
CO-1	Remember the fundamentals of computers, Operating Systems, MS-Office and its applications in business	K1
CO-2	Understands the components, the terminologies of Operating System and working of Microsoft Office applications	K2
CO-3	Apply MS- Office tools to organize, manage and present information, data and figures.	K3
CO-4	Analyze the needs and construct solutions to solve the real world problems by using Word, to create and share documents; Excel, to analyze and visualize data; PowerPoint, to create, collaborate, and effectively present ideas	K4

(K1- Remember, K2 - Understand, K3 - Apply, K4 - Analyse)

PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO 1	M	M	M	H	H	H	M	M	M
CO 2	M	M	M	H	H	H	M	M	M
CO 3	H	H	H	H	H	H	M	H	H
CO 4	H	H	H	H	H	H	M	M	M

PSO - CO MAPPING

CO/PSO	PSO 1	PSO 2	PSO 3
CO 1	M	M	M
CO 2	M	M	M
CO 3	H	H	M
CO 4	H	H	M

Course Title	MAJOR CORE 5 CORPORATE ACCOUNTING - I
Code	U23CC3CCT05
Course Type	Theory
Semester	III
Hours/Week	5
Credits	4
Marks	100

CONSPECTUS

To acquaint the students with the procedure for the preparation of company accounts and accounting for issue and redemption of shares and debentures.

COURSE OBJECTIVES

1. To understand about the pro-rata allotment and Underwriting of Shares
2. To apply the provisions relating to redemption of preference shares and debentures.
3. To learn the form and contents of financial statements as per Schedule III of Companies Act 2013
4. To understand the basic methods of valuation of goodwill and shares.
5. To identify the Significance of International financial reporting standard (IFRS)

UNIT – I ISSUE OF SHARES

15 HRS

Issue of Shares – Premium - Discount - Forfeiture - Reissue – Pro-rata Allotment Issue of Rights and Bonus Shares - Underwriting of Shares and Debentures – Underwriting Commission – Types of Underwriting.

Extra Reading/ Keywords: *Types of shares and debentures.*

UNIT – II REDEMPTION OF PREFERENCE SHARES AND DEBENTURES

15 HRS

Redemption of Preference Shares–Provisions of Companies Act– Capital Redemption Reserve – Minimum Fresh Issue – Redemption at Par, Premium and Discount.

Debentures: Issue and Redemption – Meaning – Methods – In-One lot–in Instalment – Purchase in the Open Market includes Ex Interest and Cum Interest - Sinking Fund Investment Method.

Extra Reading/ Keywords: *Redemption, Cum-interest, Ex-interest*

UNIT – III FINAL ACCOUNTS OF COMPANIES

15 HRS

Introduction – Final Accounts – 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

Extra Reading/ Keywords: *Annual report of companies.*

UNIT - IV VALUATION OF GOODWILL AND SHARES

15 HRS

Valuation of Goodwill – Meaning – Need for Valuation of Goodwill – Methods of Valuing Goodwill – Average Profit – Super Profit – Annuity and Capitalization Method.

Valuation of Shares – Need for Valuation of Shares – Methods of Valuation of Shares – Net Assets Method – Yield and Fair Value Methods.

Extra Reading/ Keywords: *Value of shares of public sector companies and private sector companies*

UNIT-V INDIAN ACCOUNTING STANDARDS

International Financial Reporting Standard (IFRS)–Meaning and its Applicability in India - Indian Accounting Standards – Meaning – Objectives – Significance – Procedures for Formulation of Standards – Ind AS – 1 Presentation of Financial Statement, Ind AS – 2 Valuation of Inventories, Ind AS – 7 Cash Flow Statement, Ind AS – 8 Accounting Policies, Changes in Accounting Estimate and Errors, Ind AS – 16 – Property, Plant & Equipment, Ind AS 38 – Intangible Assets Ind AS – 103, Business Combinations Ind AS 110, Consolidated Financial Statement. (Theory Only)

Extra Reading/ Keywords: ACCA

Note: Texts given in the Extra Reading/ Keywords must be tested only through assignment and seminar.

Theory - 20% Problems - 80%

TEXT BOOK

1. S.P. Jain and N.L. Narang, Advanced Accounting Vol I, Kalyani Publication, New Delhi.
2. R.L. Gupta and M. Radha swamy, Advanced Accounts Vol I, Sultan Chand, New Delhi.

SUGGESTED READINGS

1. Shukla. M.C. & Grewal T.S., (2019). *Advanced Accounts, Volume II*, New Delhi: S .Chand&Co.
2. Gupta. R.L. & Radhaswamy M., (2021). *Advanced Accounts, Volume II*, New Delhi: SultanChand.
3. Jain. S.P. & Narang K.L., (2019). *Advanced Accounts, Volume II*, New Delhi: Kalyani Publishers.
4. Maheshwari.S.N & Maheshwari.S.K (2018), *Corporate Accounting*, Noida: Vikas Publishing House Pvt.Ltd.
5. Ramachandran.R & Srinivasan.R., (2017), *Corporate Accounting*, Tiruchi: SriramPublications.

WEB REFERENCES

1. <https://www.tickertape.in/blog/issue-of-shares/>
2. <https://www.taxmann.com/bookstore/bookshop/bookfiles/chapter12valuationofgoodwillandshares.pdf>
3. <https://www.mca.gov.in/content/mca/global/en/acts-rules/ebooks/accounting-standards.html>

Note: Learners are advised to use latest edition of books.

COURSE OUTCOMES

CO. NO	Course Outcomes	Cognitive Level
CO-1	Recall the accounting treatment relating to various transactions of companies.	K1
CO-2	Explain the concepts relating to issue and redemption of shares and debentures and valuation of shares and goodwill.	K2
CO-3	Estimate the value of shares, debentures, goodwill and profit and loss of a company.	K3
CO-4	Examine the financial data of companies and interpret the results.	K4
CO-5	Assess the performance of joint stock companies through comparison of financial data.	K5

(K1- Remember; K2- Understand; K3 – Apply; K4 – Analyse; K5 - Evaluate)

PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO 1	M	L	L	M	L	L	H	H	H
CO 2	M	L	L	M	L	L	H	H	H
CO 3	M	L	L	M	L	L	H	H	H
CO 4	M	L	L	M	L	L	H	H	H
CO 5	M	L	L	M	L	L	H	H	H

PSO – CO MAPPING

CO/PSO	PSO 1	PSO 2	PSO 3
CO 1	H	L	H
CO 2	H	L	H
CO 3	H	L	H
CO 4	H	L	H
CO 5	H	L	H

Course Title	CORE COURSE 6: BUSINESS MATHEMATICS AND STATISTICS
Code	U23CC3CCT06
Course type	Theory
Semester	IV
Hours / Week	5
Credits	4
Marks	100

CONSPECTUS

To acquire the knowledge on application of derivatives, Transportation and Assignment problem and various statistical tools which enables them to compute various problems in business sectors.

COURSE OBJECTIVES

1. To impart knowledge on the basics of ratio, proportion, indices and proportions
2. To learn about simple and compound interest and arithmetic, geometric and harmonic progressions.
3. To understand various method of collection of data and its representation through graphs.
4. To familiarise with the measures of central tendency
5. To conceptualise with correlation co-efficient
6. To gain knowledge on time series analysis

UNIT I: RATIO

15 HRS

Ratio, Proportion and Variations, Indices and Logarithms

UNIT II: INTEREST AND ANNUITY

15 HRS

Banker's Discount – Simple and Compound Interest - Arithmetic, Geometric and Harmonic Progressions. Annuity - Meaning - Types of Annuity Applications.

UNIT III: BUSINESS STATISTICS MEASURES OF CENTRAL TENDENCY 15 HRS

Arithmetic Mean, Geometric Mean - Harmonic Mean - Mode and Median – Quartiles – Deciles - Percentiles. Measures of Variation – Range - Quartile Deviation and Mean Deviation - Variance and Standard Deviation & Co-efficient.

Extra Reading/ Keywords: Ogive curve, Glaciology, Pareto chart, Ethnography

UNIT IV : MEASURES OF DISPERSION AND CORRELATION

15 HRS

Correlation - Karl Pearson's Coefficient of Correlation – Spearman's Rank Correlation – Regression Lines and Coefficients.

Extra Reading/ Keywords: Lorenz curve, Skewness, Kurtosis, Method of moments, Bowley's co-efficient

UNIT V: TIME SERIES ANALYSIS AND INDEX NUMBERS

15 HRS

Time Series Analysis : Secular Trend – Seasonal Variation – Cyclical variations Index Numbers – Laspeyer’s, Fisher’s and Paasche’s Index Numbers- Testsfor Index Numbers- Cost of living Index Number - Uses of Index Numbers- Application of Index numbersin the field of Marketing.

Extra Reading/ Keywords: *Order reversal test, Time and factor test, Weighted index numbers, Zero-based budget, Cash-Only budgeting, Splicing*

Note: Texts given in the Extra Reading /Key Word must be tested only through assignment and Seminars.

TEXT BOOKS

1. Dr. B.N. Gupta, Business Mathematics & Statistics, Shashibhawan publishing house, Chennai
2. Asim Kumar Manna, Business Mathematics & Statistics, McGraw hill education, Noida

SUGGESTED READINGS

1. Kanti Swarup, Gupta PK., Man Mohan (2019), **Operations Research- Introduction to Management Science**, Sultan Chand Publishers, New Delhi.
2. Hamdy Taha A (2019), **Operations Research- An Introduction to Research**, Prentice Hall of India, New Delhi. 10th Edition, Pearson Paperback.
3. Gupta, Hira (1989), **Operations Research**, S.Chand Publishers, New Delhi.
4. SC Gupta, Kapoor VK,(2020), **Fundamentals of Mathematical Statistics**, Sultan Chand & Sons, 12th Edition, New Delhi.
5. Chaudhary Ray, Sharma (2017), **Mathematical Statistics**, Ram Prasad Publications, Agra.
6. Gupta Vikas, Gupta SC., Gupta Sanjeev Kumar (2019), **Problems and Solutions in Mathematical Statistics**, Sultan Chand & Sons Publishers, New Delhi.

WEB REFERENCES

1. <https://www.britannica.com/biography/Henry-Briggs>
2. <https://corporatefinanceinstitute.com/resources/data-science/central-tendency/>
3. <https://www.expressanalytics.com/blog/time-series-analysis/>

Note: Learners are advised to use latest edition of books.

COURSE OUTCOMES

CO No.	Course Outcomes	Cognitive Level (K1-K4)
CO-1	Recall various methods of collection of data, classify, tabulate and interpret the data through diagrams and graphs	K1

CO-2	Illustrate various Transportation Methods, Hungarian Method of Assignment, Measures of Central Tendency, Dispersion, Coefficient of variation	K2
CO-3	Apply the concept of differentiation in Marginal functions, Elasticity and Maxima and Minima of functions and Choose an appropriate type of Index Numbers and Compute Index Number by Laspeyre's, Fisher's Methods, Expenditure Method and Family Budget Method	K3
CO-4	Compare two kinds of data whether they are related by Correlation technique and Analyze the Time Series Models with respect to different variation	K4

(K1=Remember, K2=Understand, K3=Apply, K4=Analyze)

PO – CO MAPPING

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
CO-1	L	M	M	M	H	M	H	H	H
CO-2	M	M	M	M	H	M	H	H	H
CO-3	M	M	L	M	H	M	H	H	H
CO-4	M	M	L	M	H	M	H	H	H

PSO – CO MAPPING

CO/PSO	PSO1	PSO2	PSO3
CO-1	M	H	M
CO-2	M	H	M
CO-3	M	H	M
CO-4	M	H	M

Course Title	ELECTIVE – III: PROGRAMMING IN JAVA AND LAB
Code	U23CC3ECT05
Course type	Theory
Semester	III
Hours/Week	4
Credits	3
Marks	100

CONSPECTUS

This course provides the fundamental knowledge of object-oriented programming, core java and AWT controls, swing for GUI.

COURSE OBJECTIVES

1. To understand the basic Object-oriented concepts,
2. To implement the basic constructs of Core Java
3. To implement inheritance, packages, interfaces and exception handling of Core Java.
4. To implement multi-threading and I/O Streams of Core Java
5. To learn the java collection framework

UNIT I:

12 HRS

Introduction: Review of Object-Oriented concepts, Java buzzwords (Platform independence, Portability, Threads)- JVM architecture, Java Program structure, Java main method, Java Console output(System.out) - Simple java program, Data types, Variables, Type conversion and casting - Java Console input: Buffered input, Operators, Control statements -Static Data, Static Method, String and String Buffer Classes

Extra Reading/Keywords: *Writer, Reader*

UNIT II:

12 HRS

Java user defined Classes and Objects, Arrays, constructors - Inheritance: Basic concepts, Types of inheritance, Member access rules, Usage of this and Super key word- Method Overloading, Method overriding - Abstract classes, Dynamic method dispatch, Usage of final keyword

Extra Reading/Keywords: **Interface, Polymorphism**

UNIT III:

12 HRS

Packages: Definition, Access Protection, Importing Packages- Interfaces: Definition, Implementation, Extending Interfaces - Exception Handling: try, catch, throw, throws, finally
Built-in exceptions, creating own Exception classes, garbage collection, finalize

Extra Reading/Keywords: **Inner class, Java serialization**

UNIT IV:

12 HRS

Multithreaded Programming: Thread Class, Runnable interface- Synchronization, using synchronized methods, Using synchronized statement - Interthread Communication -Deadlock.

Extra Reading/Keywords: **shutdown hook, Reentrant monitor**

UNIT V:

12 HRS

Adapter classes, Inner classes- Java Util Package / Collections Framework:Collection & Iterator Interface Enumeration- List and Array List -Vector, Comparator

Extra Reading/Keywords: **JDBS, RMI**

Theory - 20% Problem: 80%

Note: Extra Reading/Keywords must be tested only through assignment and seminar.

TEXT BOOKS

1. Herbert Schildt, The Complete Reference, Tata McGraw Hill, New Delhi, 7th Edition, 2010.
2. Gary Cornell, Core Java 2 Volume I – Fundamentals, Addison Wesley, 1999.Kaveh Pahlavan, Prasanth Krishnamoorthy, “Principles of Wireless Networks”, PHI/Pearson Education, 2003.

3. Head First Java, O’Rielly Publications, Y. Daniel Liang, Introduction to Java Programming, 7th Edition, Pearson Education India, 2010.
 4. Mark Lassof,, Java Programming for Beginners, 2017, Packet Publishing Ltd, UK.
- Note: Learners are advised to use latest edition of books.*

WEB REFERENCES

1. <https://www.javatpoint.com/collections-in-java>

COURSE OUTCOMES

The learners

CO No.	Course Outcomes	Cognitive Level
CO-1	Understand the basic concepts of java	K1
CO-2	To reduce the work with the concept of reusing the code through inheritance	K2
CO-3	To implement the automatic correction of code and execution of programs simultaneously using the Exception handling and Multithreading	K3
CO-4	To develop the data structure programs in java easily	K4

(K1=Remember, K2=Understand, K3=Apply, K4=Analyze)

PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO-1	M	L	L	M	L	L	H	H	H
CO-2	M	L	L	M	L	L	H	H	H
CO-3	H	L	L	M	L	L	H	H	H
CO-4	H	H	L	M	L	L	H	H	H

PSO – CO MAPPING

CO/PSO	PSO 1	PSO 2	PSO 3
CO-1	H	M	M
CO-2	H	M	M
CO-3	H	M	M
CO-4	H	M	M

Java Programming Lab

COURSE OBJECTIVES

1. To gain practical expertise in coding Core Java programs
2. To become proficient in the use of AWT
3. To become proficient in the use of Event Handling
4. To become proficient in the use of Swing.

List of Programs

1. Write a Java program that prompts the user for an integer and then prints out all the prime numbers up to that Integer?
2. Write a Java program to multiply two given matrices.
3. Write a Java program that displays the number of characters, lines and words in a text?
4. Generate random numbers between two given limits using Random class and print messages according to the range of the value generated.
5. Write a program to do String Manipulation using Character Array and perform the following string operations: String length, Finding a character at a particular position, Concatenating two strings
6. Write a program to perform the following string operations using String class:
 - a. String Concatenation
 - b. Search a substring
 - c. To extract substring from given string
7. Write a program to perform string operations using StringBuffer class:
 - a. Length of a string
 - b. Reverse a string
 - c. Delete a substring from the given string
8. Write a java program that implements a multi-thread application that has three threads. First thread generates random integer every 1 second and if the value is even, second thread computes the square of the number and prints. If the value is odd, the third thread will print the value of cube of the number.
9. Write a threading program which uses the same method asynchronously to print the numbers 1 to 10 using Thread1 and to print 90 to 100 using Thread2.
10. Write a program to demonstrate the use of following exceptions.
 - a. Arithmetic Exception
 - b. Number Format Exception
 - c. Array Index Out of Bound Exception
 - d. Negative Array Size Exception

COURSE OUTCOMES

The learners

CO No.	Course Outcomes	Cognitive Level
CO-1	To write simple programs using the basic concepts of java	K1
CO-2	To perform string operations using java programs	K2
CO-3	To implement the automatic correction of code	K3
CO-4	To develop the programs to correct the runtime errors and run simultaneously using the Exception handling and Multithreading	K4

(K1=Remember, K2=Understand, K3=Apply, K4=Analyze)

PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO-1	M	L	L	M	L	L	H	H	H
CO-2	M	L	L	M	L	L	H	H	H
CO-3	H	L	L	M	L	L	H	H	H
CO-4	H	H	L	M	L	L	H	H	H

PSO – CO MAPPING

CO/PSO	PSO 1	PSO 2	PSO 3
CO-1	H	M	M
CO-2	H	M	M
CO-3	H	M	M
CO-4	H	M	M

Course Title	Web Technology(PHP) and Lab
Code	U23CC3ECT06
Course type	Theory
Semester	III
Hours/Week	4
Credits	3
Marks	100

CONSPECTUS

To construct a web page and relate how PHP and SQL combine to produce the web page.

COURSE OBJECTIVES

1. To use PHP and MySQL to develop dynamic web sites for user on the Internet
2. To develop web sites ranging from simple online information forms to complex e-commerce sites with MySQL database, building, connectivity, and maintenance
3. To analyze the PHP arrays
4. To imply the concept of using functions
5. To work with database and SQL

UNIT I

15 HRS

Introducing PHP – Basic development Concepts – Creating first PHP Scripts
Using Variable and Operators – Storing Data in variable – Understanding Data types
Setting and Checking variables Data types – Using Constants – Manipulating Variables with Operators.

Extra Reading/Keywords: *Type juggling and casting*

UNIT II

15 HRS

Controlling Program Flow: Writing Simple Conditional Statements -Writing More Complex Conditional Statements
– Repeating Action with Loops -Working with String and Numeric Functions.

Extra Reading/Keywords: *Scope and global variables*

UNIT III

15 HRS

Working with Arrays: Storing Data in Arrays – Processing Arrays with Loops and Iterations
Using Arrays with Forms - Working with Array Functions - Working with Dates and Times.

Extra Reading/Keywords: *Understanding array pointers*

UNIT IV

15 HRS

Using Functions and Classes: Creating User-Defined Functions - Creating Classes – Using Advanced OOP Concepts

Extra Reading/Keywords: *Cloning objects*

UNIT V

15 HRS

Working with Database and SQL : Introducing Database and SQL -Using MySQL-Adding and modifying Data - Handling Errors – Using SQLite Extension and PDO Extension.

Introduction XML - Simple XML and DOM Extension

Extra Reading/Keywords: *AJAX*

Note: Extra Reading/Keywords must be tested only through assignment and seminar.

TEXT BOOKS

1. Vikram Vaswani, “PHP A Beginner's Guide”, Tata McGraw Hill 2008.
2. Steven Holzner , “The PHP Complete Reference”, Tata McGraw Hill, 2007.
3. Steven Holzer , “Spring into PHP”, Tata McGraw Hill 2011, 5thEdition.

SUGGESTED READINGS

1. RasmusLerdorf, Kevin Tatroe, Bob Kaehms, PHP Programming,
2. Leon Atkinson “Core PHP Programming”, Prentice Hall, ISBN0130463469.
3. W. Jason Gilmore, “Beginning PHP5 and MySQL: From Novice to Professional”, 2004, Apress, ISBN:1- 893115-51-8

WEB REFERENCES

1. <https://www.w3schools.com/php/>
2. <https://www.phptpoint.com/php-tutorial-pdf/>
3. <http://www.xmlsoftware.com/>

Note: Learners are advised to use latest edition of books.

COURSE OUTCOMES

The learners

CO No.	Course Outcomes	Cognitive Level
CO-1	Illustrate the PHP Programming	K1
CO-2	Describe the functions and conditional statements in PHP Programming	K2
CO-3	Apply the concept of arrays in real time applications.	K3
CO-4	Analyze the working concept of files.	K4
CO-5	Implication of adding and modifying data in database and SQL..	K5

(K1=Remember, K2=Understand, K3=Apply, K4=Analyze)

PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO-1	H	M	H	M	H	M	H	H	H
CO-2	H	M	M	M	H	M	M	M	H
CO-3	H	H	H	M	H	M	H	H	H
CO-4	H	M	M	M	H	M	M	M	H
CO- 5	H	H	M	M	H	M	H	H	H

PSO – CO MAPPING

CO/PSO	PSO 1	PSO 2	PSO 3
CO-1	H	M	M
CO-2	H	M	H
CO-3	H	M	M
CO-4	H	M	M
CO - 5	H	M	M

COURSE OBJECTIVES

1. The objectives of this course are to have a practical understanding about how to write PHP code to solve problems.
2. Display and insert data using PHP and MySQL.
3. Test, debug, and deploy web pages containing PHP and MySQL.
4. It also aims to introduce practical session to develop simple applications using PHP and MySQL.

LIST OF PRACTICALS

1. Write a PHP program which adds up columns and rows of given table
2. Write a PHP program to compute the sum of first n given prime numbers
3. Write a PHP program to find valid an email address
4. Write a PHP program to convert a number written in words to digit.
5. Write a PHP script to delay the program execution for the given number of seconds.
6. Write a PHP script, which changes the colour of the first character of a word
7. Write a PHP program to find multiplication table of a number.
8. Write a PHP program to calculate Factorial of a number.
9. Write a PHP code to create a student mark sheet table. Insert, delete and modify records.
10. From a XML document (email.xml), write a program to retrieve and print all the e-mail addresses from the document using XML
11. From a XML document (tree.xml), suggest three different ways to retrieve the text value 'John' using the DOM:
12. Write a program that connects to a MySQL database and retrieves the contents of any one of its tables as an XML file. Use the DOM.

COURSE OUTCOMES

The learners

CO No.	Course Outcomes	Cognitive Level
CO-1	On the completion of this laboratory course the students ought to	K1
CO-2	Obtain knowledge and develop application programs using Python.	K2
CO-3	Apply the various PHP concepts and Create dynamic Web applications such as content management, user registration, and ecommerce using PHP and to understand the ability to post and publish a PHP website.	K3
CO-4	Develop a MySQL database and establish connectivity using MySQL.	K4
CO-5	Analyze the XML concepts and develop the PHP coding with XML file.	K5

(K1=Remember, K2=Understand, K3=Apply, K4=Analyze)

PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO-1	H	M	H	M	H	M	H	H	H
CO-2	M	M	M	M	H	M	M	M	H
CO-3	H	H	H	M	H	M	H	H	H
CO-4	M	M	H	M	H	M	M	M	H
CO- 5	H	H	M	M	H	M	H	H	H

PSO – CO MAPPING

CO/PSO	PSO 1	PSO 2	PSO 3
CO-1	H	M	L
CO-2	M	M	L
CO-3	H	H	L
CO-4	M	H	M
CO - 5	H	H	M

Course Title	SKILL ENHANCEMENT COURSE -4 ENTREPRENEURSHIP DEVELOPMENT
Code	U23CC3SET04
Course type	Practical
Semester	III
Credits	1
Marks	100

CONSPECTUS

This course provides practical skills in the art of beautification and making jewellery, embroidery, garland, jute bag and sanitary napkins from relevant raw materials. It gives training in entrepreneurial way of thinking to identify and create business opportunities to become successful entrepreneurs.

COURSE OBJECTIVES

1. To apply the basics of beautification, bridal make up and mehandi designs.
2. To understand the art of making artificial jewellery.
3. To understand the art of embroidery.
4. To apply the different techniques of natural and artificial garland making.
5. To apply the technique of making jute bags and sanitary napkins.

UNIT-I BASICS OF BEAUTIFICATION 3 HRS

Threading – Facial – Hair dress – Manicure – Pedicure – Bridal Make up – Mehandi.

Extra Reading /Keyword: *Nail art and art of wearing saree*

UNIT-II ART OF MAKING JEWELLERY 3 HRS

Zardosi - Jumki work - Kundhan stone works - Terracotta.

Extra Reading /Keyword: *Maggam works*

UNIT - III BASICS OF EMBROIDERY 3 HRS

Types of Embroidery – Hand Embroidery - Thread work

Extra Reading /Keyword: *Aari works*

UNIT- IV NATURAL AND ARTIFICIAL GARLAND MAKING 3 HRS

Natural flower garland - Artificial flower garland - Bouquet - Flower vase arrangement

Extra Reading /Keyword: *Bridal garland making*

UNIT- V ECO FRIENDLY PRODUCTS 3 HRS

Jute bag making – Homemade sanitary napkins.

Note: Texts given in the Extra Reading/Keywords must be tested only through assignment and seminar.

SUGGESTED READINGS

1. Laura B. Starr, The Doll Book, 2016, Read Book Publishers, USA.
2. Jenny Strbe, Braids & Buns, Ponies & Pigtails, 2016, Chronicle books, UK.
3. Lisa Lam and Amy Butter, The Bag Making Bible: The Complete Guide. to Sewing your own bags, 2010, David & Charles Publishing Ltd. UK.
4. Arts & Craft. Vol.6 Aasha Enterprises, Hyderabad -39.

5. Renu Gupta, 2004, Complete Beautician Course, Diamond Pocket Books Private Limited, New Delhi.

COURSE OUTCOMES

The learners

CO No.	Course Outcomes	Cognitive Level
CO-1	Recall the basics of beautification, jewellery making, embroidery and eco-friendly products.	K1
CO-2	Understand the procedures for using beautification products and eco-friendly products.	K2
CO-3	Exhibit basic skills in hair dressing, hand embroidery, making jewellery, garland and other products with self-introduced designs.	K3
CO-4	Assess the utility of hand made products and eco-friendly products.	K4

(K1- Remember; K2- Understand; K3 – Apply; K4 – Analyse)

Course Title	SKILL ENHANCEMENT COURSE- 5 : INDUSTRIAL RELATIONS: INVESTMENT BASICS
Code	U23CC3SET05
Course Type	Theory
Semester	III
Hours/Week	2
Credit	2
Marks	100

CONSPECTUS

To expose the students to various investment alternatives.

COURSE OBJECTIVES

1. To understand different investment activities.
2. To understand bank and post office deposits.
3. To analyse various types of mutual funds.
4. To analyse various life insurance policies.
5. To understand the basics of financial and non-financial investments.

UNIT I - INTRODUCTION TO INVESTMENTS

6 HRS

Investments- Savings Vs Investments – Importance of savings and investments -Objectives of investments - Investment alternatives - Financial Vs Non-financial assets.

Extra Reading/Keywords: *IRA, CD and money market accounts*

UNIT II – BANK AND POST OFFICE DEPOSITS AND CERTIFICATES

6 HRS

Introduction to Bank Deposits, Types of Deposit Account - Common guidelines of opening and operating accounts, Deposit related services, Depositservices offered to Non- Resident Indians Post office investment savings schemes – Advantages.

Extra Reading/Keywords: *Sukanya Samriddhi Accounts, Senior Citizen Savings Scheme*

UNIT III - MUTUAL FUNDS

6 HRS

New fund offers and procedure for investing in NFO - Investors rights and obligations -Types of funds – Open ended schemes - Close ended funds.

Extra Reading/Keywords: *Thematic and Arbitrage funds*

UNIT IV – LIFE INSURANCE AND PROVIDENT FUND SCHEMES

6 HRS

Type of life insurance policy - Endowment policy - Term policy - Whole lifepolicy - Money back policy - ULIPs - Kinds of provident funds - Statutory Provident Fund, Recognized Provident Fund and Unrecognized Provident Fund. Equity Linked Savings Schemes(ELSSs) - Pension Plan.

Extra Reading/Keywords: *Market linked investment plans, Retirement planning investmentoptions*

UNIT V – REAL ASSETS AND CORPORATE SECURITIES

6 HRS

Investments in Real estate – E-Real estate - E-gold – Commodities -Shares - Debentures – Bonds – Derivatives.

Extra Reading/Keywords: *Collectables, Equity crowd funding*

Note: Texts given in the Extra Reading/ Keywords must be tested only through assignment and seminar.

TEXT BOOKS

1. Punithavathi Pandian, (2018), Security Analysis and Portfolio Management, Vikas Publishing House Pvt Ltd, New Delhi.
2. Preethi Singh, (2018), Investment Management, Himalaya Publishing House, New Delhi.

SUGGESTED READINGS

1. Natarajan L, (2018), Investment Management, Security Analysis and Portfoliomangement, Margham Publications, Chennai.
2. Avadhani VA, (2018), Investment and Securities Market in India, Himalaya Publishing House, Mumbai.
3. Bhalla VK, (2018), Investment Management, Security Analysis and Portfolio Management, S.Chand and Company Ltd, New Delhi.
4. Prasanna Chandra, (2018), Investment Analysis and Portfolio Management, Tata McGraw-Hill Publishing Company Limited, New Delhi.
5. Graham and Dodd, (2018), Investment, Tata McGraw - Hill Publishing Company Limited, New Delhi.

WEB REFERENCES

1. <https://www.investopedia.com/terms/m/mutualfund.asp>
2. <https://www.geektonight.com/investment-management-pdf/>
3. http://www.aurobindo.du.ac.in/uploads/pdf/1585999470_Mutual_funds_.pdf

Note: Learners are advised to use latest edition of books.

COURSE OUTCOMES

CO No.	Course Outcomes	Cognitive Level
CO-1	Describe the various investment alternatives.	K1
CO-2	Explain the guidelines for investing in financial and non-financial assets.	K2
CO-3	Construct the procedure for investment in various deposits	K3
CO-4	Analyze the different types of mutual funds and various schemes available for investment.	K4

Course Title	CORE COURSE: 7 – CORPORATE ACCOUNTING II
Total Hours	75
Hours/Week	5 Hrs / Wk
Code	U23CC4CCT07
Course Type	Theory
Credits	4
Marks	100

CONSPECTUS

To acquaint the students with the procedure for the preparation of company accounts and accounting treatments for amalgamation, liquidation and banking companies.

COURSE OBJECTIVES

1. To know the types of Amalgamation, Internal and external Reconstruction
2. To know Final statements of banking companies
3. To understand the accounting treatment of Insurance company accounts
4. To understand the procedure for preparation of consolidated Balance sheet
5. To have an insight on modes of winding up of a company

UNIT – I AMALGAMATION, INTERNAL & EXTERNAL RECONSTRUCTION 15 HRS

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 & External Reconstruction Internal Reconstruction – Conversion of Stock – Increase and Decrease of Capital – Reserve Liability - Accounting Treatment of External Reconstruction

Extra Reading /Keywords: Acquisition, External Reconstruction

UNIT - II ACCOUNTING OF BANKING COMPANIES 15 HRS

Final Statements of Banking Companies (As Per New Provisions) - Non-Performing Assets - Rebate on Bills Discounted- Profit and Loss a/c - Balance Sheet as Per Banking Regulation Act 1949.

Extra Reading /Keywords: Non-Performing assets, Money at call and short notice

UNIT – III INSURANCE COMPANY ACCOUNTS 15 HRS

Meaning of Insurance – Principles – Types – Preparation of Final Accounts of Insurance Companies – Accounts of Life Insurance Business – Accounts of General Insurance Companies - New Format.

Extra Reading /Keywords: Insurance guidelines

UNIT – IV CONSOLIDATED FINANCIAL STATEMENTS 15 HRS

Introduction-Holding & Subsidiary Company-Legal Requirements Relating to Preparation of Accounts -Preparation of Consolidated Balance Sheet (Excluding Inter-Company Holdings).

Extra Reading /Keywords: Deficiency account

UNIT –V LIQUIDATION OF COMPANIES 15 HRS

Meaning-Modes of Winding Up – Preparation of Statement of Affairs and Statement of Deficiency or Surplus (List H) Order of Payment – Liquidators Remuneration- Liquidator’s Final Statement of Accounts.

Extra Reading /Keywords:

Note: Texts given in the Extra Reading/ Keywords must be tested only through assignment and seminar.

Theory - 20% Problems - 80%

TEXT BOOK

1. Reddy T.S. & Murthy A., (2020). Corporate Accounting, Chennai: Margham Publications.
2. Gupta. R.L. & Radhaswamy M., (2021). Corporate Accounting, New Delhi: SultanChand & Sons.

SUGGESTED READINGS

1. Shukla. M.C. & Grewal T.S., (2019). Advanced Accounts, Volume II, New Delhi: S .Chand&Co.
2. Gupta. R.L. & Radhaswamy M., (2021). Advanced Accounts, Volume II, New Delhi: SultanChand.
3. Jain. S.P. & Narang K.L., (2019). Advanced Accounts, Volume II, New Delhi: KalyaniPublishers.
4. Maheshwari.S.N & Maheshwari.S.K (2018), Corporate Accounting, Noida: Vikas PublishingHouse Pvt.Ltd.
5. Bhushan Kumar Goyal (2022), Basic Corporate Accounting, New Delhi: TaxmannPublication.

WEB REFERENCES

1. https://www.icsi.edu/media/webmodules/CMA_Book_010820.pdf
2. <https://icmai.in/upload/Students/Syllabus2016/inter/Paper-12-Feb-2022.pdf>
3. <https://www.mca.gov.in/Ministry/pdf/CompaniesAct2013.pdf>

Note: Learners are advised to use latest edition of books.

COURSE OUTCOMES

The learners

CO No.	Course Outcomes	Cognitive Level
CO-1	Remember the concept of amalgamation, alteration of share capital, holding companies, liquidation accounts and banking companies	K1
CO-2	Understand the concepts of different modes of company accounts.	K2
CO-3	Apply the procedure for preparing company accounts.	K3
CO-4	Analyze the accounting applications of company accounts.	K4
CO-5	Evaluate the companies positions under amalgamation, alteration and liquidation.	K5

(K1- Remember; K2- Understand; K3 – Apply; K4 – Analyse; K5 -

Evaluate)PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO 1	M	L	L	M	L	L	H	H	H
CO 2	M	L	L	M	L	L	H	H	H
CO 3	M	L	L	M	L	L	H	H	H
CO 4	M	L	L	M	L	L	H	H	H
CO 5	M	L	L	M	L	L	H	H	H

PSO – CO MAPPING

CO/PSO	PSO 1	PSO 2	PSO 3
CO 1	H	L	H
CO 2	H	L	H
CO 3	H	L	H
CO 4	H	L	H
CO 5	H	L	H

Course Title	CORE COURSE: 8 COMPANY LAW
Code	U23CC3CCT08
Course Type	Theory
Semester	III
Hours/Week	5
Credits	4
Marks	100

CONSPECTUS

To provide an understanding of the provisions and practice of companies act and understand the applications of such act in real time situations.

COURSE OBJECTIVES

1. To know Company Law 1956 and Companies Act 2013
2. To have an understanding on the formation of a company
3. To understand the requisites of meeting and resolution
4. To gain knowledge on the procedure to appoint and remove Directors
5. To familiarize with the various modes of winding up

UNIT I - INTRODUCTION TO COMPANY LAW

15 HRS

Act 2013 – Definition of a Company, Characteristics of Company -Lifting or Piercing the Corporate Veil – Company Distinguished from Partnership and LimitedLiabilities Partnerships
Classification of Companies – Based on Incorporation, Liability, Number of Members, Control.

Extra Reading /Keywords:

UNIT II - FORMATION OF COMPANY

15 HRS

Formation of a Company – Promoter – Fundamental Documents – Memorandum of Association –Contents – Alternation – Legal Effects - Articles of Association - Certificate of Incorporation – Prospectus – Contents – Kinds -Liabilities – Share Capital – Kinds – Issue – Alternation – Dividend – Debentures.

Extra Reading /Keywords:

UNIT III – MEETING

15 HRS

Meeting and Resolution – Types – Requisites
Voting & Poll – Resolution – Ordinary, Special Audit
Auditors – Qualification, Disqualification, Appointment and Removal of an Auditor.

Extra Reading /Keywords:

UNIT IV – MANAGEMENT & ADMINISTRATION

15 HRS

Management & Administration – Directors – Legal Position – Board of Directors – Appointment/ Removal – Disqualification - Director Identification Number – Directorships – Powers – Duties – Board Committees – Related Party Transactions
Contract by One – Person Company – Insider Trading- Managing Director – Manager – Secretarial Audit – Administrative Aspects and Winding Up – National Company Law Tribunal(NCLT) – National Company Law Appellate Tribunal (NCLAT) – Special Courts.

UNIT V – WINDING UP

15 HRS

Meaning – Modes – Compulsory Winding Up – Voluntary Winding Up - Consequences of Winding Up Order - Powers of Tribunal – Petition for Winding Up – Company Liquidator.

TEXT BOOK

Kapoor N.D, (2021). Company Law- Incorporating the Provisions of the Companies Amendment Act 2013, New Delhi: Sultan Chand & Sons.

SUGGESTED READINGS

1. Gower L.C.B, (2005). Principles of Modern Company Law, London: Stevens & Sons.
2. Singh Avtar, (2007). Company Law, Lucknow: Eastern Book Co.
3. Gogna. P.P.S. (2016), Company Law, S Chand Publishing, New Delhi.

WEB REFERENCE

2. <https://www.icai.org/>
3. <https://icmai.in/icmai/>
4. <https://swayam.gov.in/Company+law+>

Note: Learners are advised to use latest edition of books.

COURSE OUTCOMES

CO No.	Course Outcomes	Cognitive Level (K1-K5)
CO-1	Understand the classification of companies under the act	K1
CO-2	Examine the contents of the Memorandum of Association & Articles of Association	K2
CO-3	Know the qualification and disqualification of Auditors	K3
CO-4	Understand the workings of National Company Law Appellate Tribunal (NCLAT)	K4
CO-5	Analyse the modes of winding up	K5

(K1- Remember, K2 - Understand, K3 – Apply, K4 – Analyse, K5 - Evaluate)

PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO 1	H	H	H	H	M	M	H	M	H
CO 2	H	H	M	H	H	M	H	H	H
CO 3	M	M	H	M	M	M	H	H	H
CO 4	H	H	H	M	H	M	H	M	H

CO 5	M	M	H	M	M	M	H	H	H
CO 6	H	H	H	M	H	M	H	M	H

PSO – CO MAPPING

CO/PSO	PSO 1	PSO 2	PSO 3
CO 1	H	H	M
CO 2	H	H	H
CO 3	H	M	H
CO 4	H	H	H
CO 5	H	M	H
CO 6	H	H	H

Course Title	RELATIONAL DATABASE MANAGEMENT SYSTEM
Total Hours	60
Hours/Week	3
Code	U23CC4ECT07
Course Type	Theory
Credits	3
Marks	100

GENERAL OBJECTIVE:

To impart the fundamental aspects of database design, database languages and database-system implementation.

COURSE OBJECTIVES:

The Learner will be able to

1. To gain a good understanding of the architecture and functioning of Database Management Systems
2. To understand the use of Structured Query Language (SQL) and its syntax.
3. To apply Normalization techniques to normalize a database.
4. To write simple and complex queries using SQL commands.

UNIT I: INTRODUCTION:

12 HRS

Introduction to DBMS– Data and Information Database – Database Management System
– Objectives- Advantages – Components – Architecture- ER Model: Building blocks of ER Diagram
Extra Reading/Key Words: DB Software, Data Mining

UNIT II: RELATIONAL MODEL

12 HRS

Relationship Degree – Classification – ER diagram to Tables – ISA relationship -Constraints – Aggregation and Composition – Advantages - Structure of Relational Database.
Introduction to Relational Database Design : Objectives, Tools Redundancy and Data Anomaly
Extra Reading/Key Words: Tuple and Domain Calculus

UNIT III: DATABASE DESIGN NORMALIZATION

12 HRS

The Purpose

of Normalization – How Normalization Supports Database Design
Data Redundancy and Update Anomalies- Functional Dependencies - The Process of Normalization – First Normal Form - Second Normal Form - Third Normal Form.
Extra Reading/Key Words: Boyce Code NF, 4NF, 5 NF

UNIT IV: INTRODUCTION TO SQL AND ADVANCED SQL

12 HRS

Introduction to SQL: Data Definition Commands – Data Manipulation Commands – SELECT Queries – Additional Data Definition Commands - Additional SELECT Query Keywords – Joining Database Tables - Advanced SQL: Relational SET Operators: UNION – UNION ALL – INTERSECT - MINUS.
Extra Reading/Key Words: PostgreSQL

UNIT V: SQL OPERATORS, QUERIES AND FUNCTIONS**12 HRS**

SQL Join Operators: Cross Join – Natural Join – Join USING Clause – JOIN ON Clause – Outer Join -Sub Queries and Correlated Queries: WHERE – IN – HAVING – ANY and ALL – FROM - SQL Functions: Date and Time Function – Numeric Function – String Function – Conversion Function.

Extra Reading/Key Words: Embedded SQL

COURSE OUTCOMES

CO No.	Course Outcomes	Cognitive Level
CO-1	Remember the basics of database systems, relational model, normalization, SQL	K1
CO-2	Understand basics of relational model and Normal forms	K2
CO-3	Apply and analyze relational algebra and Normal forms in designing schema	K3, K4
CO-4	Analyze the problem and apply the Sequel language and solve by writing SQL queries	K3,K4
CO-5	Evaluate the given scenario of the real time problems and apply SQL	K3, K4, K5,

(K1=Remember, K2=Understand, K3=Apply,K4=Analyze,K5=Evaluate,K6=Create)

TEXT BOOKS

1. S. Sumathi, S. Esakkirajan, “Fundamentals of Relational Database Management System”,Springer International Edition 2007.

REFERENCE BOOKS

1. Abraham Silberschatz, Henry F. Korth, S. Sudarshan, “**Database System Concepts**”, 2010, Seventh Edition, McGraw-Hill Publications, New Delhi.
2. Ramez Elmasri, Shamkant B. Navathe, “**Fundamentals of Database Systems**”, 2006, Addison Wesley Publishing Company
3. Seema kedar, “**Database Management System**”, 2011, Technical Publications.
4. Elmasri & Navathe, “**Fundamentals of Database Systems**”, 2006, Pearson Education Publications, New Delhi.
5. G.K.Gupta ,”**Database Management System**”, 2011, Tata McGraw Hill Publications Company Limited, New Delhi.

WEB REFERENCES

1. <https://nptel.ac.in/courses/106106093/>
2. <https://nptel.ac.in/courses/106106095/>
3. NPTEL & MOOC courses titled Relational Database Management Systems

PO-CO MAPPING

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
CO-1	M	M	H	H	M	M	M	M	M
CO-2	M	M	H	H	M	M	M	M	M
CO-3	H	H	H	H	H	M	H	H	H
CO-4	H	H	H	H	H	M	H	H	H
CO-5	H	H	H	H	H	M	H	H	H

PSO-CO MAPPING

CO/PSO	PSO1	PSO2	PSO3
CO-1	M	M	M
CO-2	M	M	M
CO-3	H	H	H
CO-4	H	H	H
CO-5	H	H	H

Course Title	ELECTIVE - IV: INTRODUCTION TO DATA SCIENCE
Code	U23CC4ECT08
Course type	Theory
Semester	IV
Hours/Week	3
Credits	3
Marks	75

CONSPECTUS

This course provides an insight into the fundamental aspects of Data science process and Hadoop framework

COURSE OBJECTIVES

1. To introduce the concepts, techniques and tools in Data Science;
2. To understand the various facets of data science practice, including data collection and integration, exploratory data analysis, predictive modelling, descriptive modelling and effective communication.
3. To apply the machine learning algorithms in Hadoop framework
4. To understand the various features in Hadoop;
5. To apply the techniques in various scenarios.

UNIT I: INTRODUCTION

15 HRS

Benefits and uses - Facets of data - Data science process -Big data ecosystem and data science

Extra Reading/Keywords: Social Network Data, Data Evolution

UNIT II: THE DATA SCIENCE PROCESS

15 HRS

Overview – research goals - Retrieving data – transformation - Exploratory Data Analysis – Model building - Data Visualization

Extra Reading/Keywords: Advanced Visualizations, Creating 3D plots.

UNIT III: ALGORITHMS

15 HRS

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

Extra Reading/Keywords: Correlation Matrix, Normalization

UNIT IV: INTRODUCTION TO HADOOP

15 HRS

Hadoop framework – Spark- replacing MapReduce- NoSQL – ACID- CAP – BASE – types

Extra Reading/Keywords: Inferential Statistics with R, PIG

UNIT V CASE STUDY

15 HRS

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

Extra Reading/Keywords: Mining of Massive Datasets, prediction

Theory - 20% Problem: 80%

Note: Extra Reading/Keywords must be tested only through assignment and seminar.

TEXT BOOKS

1. Davy Cielen, Arno D. B. Meysman, Mohamed Ali, “Introducing Data Science”, manning publications 2016
2. Roger Peng, “The Art of Data Science”, lulu.com 2016.

- MurtazaHaider, “Getting Started with Data Science – Making Sense of Data with Analytics”, IBM press, E-book.

SUGGESTED READINGS

- Davy Cielen, Arno D.B. Meysman, Mohamed Ali, “Introducing Data Science: Big Data, Machine Learning, and More, Using Python Tools”, Dreamtech Press 2016.
- Annalyn Ng, Kenneth Soo, “Numsense! Data Science for the Layman: No Math Added”, 2015, 1st Edition.
- Cathy O'Neil, Rachel Schutt, “Doing Data Science Straight Talk from the Frontline”, O'Reilly Media 2013.
- Lillian Pierson, “Data Science for Dummies”, 2015 II Edition

WEB REFERENCES

- <https://github.com/manjunath5496/Data-Science-Study-Materials/blob/master/README.md>
- <https://scientistcafe.com/ids/IDS.pdf>
- https://sist.sathyabama.ac.in/sist_coursematerial/uploads/SCSA3016.pdf

Note: Learners are advised to use latest edition of books.

COURSE OUTCOMES

The learners

CONo.	COURSE OUTCOMES	Cognitive Level
CO-1	Understand the data science process, and Bigdata ecosystem	K1
CO-2	Apply data visualization techniques in data science.	K2
CO-3	Analyze the various machine learning algorithms	K3
CO-4	Evaluate the tools and methods for analyzing the data.	K4
CO-5	Investigate the recent potential applications and development of data science with real time case studies.	K5

(K1=Remember, K2=Understand, K3=Apply, K4=Analyze)

PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO-1	M	L	L	M	L	H	H	H	H
CO-2	M	L	L	M	H	L	H	H	H
CO-3	H	L	L	M	H	H	H	H	H
CO-4	H	H	L	M	L	H	H	H	H
CO-5	H	H	H	M	M	H	H	M	H

PSO – CO MAPPING

CO/PSO	PSO 1	PSO 2	PSO 3
CO-1	H	M	H
CO-2	H	M	H
CO-3	H	M	H
CO-4	H	M	H

Course Title	SKILL ENHANCEMENT COURSE -6: BUSINESS SOFTWARE – TALLY
Total Hours	30
Hours/Week	2
Code	U23CC4SEP06
Course Type	Practical
Credits	2
Marks	100

CONSPECTUS

This course aims to equip the students with the practical skills of Tally.

COURSE OBJECTIVES

1. To understand the concepts of computerised accounting.
2. To apply the procedures for entering different types of vouchers.
3. To analyse final accounts with adjustments.
4. To understand the preparation of stock ledger.
5. To analyse accounting for cost centre and cost category.

UNIT-I INTRODUCTION

6 HRS

Computerised Accounting – Meaning – Importance of Computerised accounting – Computerised accounting Vs Manual accounting. Introduction to architecture of Tally – Creation of company – Creation of groups – Various kinds of groups – Multiple and Single – Creation of ledgers – Various kinds of ledgers.

Extra Reading /Keywords: *Computerised Accounting*

UNIT- II VOUCHING

6 HRS

Entering vouchers – Journal voucher, Purchase voucher, Sales voucher, Receipt vouchers, Payment vouchers – Role and importance of function keys. **Extra Reading /Keywords:** *Function keys and Vouchers*

UNIT- III FINAL ACCOUNTS

6 HRS

Extraction of Trial Balance, Trading Account, Profit and Loss Account and Balance Sheet, Simple sums with and without adjustments – Alter – Select – Edit – Delete – Selection of company.

Extra Reading /Keywords: *Final Accounts with adjustments*

UNIT- IV INVENTORIES

6 HRS

Introduction to inventories – Creation of stock category – Stock groups – Stock items – Editing and deletion of stock items – Usage of stock in voucher entry – Stock voucher or purchase orders – Sales orders – Customer and supply analysis – Extracting simple reports and graphs with tally accounting package.

Extra Reading /Keywords: *Inventories, Stock vouchers*

UNIT-V COST CENTRE

6 HRS

Introduction to cost – Creation of cost category – Cost centre category – Editing and deleting cost centre. Usage of cost category and cost centre in voucher entry – Budgetcontrol – Creation of budgets – Editing and deleting budgets – Reports.

Extra Reading /Keywords: *Cost centre and Cost category.*

Note: Texts given in the Extra Reading /Keywords must be tested only through assignment and seminar.

Note: Learners are advised to use latest edition of books.

COURSE OUTCOMES (CO)

The learners:

CO No.	Course Outcomes	Cognitive Level
CO-1	Recall the concepts of Computerised accounting and Tally software	K1
CO-2	Identify the types of vouchers and procedure for preparing final accounts, inventory accounting, cost centers and cost categories.	K2
CO-3	Construct the final accounts with adjustments and create vouchers and inventory accounts and bill wise details of cost categories.	K3
CO-4	Demonstrate accounting skills and analytical skills in using Tally Software	K4
CO-5	Examine the accounting procedures to rectify the correctness of accounting procedure for companies	

(K1- Remember; K2- Understand; K3 – Apply; K4 –Analyse)

TEXT BOOK

ICAR and D Team, (2018) Tally 9, New Delhi, Vikas Publishing House Pvt. Ltd.

SUGGESTED READINGS

1. Asok K Nadhani (2018), Tally ERP. 9 Training Guide, New Delhi: BPB Publications.
2. Gaurav Agarawal (2021), Tally Prime with GST book Digital Mumeen Ji, 1st edition
3. Vikas Gupta (2020), Tally ERP with GST in simple steps, DT Editorial Services.
4. Vikas Gupta (2018) Comdex Tally. ERP .9 Dreamtech Press.
5. Srinivasa Vallaban (2019) Computer Applications in Business, New Delhi: Sultan and Sons.

WEB REFERENCES

1. <https://tallysolutions.com/tally/what-is-tally-erp-9-and-how-to-use-it/>
2. <https://tallysolutions.com/learning-hub/>
3. https://help.tallysolutions.com/article/Tally.ERP9/Voucher_Entry/Accounting_Vouchers/Voucher_Entry_in_Tally.htm#:~:text=A%20voucher%20is%20a%20document,financial%20position%20of%20the%20company.

COMPUTER PRACTICAL FOR BUSINESS SOFTWARE - FOR EXTERNAL EVALUATION

- Petty Cash Entries, Subsidiary Books
- Accounts Only – Accounts with Inventory
- Accounts with Inventory Tax Initialize

- Stock Categories
- Cost Centre
- Cost Categories
- Stock Journal
- Balance Sheet
- Final Accounts Without Adjustments
- Final Accounts with Adjustments
- Order Processing
- Price List
- Bill-wise Details
- Bank Reconciliation Statement
- Interest Calculation

Note: Learners are advised to use latest edition of books.

PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO -1	H	M	M	L	H	H	H	M	M
CO -2	H	M	M	L	H	H	H	M	M
CO -3	H	M	M	L	H	H	H	M	M
CO -4	H	M	M	L	H	H	H	H	H
CO-5	H	M	M	L	H	H	H	H	H

PSO – CO MAPPING

CO/PSO	PSO 1	PSO 2	PSO 3
CO -1	M	H	M
CO -2	H	H	H
CO -3	H	H	H
CO -4	H	H	H
CO- 5	H	H	H

Course Title	SKILL ENHANCEMENT COURSE –7 INTRODUCTION TO SPSS
Hours/Week	2
Code	U23CC4SET07
Course Type	Theory cum Practical
Credits	2
Marks	100

CONSPECTUS

To provide familiarity with the tool box of statistical software and enable them to have deep understanding of statistical package for SPSS

COURSE OBJECTIVES

1. To understand the statistical packages
2. To know various tests available in SPSS software packages
3. To familiarize with data handling statistically
4. To learn about analyzing the data
5. To gain insights into various tests which statistically prove the tests.

UNIT I - INTRODUCTION TO SPSS

6 HRS

SPSS Environment: data editor, output viewer, syntax editor – Data view window

SPSS Syntax – Data creation – Importing data – Variable types in SPSS and Defining variables – Creating a Codebook in SPSS.

Extra Reading /Keywords: *Tabulation in spss*

UNIT II - WORKING WITH DATA

6 HRS

Computing Variables - Recoding (Transforming) Variables: Recoding Categorical String

Variables using Automatic Recode -Rank Cases - Sorting Data - Grouping or Splitting Data.

Extra Reading /Keywords: *Dependent Variable, Independent variable*

UNIT III – EXPLORING DATA

6 HRS

Descriptive Statistics for Continuous Variables - The Explore procedure - Frequencies

Procedure -Descriptive - Compare Means - Frequencies for Categorical Data.

Extra Reading /Keywords: *Standard deviation, Regression*

UNIT IV – ANALYSING DATA -I

6 HRS

Inferential Statistics for Association: Pearson Correlation -Chi-square Test of Independence

Extra Reading /Keywords: *Man-Whitney test*

UNIT V – ANALYSING DATA -II

6 HRS

Inferential Statistics for Comparing Means: One Sample t Test, Paired- Samples T Test -

Independent Samples T Test, One-Way ANOVA.

Extra Reading /Keywords: *Two-way ANOVA*

TEXT BOOK

SPSS for Intermediate Statistics: Use and Interpretation, Nancy L. Leech et. al., Second edition published in 2005 by Lawrence Erlbaum Associates, Inc.

SUGGESTED READINGS

1. Using IBM SPSS statistics for research methods and social science statistics, William E. Wagner, Fifth edition published in 2015 by SAGE Publications, Inc.
2. HOW TO USE SPSS ® A Step-By-Step Guide to Analysis and Interpretation, Brian C. Cronk, Tenth edition published in 2018 by Routledge.

WEB REFERENCE

1. IBM 2016, *IBM Knowledge Center: SPSS Statistics*, IBM, viewed 18 May 2016, <https://www.ibm.com/support/knowledgecenter/SSLVMB/welcome/>
2. <https://onlinelibrary.wiley.com/doi/book/10.1002/9781119417453>
3. https://benthamsience.com/ebook_volume/3325/related-ebooks

Note: Learners are advised to use latest edition of books.

COURSE OUTCOMES

CO No.	Course Outcomes	Cognitive Level (K1-K5)
CO-1	Remember the various statistical tools to analyze data	K1
CO-2	Explain the application of SPSS statistical package in real time cases	K2
CO-3	Apply the knowledge of preparation of tests	K3
CO-4	Analyze the data with the predicted results through tests	K4
CO-5	Evaluate the hypothesis using tests	K5

(K1- Remember, K2 - Understand, K3 – Apply, K4 – Analyse, K5 - Evaluate)

PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO 1	H	H	H	H	M	M	H	M	H
CO 2	H	H	M	H	H	M	H	H	H
CO 3	M	M	H	M	M	M	H	H	H
CO 4	H	H	H	M	H	M	H	M	H
CO 5	M	M	H	M	M	M	H	H	H

PSO – CO MAPPING

CO/PSO	PSO 1	PSO 2	PSO 3
CO 1	H	H	M
CO 2	H	H	H
CO 3	H	M	H
CO 4	H	H	H
CO 5	H	M	H

Course Title	CORE COURSE -9 – COST ACCOUNTING
Code	U23CC5CCT09
Course Type	Theory
Semester	V
Hours/Week	5
Credits	4
Marks	100

CONSPECTUS

This course provides an understanding of basic principles of cost accounting and developing skills in the preparation of cost accounts.

COURSE OBJECTIVES

1. To understand the costing concepts and preparation of cost sheet, tenders and Quotations.
2. To understand material cost computation.
3. To understand the preparation of labour cost, allocation and apportionment of overheads.
4. To apply the procedure for the preparation of contract accounts and process accounts
5. To understand the computation of transport cost and to apply the procedure for preparation of reconciliation statement.

UNIT – I INTRODUCTION TO COST ACCOUNTING

15 HRS

Cost Accounting – Definition - Scope and Objectives - Cost Center and Cost Unit - Cost Accounting and Financial Accounting - Methods and Techniques of Costing - Cost Concepts and Classification - Cost Sheet - Tenders and Quotations

Extra Reading/ Keywords: *Prime Cost, Works Cost, Cost of Production and Cost of sales*

UNIT - II MATERIAL COST

15 HRS

Material Cost - Purchase Control - Stores Control - Fixation of various levels - Perpetual Inventory System- ABC analysis - Control over Issues - Methods of pricing material issues

FIFO – LIFO - Average Price Method - Base Stock Method.

Extra Reading/ Keywords: *EOQ, FIFO method, LIFO method, Weighted Average Price.*

UNIT - III LABOUR AND OVERHEAD COST

15 HRS

Labour Cost - Labour Turnover - Idle time - Overtime - Computation of Labour Cost - Systems of wage payment - Premium and Bonus Plan - Overheads – Classification - Allocation and Apportionment of overheads - Bases of apportionment - Absorption of overheads - Methods of absorption of manufacturing overheads - Machine Hour Rate – Activity based costing – Steps in Development of an ABC system

Extra Reading/ Keywords: *Labour turnover, Apportionment of overheads, Absorption of overheads, Machine Hour rate*

UNIT - IV CONTRACT COSTING AND PROCESS COSTING

15 HRS

Contract Costing - Cost Plus Contracts - Escalation Clause - Process costing - Normal loss - Abnormal loss - Abnormal gain (excluding Inter process profit & equivalent production).

Extra Reading /Keywords: *Work Certified, Work uncertified - Escalation clause - Equivalent production*

UNIT – V SERVICE COSTING AND RECONCILIATION OF COST & FINANCIAL ACCOUNTING

15 HRS

Service Costing –Transport Costing - Reconciliation of cost and financial accounts - Need for reconciliation – causes for disagreement in profits – Preparation of reconciliation statement.

Extra Reading /Keywords: *Transport Costing, Tonne, Kilometre and passenger Kilometres-Memorandum reconciliation statement.*

Note: Texts given in the Extra Reading /Keywords must be tested only through Assignment and Seminar.

Theory - 20% Problems - 80%

TEXT BOOK

Reddy T.S and Hari Prasad Reddy (2019), *Cost Accounting*, Margham Publications, Chennai.

SUGGESTED READINGS

1. Jain S.P. and Narang, K.L. (2020), *Cost Accounting Principles and Practices*, Kalyani Publishers, New Delhi.
2. Maheshwari.S.N and Mittal. S.N (2015), *Cost Accounting*, Mahavir Publication, Delhi.
3. Saxena.V.K and Vashist. C.D (2012), *Cost Accounting-Problems and Solutions*, S Chand, Delhi.

WEB REFERENCES

1. <https://icmai.in/upload/Students/Syllabus2016/Inter/Paper-8-January-2021.pdf>
2. https://www.icai.org/post.html?post_id=17759
3. https://onlinecourses.nptel.ac.in/noc20_mg53/preview
4. https://ugmoocs.inflibnet.ac.in/index.php/courses/view_ug/198

Note: Learners are advised to use latest edition of books.

COURSE OUTCOMES (CO)

CO No.	Course Outcomes	Cognitive Level
CO-1	Recall cost concepts, tenders, quotations, contract costing and service costing.	K1
CO-2	Understand the cost techniques, methods of related to material, labour and overheads, preparation of contract, process and service costing.	K2
CO-3	Apply the procedures related to preparation of cost sheet, contract costing, service costing and different elements of cost.	K3
CO-4	Examine the treatment for costing techniques and reconciliation of integrated accounts.	K4
CO-5	Appraise the methods, techniques and classification of costing and reconcile the cost accounts with financial accounts	K5
CO-6	Develop accounting skills relevant to cost data of business entities.	K6

(K1- Remember, K2- Understand, K3 – Apply, K4 – Analyse, K5- Evaluate, K6- Create)

PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO 1	H	M	M	L	H	M	H	H	H
CO 2	H	M	M	L	H	M	H	H	H
CO 3	H	M	M	L	H	M	H	H	H
CO 4	H	M	M	L	H	M	H	H	H
CO 5	H	M	M	L	H	M	H	H	H
CO 6	H	M	M	M	H	M	H	H	H

PSO – CO MAPPING

CO/PSO	PSO 1	PSO 2	PSO 3
CO 1	H	H	M
CO 2	H	H	M
CO 3	H	H	M
CO 4	H	H	M
CO 5	H	H	M
CO 6	H	H	M

Course Title	CORE COURSE 10 – BANKING THEORY LAW AND PRACTICE
Code	U23CC5CCT10
Course Type	Theory
Semester	II
Hours/Week	5
Credits	4
Marks	100

CONSPECTUS

This course aims at providing an understanding of banking law and practices and the recent trends in banking.

COURSE OBJECTIVES

1. To understand the functions of commercial banks, RBI, its organization, functions and methods of credit control.
2. To analyze the relationship between banker and customer and various types of bank accounts.
3. To understand negotiable instruments and statutory protection to paying banker and collecting banker.
4. To analyze the procedure and policies adopted by banks to provide loans and advances to customers.
5. To understand the recent trends in banking and Indian financial network.

UNIT I - INTRODUCTION TO BANKING

15 HRS

Commercial Banks - Functions - Credit creation - Reserve Bank of India - Organisation and functions - Methods of credit control - Business of Banking Companies - Control over Management - Prohibition of certain activities in relation to banking companies.

Extra Reading /Keywords: History of banking

UNIT II - BANKER AND CUSTOMER RELATIONSHIP

15 HRS

Banker and Customer relationship - Special features.

Different types of accounts - Opening and closing of accounts - Forms used in the operation of bank account - Cheque book, Pass book, Mistakes in the pass book - Types of account holders.

Extra Reading /Keywords: Relationship banking strategy

UNIT III - NEGOTIABLE INSTRUMENTS

15 HRS

Negotiable instruments - Definition - Cheque - Features - Holder and holder in due course - Payment in due course - Crossing - Different types. Endorsements - Different kinds - Paying banker - Material alteration - Refusal of payment by banks – Statutory protection to the paying banker. Collecting banker - Statutory protection.

Extra Reading /Keywords: Securitization, Remittance services

UNIT IV - LOANS AND ADVANCES

15 HRS

Loans and Advances - Principles of good lending - Credit worthiness of borrowers. - Modes of securing advances - Lien, Pledge, Mortgage and Hypothecation - Advances against different types of securities – Goods, Documents of title to goods, Life insurance policies, FDR and Government Securities.

Extra Reading /Keywords: Loan syndication, banc assurance

UNIT V - RECENT TRENDS IN BANKING

15 HRS

E-Banking – Internet Banking – Telephone Banking – Mobile Banking – ATMs. - Cash Machine – Electronic Money - Electronic Fund Transfer System (EFT) – RTGS,NEFT,MICR, KYC norms and Clearing house - Indian Financial Network – Customer Grievances Redressal and Ombudsman.

Extra Reading /Keywords: Core banking, Control mechanism

Note: Texts given in the Extra Reading /Key words must be tested only through assignment and seminar.

TEXT BOOK

Varshney P.N., and Sundharam K.P.M. (2016), Banking Theory Law and Practice; SultanChandSons; New Delhi.

SUGGESTED REFERENCES

1. Tannan. M.L., (2017) - Banking Law and Practice in India, 27th edition, IndianLaw House,New Delhi.
2. Gordon E and Natarajan, K. (2021)-Banking Theory Law and Practice, HimalayasPublishingHouse, New Delhi.
3. Maheswari S. N. and Maheswari, S. K. (2014), Banking Law and Practice – KalyaniPublishers, Ansari Rd, Daryaganj, New Delhi 110002.
4. Gupta O.P. and Santosh Kumari Gupta, (2019) Banking Law and Practice in India,SahityaBhawan Publications, Khandari, Agra, Uttar Pradesh - 282002.
5. Agarwal, O.P, (2019), Modern Banking of India, Himalaya Publications, Mumbai.

WEB REFERENCES

1. Reserve Bank of India. - https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/RBIAM_230609.pdf.
2. Banking Law and Practice: <https://www.icsi.edu/media/webmodules/publications/9.1%20Banking%20Law%20Professional.pdf>.
3. Indian Institute of Banking and Finance - <https://www.yumpu.com/user/iibf.org.in>
4. KLE Law Academy – <https://www.gklawcollege.com/wp-content/themes/gklawtheme/downloads/library/studymaterials/1banking-law.pdf>.
5. Symbiosis Law School, Hyderabad – <https://www.slsh.edu.in/cbf>.

Note: Learners are advised to use latest edition of books.

COURSE OUTCOMES

CO No.	Course Outcomes	Cognitive Level
CO-1	Recall the basic concepts in banking, functions, roles and banking activities.	K1
CO-2	Explain the general and special relationship between banker and customer, framework of negotiable instruments used in banking and modes of securing advances.	K2
CO-3	Apply the banking laws and procedures in day-to-day banking transactions.	K3
CO-4	Analyze the banking activities in relation to various banking regulations.	K4

(K1- Remember; K2- Understand; K3 – Apply; K4 – Analyze.)

PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO 1	H	M	H	M	L	H	H	H	M
CO 2	H	M	H	H	M	H	H	H	M
CO 3	H	M	H	M	M	H	H	H	M
CO 4	H	M	H	M	M	H	H	H	M

PSO – CO MAPPING

CO/PO	PSO 1	PSO 2	PSO 3
CO 1	H	H	M
CO 2	H	H	M
CO 3	H	H	M
CO 4	H	H	M

Course Title	CORE COURSE 11– INCOME TAX THEORY LAW AND PRACTICE
Hours/Week	5
Code	U23CC5CCT11
Course Type	Theory
Credits	4
Marks	100

CONSPECTUS

The course aims to equip the learners with the basic principles of Income Tax Law and enable the learners to apply the basic principles in computing income tax.

COURSE OBJECTIVES

1. To understand the concepts of income tax and determination of residential status.
2. To apply the provisions concerning income from salary.
3. To apply the provisions relating to income from house property and capital gains.
4. To apply the provisions of income from profits and gains of business or profession
5. To apply the provisions concerning income from other sources and computation of tax liability of an individual.

UNIT – I INTRODUCTION AND RESIDENTIAL STATUS 15 HRS

Income Tax Act - Introduction and important definitions - Assessment year, previous year, Person, Assesse.- Determination of residential status of an individual - Scope of total income.

Extra Reading /Keywords: *Agricultural income, Capital and Revenue receipts*

UNIT – II INCOME FROM SALARIE 15 HRS

Income from Salaries - Chargeability – Allowances - Pension – Gratuity - Encashment of earned leave – Perquisites -Deductions from salary under Section 16 - Computation of salary income.

Extra Reading /Keywords: *Super Annuation Fund, Salary in arrears.*

UNIT – III INCOME FROM HOUSE PROPERTY AND CAPITAL GAINS 15 HRS

Income from House Property - Annual Value - Let out and Self occupied property - Deemed to be let out property - Deductions under Sec. 24 - Capital Gains - Chargeability - Capital asset - Cost of acquisition - Transfer -Computation of capital gains – Exemptions under Sections 54, 54EC, 54F.

Extra Reading /Keywords: *Arrears of rent, Unrealised rent*

UNIT – IV PROFITS AND GAINS OF BUSINESS OR PROFESSION 15 HRS

Profits and Gains of Business or Profession: Meaning and Scope – Deductions under Sections 36 and 37- Expenses and payments not deductible -Computation of income under Profits and Gains of Business or Profession.

Extra Reading /Keywords: *Maintenance of books of accounts, Audit report.*

UNIT – V INCOME FROM OTHER SOURCES AND TAX LIABILITY 15 HRS

Income from Other Sources - Casual income - Interest income - Tax Deducted at Source and Grossing up. Dividends - Winnings from lotteries, Crossword puzzles and Card games. -Deductions in computing total income (Sections 80C, 80D, 80E, 80G,80U) Computation of tax liability of an individual

Extra Reading /Keywords: *Deep discount bonds, Composite letting.*

Theory - 30%

Problem - 70%

Note: Texts given in the Extra Reading /Keywords must be tested only through assignment and seminar.

TEXT BOOK

Vinod K. Singhanian, Monica Singhanian, Student's Guide to Income Tax Including GST, Assessment year 2023-24, Delhi; Taxmann.

SUGGESTED READINGS

1. Reddy T.S & Hari Prasad Y, Income Tax Theory Law and Practice, Assessment year 2023-24, Margham Publications, Chennai.
2. Srinivasan T, Income Tax Law and Practice, Assessment year 2023-24, Vijay Nicole, Chennai.
3. Manoharan T.N and Hari G.R, Student's Handbook on Taxation (Including Income Tax Law and GST Law), Assessment year 2023-24, Snow White.
4. Murthy A, Income Tax Law and Practice, Assessment year 2023-24, Vijay Nicole, Chennai.

WEB REFERENCES

1. <https://www.incometaxindia.gov.in>
2. <https://www.incometaxindiaefilinggov.in>
3. <https://www.onlineservicestn.egov-nsdl.com>

Note: Learners are advised to use latest edition of books.

COURSE OUTCOMES

CO No.	Course Outcomes	Cognitive Level
CO-1	Recall the basic concepts of income tax and provisions concerning determination of residential status, income from - salary, house property, capital gains, profits and gains of business or profession, and income from other sources.	K1
CO-2	Understand the provisions relating to determination of residential status, income from - salary, house property, capital gains, profits and gains of business or profession, and income from other sources.	K2
CO-3	Apply the provisions relating to determination of residential status, income from - salary, house property, capital gains, profits and gains of business or profession, and income from other sources.	K3
CO-4	Analyse the provisions relating to determination of residential status, income from - salary, house property, capital gains, profits and gains of business or profession, and income from other sources.	K4
CO-5	Assess the provisions relating to determination of residential status, income from - salary, house property, capital gains, profits and gains of business or profession, income from other sources and tax liability.	K5
CO-6	Modify the calculation of tax liability of an individual based on the appropriate provisions.	K6

(K1- Remember; K2- Understand; K3 – Apply; K4 – Analyse; K5- Evaluate; K6 – Create)

PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO 1	H	H	H	H	M	M	H	M	H
CO 2	H	H	M	H	H	M	H	H	H
CO 3	M	M	H	M	M	M	H	H	H
CO 4	H	H	H	M	H	M	H	M	H
CO 5	M	M	H	M	M	M	H	H	H
CO 6	H	H	H	M	H	M	H	M	H

PSO – CO MAPPING

CO/PSO	PSO 1	PSO 2	PSO 3
CO 1	H	H	M
CO 2	H	H	H
CO 3	H	M	H
CO 4	H	H	H
CO 5	H	M	H
CO 6	H	H	H

Course Title	CORE COURSE 12 – MANAGEMENT ACCOUNTING
Hours/Week	6Hrs / Wk
Code	U23CC6CCT12
Course Type	Theory
Credits	4
Marks	100

CONSPECTUS

To provide an understanding of the principles and practice of auditing and understand the procedure for investigation.

COURSE OBJECTIVES

1. To understand basics management accounting
2. To know the aspects of Financial Statement Analysis
3. To familiarize with fund flow and cash flow analysis
4. To learn about budgetary control
5. To gain insights into marginal costing.

UNIT I - INTRODUCTION TO MANAGEMENT ACCOUNTING 18 HRS

Management Accounting – Meaning – Scope – Importance- Limitations
 Management Accounting Vs Cost Accounting – Management Accounting Vs Financial Accounting.
Extra Reading /Keywords: *Role of professional bodies for Management Accountancy in India*

UNIT II - FINANCIAL STATEMENT ANALYSIS 18 HRS

Analysis and Interpretation of Financial Statements – Nature and Significance – Types of Financial Analysis Tools of Analysis – Comparative Statements – Common Size Statement – Trend Analysis. Ratio Analysis: Meaning – Advantages – Limitations Types of Ratios – Liquidity Ratios – Profitability Ratios -Turnover Ratios – Capital Structure Ratios – Leverage Ratios -Preparation of Financial Statements from Ratios.

Extra Reading /Keywords: *Solvency ratios*

UNIT III – FUND FLOW ANALYSIS & CASH FLOW ANALYSIS 18 HRS

Introduction, Meaning of Funds Flow Statement-Ascertainment of Flow of Funds - Technique of Preparing Funds Flow Statement- Schedule of Changes in Working Capital- Adjusted Profit and Loss Account - Preparation of Funds Flow Statement. **Cash Flow Statements:** Meaning – Advantages – Limitations – Preparation of Cash Flow Statement as per AS 3 – Types of Cash Flows - Operating, Financing and Investing Cash Flows.

Extra Reading /Keywords: *Cash Flow Statement as per New Companies Act, 2013.*

UNIT IV – BUDGETARY CONTROL 18 HRS

Budgetary Control: Meaning – Preparation of Various Budgets – Cash Budget -Flexible Budget– Production Budget – Sales Budget.

Extra Reading /Keywords: *Budgeting practices of business firms*

UNIT V – MARGINAL COSTING 18 HRS

Meaning - Features – Fixed Cost, Variable Cost and Semi Variable Cost- Contribution-Marginal Cost Equation- P/V Ratio - Break Even Point - Margin of Safety – Cost- Volume Profits Analysis- Break Even Point - Decision Making : Selection Of a Product Mix – Make or Buy Decision – Discontinuance of a product line – Change or Status quo – Limiting Factors – Exploring New Markets.

Extra Reading /Keywords: *Types of breakeven point*

TEXT BOOK

Dalston L. Cecil & Jenitra L. Merwin, (2017) *Management Accounting*, Trichy, LearnTech Press.

SUGGESTED READINGS

2. Reddy T.S & .Hari Prasad Reddy Y (2014), *Management Accounting*, Chennai, Margham Publications
3. Shashi K. Guptha & Sharma R.K (2014), *Management Accounting*, New Delhi: Kalyani Publishers.
4. Maheswari S.N (2014). *Management Accounting*; New Delhi : Sultan Chand and Sons.
5. Dr. R. Ramachandran & Dr. R. Srinivasan (2018), *Management Accounting*, Trichy: SriRam Pubishers.

WEB REFERENCE

1. <https://www.accountingnotes.net/companies/fund-flow-analysis/fund-flow-analysis-accounting/13300>
2. <https://accountingshare.com/budgetary-control/>
3. <https://www.investopedia.com/terms/m/marginalcostofproduction.asp>

Note: Learners are advised to use latest edition of books.

COURSE OUTCOMES

CO No.	Course Outcomes	Cognitive Level (K1-K5)
CO-1	Remember and recall basics in management accounting	K1
CO-2	Apply the knowledge of preparation of Financial Statements	K2
CO-3	Analyze the concepts relating to fund flow and cash flow	K3
CO-4	Evaluate techniques of budgetary control	K4
CO-5	Formulate criteria for decision making using principles of marginal costing.	K5

(K1- Remember, K2 - Understand, K3 – Apply, K4 – Analyse, K5 - Evaluate)

PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO 1	H	H	H	H	M	M	H	M	H
CO 2	H	H	M	H	H	M	H	H	H
CO 3	M	M	H	M	M	M	H	H	H
CO 4	H	H	H	M	H	M	H	M	H
CO 5	M	M	H	M	M	M	H	H	H

PSO – CO MAPPING

CO/PSO	PSO 1	PSO 2	PSO 3
CO 1	H	H	M
CO 2	H	H	H
CO 3	H	M	H
CO 4	H	H	H
CO 5	H	M	H

Course Title	ELECTIVE COURSE 5 – FINANCIAL MANAGEMENT
Code	U23CC5ECT09
Course Type	Theory
Semester	V
Hours/Week	5
Credits	4
Marks	100

CONSPECTUS

The course aims to equip the learners with the basics of financial management and enable the learners to apply complex financial management decisions.

COURSE OBJECTIVES

1. To introduce the concept of financial management.
2. To learn the capital structure theories.
3. To gain knowledge about techniques in capital budgeting
4. To learn about dividend payment models
5. To understand the needs and calculation of working capital in an organization

UNIT I: INTRODUCTION

15 HRS

Meaning and Objectives of Financial Management – Functions of Financial Management. Finance - Sources of Finance - Role of Financial Manager - Financial Goals - Profit maximization Vs. Wealth Maximization – Concept of Time Value Money – Risk and Return – Components of Financial Management.

Extra Reading / Keyword: *Financial Planning – Objectives and Functions*

UNIT II: FINANCIAL DECISION

15 HRS

Capital Structure – Definition - Meaning- Theories- Factors determining Capital Structure – Various approaches of Capital structure

Cost of Capital – Meaning – Factors determining cost of capital - Methods - Cost of Equity Capital – Cost of Preference Capital – Cost of Debt – Cost of Retained Earnings – Weighted Average (or) Composite Cost of Capital (WACC) Leverage – Concept – Operating and Financial Leverage

Extra Reading / Keyword: *Debt vs Equity*

UNIT III: INVESTMENT DECISION

15 HRS

Capital Budgeting - Meaning - Process – Cash Flow Estimation Capital Budgeting Appraisal Methods: Traditional Methods - Payback Period – Accounting Rate of Return (ARR).

Discounted Cash-flow Methods: Net Present Value (NPV) – Internal Rate of Return – Profitability Index

Extra Reading / Keyword: *Objectives of Capital Expenditure Decision*

UNIT IV: DIVIDEND DECISION

15 HRS

Meaning – Dividend Policies – Factors Affecting Dividend Payment – Provisions on Dividend Payment in Company Law – Dividend Models - Walter’s Model - Gordon’s Model – M&M Model.

Extra Reading / Keyword: *Dividend Payout Policies*

UNIT V: WORKING CAPITAL DECISION

15 HRS

Meaning – Dividend Policies – Factors Affecting Dividend Payment – Provisions on Dividend Payment in Company Law – Dividend Models - Walter’s Model - Gordon’s Model – M&M Model.

Extra Reading / Keyword: *Motives for holding Cash*

Theory – 40% Problems 60%

Note: Texts given in the Extra Reading /Keywords must be tested only through assignment and seminar.

TEXT BOOK:

- R.K. Sharma, Shashi K Gupta, Financial Management, Kalyani Publications, NewDelhi

Books for References:

- M.Y. Khan and P.K.Jain, Financial Management, McGraw Hill Education, Noida
- I.M. Pandey, Financial Management, Vikas Publications, Noida
- Dr.S.N. Maheshwari, Elements of Financial Management, Sultan Chand & Sons, NewDelhi
- Dr.Kulkarni and Dr. Sathya Prasad, Financial Management, Himalaya PublishingHouse, Mumbai

COURSE OUTCOME

CO. No	Course Outcomes	Cognitive Level
CO 1	Recall the concepts of financial management, time value of money, cost of capital, capital structure, working capital management, techniques of capital budgeting, and dividend policy.	K1
CO 2	Understand the concepts of financial management, time value of money, cost of capital, capital structure, working capital management, techniques of capital budgeting, and dividend policy.	K2
CO 3	Apply the methods of time value of money cost of capital, capital structure, working capital management, techniques of capital budgeting, and dividend policy.	K3
CO 4	Analyse the methods of time value of money cost of capital, capital structure, working capital management, techniques of capital budgeting, and dividend policy	K4
CO 5	Evaluates the techniques of capital budgeting, cost of capital, capital structure, working capital management, techniques of capital budgeting, and dividend policy	K5
CO 6	Create the concepts of financial management , time value of money, cost of capital, capital structure, working capital management, techniques of capital budgeting, and dividend policy	K6

(K1- Remember; K2- Understand; K3 – Apply; K4 – Analyse; K5- Evaluate; K6 – Create)

PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO 1	L	M	M	M	L	L	H	H	H
CO 2	L	M	M	M	L	L	H	H	H
CO 3	L	M	M	M	L	L	H	H	H
CO 4	L	M	M	M	L	L	H	H	H
CO 5	L	M	M	M	L	L	H	H	H
CO 6	L	M	M	M	L	L	H	H	H

PSO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3
CO 1	H	M	H
CO 2	H	M	H
CO 3	H	M	H
CO 4	H	M	H
CO 5	H	M	H
CO 6	H	M	H

Course Title	ELECTIVE COURSE 5 – INDIRECT TAXATION
Code	U23CC5ECT10
Course Type	Theory
Semester	V
Hours/Week	5
Credits	4
Marks	100

CONSPECTUS

The course aims to equip the learners with the basic principles of Indirect Tax and enable the learners to apply the basic principles in computing income tax.

COURSE OBJECTIVES

1. To get introduced to indirect taxes
2. To have an overview of Indirect taxes
3. To be familiar the CGST and IGST Act
4. To learn procedures under GST
5. To gain knowledge about Customs Duty.

UNIT I: INTRODUCTION TO INDIRECT TAX

15 HRS

Concept and Features of Indirect Taxes - Difference between Direct and Indirect Taxes – Special Feature of Indirect Tax Levies – Contribution to Government Revenues – Role of Indirect Taxation – Merits and Demerits of Indirect Taxation – Reforms in Indirect Taxation – Introduction to Foreign Trade Policy(FTP) 2023

Extra Reading / Keyword: *Indirect tax in India*

UNIT II: An Overview of Goods & Service Tax (GST)

15 HRS

Introduction of Goods and Service Tax in India— Kelkar Committee - Constitutional Amendment - Goods and Service Tax: Concepts, Meaning, Significance, Features and Benefits - Important GST Common Portals – Taxes and Duties not Subsumed in GST – Rates of GST in India - Role of GSTN in Implementation of GST - Challenges in Implementation of GST

Extra Reading / Keyword: *Input tax credit under GST*

UNIT III: CGST & IGST Act 2017

15 HRS

Supply – Meaning – Classification – Time of Supply – Valuation – Voluntary – Compulsory – Input Tax Credit – Eligibility – Reversal – Reverse charge Mechanism – E-Way Bill - Various Provisions Regarding E-way Bill in GST – IGST Act - Export and Import of Goods and Services– Inter State Vs Intra State Supply – Place of Supply.– Anti Profiteering Rules – Doctrine of Unjust Enrichment

Extra Reading / Keyword: *GST Council*

UNIT IV: Procedures under GST

15 HRS

Registration under GST Law, Tax Invoice Credit and Debit Notes, Different GST Returns, Electronic Liability Ledger, Electronic Credit Ledger, Electronic Cash Ledger, Different Assessment under GST, Interest Penalty under GST, Mechanism of Tax Deducted at Source

(TDS) and Tax Collected at Source (TCS), Audit under GST.

Extra Reading / Keyword: GST Benefits

UNIT V Customs Act 1962

15 HRS

Custom Duty: Concepts; Territorial Waters - High Seas - Levy of Customs Duty, Types of Custom Duties – Valuation - Baggage Rules & Exemptions.

Extra Reading / Keyword: / *Customs duty in India*

Theory – 20% Problems 80%

Note: Texts given in the Extra Reading /Keywords must be tested only through assignment and seminar.

TEXT BOOK:

- Vinod K Singhania, Indirect Taxes, Taxman’s Publications, New Delhi

Books for References:

- Dr. H.C. Mehrotra & Prof. V.P. Agarwal, Goods and Services Tax (GST), Sahitya Bhawan Publications, Agra.
- Rajat Mohan, Goods & Services Tax, Bharat Law Publications House, New Delhi.
- CA. Pushpendra Sisodia, Indirect Tax Laws, Bharat Publications, New Delhi.

COURSE OUTCOME

CO. No	Course Outcomes	Cognitive Level
CO 1	Recall the concepts of GST, Time value of supply, input tax credit, debit notes, credit notes, TDS, TCS, Customs duties and Baggage Rules & Exemptions.	K1
CO 2	Understand the concepts of GST, Time value of supply, input tax credit, debit notes, credit notes, TDS, TCS, Customs duties and Baggage Rules & Exemptions.	K2
CO 3	Apply the concepts of GST, Time value of supply, input tax credit, debit notes, credit notes, TDS, TCS, Customs duties and Baggage Rules & Exemptions.	K3
CO 4	Determine the concepts of GST, Time value of supply, input tax credit, debit notes, credit notes, TDS, TCS, Customs duties and Baggage Rules & Exemptions.	K4
CO 5	Estimate the concepts of GST, Time value of supply, input tax credit, debit notes, credit notes, TDS, TCS, Customs duties and Baggage Rules & Exemptions.	K5
CO 6	Create the concepts of GST, Time value of supply, input tax credit, debit notes, credit notes, TDS, TCS, Customs duties and Baggage Rules & Exemptions.	K6

(K1- Remember; K2- Understand; K3 – Apply; K4 – Analyse; K5- Evaluate; K6 – Create)

PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO 1	L	M	M	M	L	L	H	H	H
CO 2	L	M	M	M	L	L	H	H	H
CO 3	L	M	M	M	L	L	H	H	H
CO 4	L	M	M	M	L	L	H	H	H
CO 5	L	M	M	M	L	L	H	H	H
CO 6	L	M	M	M	L	L	H	H	H

PSO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3
CO 1	H	M	H
CO 2	H	M	H
CO 3	H	M	H
CO 4	H	M	H
CO 5	H	M	H
CO 6	H	M	H

Course Title	ELECTIVE VI: Software Engineering
Code	U23CC5ECT11
Course type	Theory
Semester	V
Hours/Week	4
Credits	3
Marks	100

CONSPECTUS

To develop software projects with the analysis of all requirements.

COURSE OBJECTIVES

1. To learn about the basic concepts of software engineering.
2. To learn software development life cycle models.
3. To learn requirement analysis and specification of software development.
4. To learn and analyze the various software testing methods.
5. To learn how to maintain software quality

UNIT I:

12 HRS

Introduction – Evolution – Software Development projects
Emergence of Software Engineering- Software Life cycle models
Waterfall model – Rapid Application Development – Agile Model – Spiral Model
Extra Reading/Keywords: *Water fall model and its extensions*

UNIT II:

12 HRS

Requirement Analysis and Specification -Gathering and Analysis- SRS – Formal System Specification
Extra Reading/Keywords: *Other design analysis*

UNIT III:

12 HRS

Software Design – Overview – Characteristics – Cohesion & Coupling -Layered design –
Approaches-Function Oriented Design – Structured Analysis - DFD – Structured Design – Detailed
design
Extra Reading/Keywords: *Other Architectural design*

UNIT IV:

12 HRS

Object Modeling using UML – OO concepts – UML- Diagrams – Use case, Class, Interaction-
Activity, State Chart – Postscript
Extra Reading/Keywords: *Latest user Interface designs*

UNIT V:

12 HRS

Coding & Testing – coding – Review – Documentation-Testing – Black-box, White-box
Integration, OO Testing, Smoke testing.
Extra Reading/Keywords: *Other software testing*
Note: Extra Reading/Keywords must be tested only through assignment and seminar.

TEXT BOOKS

1. Rajib Mall, “Fundamentals of Software Engineering”, PHI 2018, 5th Edition.
2. Roger S. Pressman, “Software Engineering - A Practitioner’s Approach”, McGraw Hill 2010, 7thEdition.

SUGGESTED READINGS

1. Pankaj Jalote, "An Integrated Approach to Software Engineering", Narosa Publishing House 2011,3rd Edition.

WEB REFERENCES

1. NPTEL online course – Software Engineering - <https://nptel.ac.in/courses/106105182/>

Note: Learners are advised to use latest edition of books.

COURSE OUTCOMES

CO No.	Course Outcomes	Cognitive Level
CO-1	Recall and compare the various Software Life Cycle Models and project Estimation Techniques.	K1
CO-2	Understand the specifications of requirements analysis and software design.	K2
CO-3	Apply the concepts of function oriented software design.	K3
CO-4	Analyze coding and testing.	K4
CO-5	Evaluate the knowledge of Software documentation.	K5
CO-6	Create the knowledge of working principles in developing good software.	K6

(K1=Remember, K2=Understand, K3=Apply, K4=Analyze,k5=Evaluate,k6=create)

PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO-1	H	M	M	H	M	M	H	H	H
CO-2	H	H	M	M	H	M	M	M	H
CO-3	H	H	H	M	H	H	H	M	H
CO-4	H	M	H	H	H	M	M	M	H
CO- 5	H	H	M	M	H	M	H	H	H

PSO – CO MAPPING

CO/PSO	PSO 1	PSO 2	PSO 3
CO-1	H	M	M
CO-2	H	M	H
CO-3	H	H	M
CO-4	M	M	M
CO - 5	H	M	H

Course Title	Elective VI: Object oriented Analysis and Design
Code	U23CC5ECT12
Course type	Theory
Semester	V
Hours/Week	4
Credits	3
Marks	100

CONSPECTUS

To make aware of the software requirements, design the software using tools and to be acquainted with the writing of test cases using different testing techniques.

COURSE OBJECTIVES

1. Understand object oriented system approaches and various phases of SDLC
2. Analyze various object oriented methodologies and UML
3. Analyze different use cases, objects and methods
4. Understand and apply various design axioms, classes and interfaces.
5. Understand basic behavioral models with activity, state chart diagrams.

UNIT I:

12 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

Extra Reading/Keywords: *Microsoft SDL.*

UNIT II: RECTIFICATION OF ERRORS AND BANK RECONCILIATION STATEMENT

12 HRS

Rambaugh methodology, OMT – Booch methodology, Jacobson methodology – patterns - Unified approach – UML – Class diagram – Dynamic modelling.

Extra Reading/Keywords: *UML tools*

UNIT III:

12 HRS

Introduction - UML – Meta model - Analysis and design - more information. Outline Development Process: Overview of the process-Inception - Elaboration-construction refactoring patterns transmission-iterative development -use cases.

Extra Reading/Keywords: *Designing Methods and Protocols*

UNIT IV:

12 HRS

OO Design axioms – Class visibility – refining attributes - Methods –Access layer - OODBMS – Table – class mapping view layer

Extra Reading/Keywords: *design with inheritance.*

UNIT V:

12 HRS

Interaction diagram-package diagram - state diagram-activity diagram -deployment diagram - UML and programming

Extra Reading/Keywords: *Modeling of IT systems*

Theory - 20% Problem: 80%

Note: Extra Reading/Keywords must be tested only through assignment and seminar.

TEXT BOOKS

- Ali Bahrami, “Object Oriented System Development”, McGraw-Hill International Edition 2017.
- Martin Fowler, Kendall Scott, "UML Distilled", Addison Wesley
- Eriksson, "UML Tool Kit", Addison Wesley

SUGGESTED READINGS

1. Grady Booch, Object – Oriented Analysis and Design with Applications, Pearson Education, Ninth Edition, Indian Reprint, 2002.
2. Tom Pender, UML 2 Bible, Wiley Publishing Inc., USA.
3. Hans-Erik Ericson and Magnus Penker, *UML Toolkit*, Wiley Computer Publishing, New York.
4. Martin Fowler, *UML Distilled*, Third Edition, Pearson Education, 2011.
5. Atul Kahate, *Object Oriented Analysis and Design*, Tata MC Graw-Hill, Delhi, 2004.

WEB REFERENCES

1. <https://www.coursera.org/learn/object-oriented-design>
2. <https://medium.com/omarelgabrys-blog/object-oriented-analysis-and-design-introduction-part-1-a93b0ca69d36>
3. <https://www.geeksforgeeks.org/object-oriented-analysis-and-design/>

Note: Learners are advised to use latest edition of books.

COURSE OUTCOMES

The learners

CO No.	Course Outcomes	Cognitive Level
CO-1	The students should be able to specify software requirements, design the software using tools	K1
CO-2	To write test cases using different testing techniques.	K2
CO-3	Analyze different use cases, objects and methods.	K3
CO-4	Discuss basic behavioral models with activity, state chart diagrams.	K4

(K1=Remember, K2=Understand, K3=Apply, K4=Analyze)

PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO-1	M	L	L	M	L	L	H	H	H
CO-2	M	L	L	M	L	L	H	H	H
CO-3	H	L	L	M	L	L	H	H	H
CO-4	H	H	L	M	L	L	H	H	H

PSO – CO MAPPING

CO/PSO	PSO 1	PSO 2	PSO 3
CO-1	H	M	H
CO-2	H	M	H
CO-3	H	M	H
CO-4	H	M	H

CONSPECTUS

This course provides the exposure to work on word documents; excel spread sheets, power point presentations using the Microsoft suite of office tools.

COURSE OBJECTIVES

1. To get familiarized to the usage of UML tool kit.
2. To understand the requirements of the software and to map them appropriately to subsequent phases of the software development
3. To develop the ability to verify and validate their designs

List of Programs

Using UML tools produce analysis and design models for

1. Library Management System
2. Automatic Teller Machine
3. Student Information Management
4. Matrimony Service
5. Stock Management System

COURSE OUTCOMES

The learners

CO No.	Course Outcomes	Cognitive Level
CO1	Students must be able to analyse and design the problem at hand.	K1
CO2	Students should be able to use UML tools for the designing the software and test the correctness and soundness of their software through testing tools	K2

(K1=Remember, K2=Understand, K3=Apply, K4=Analyze)

PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO-1	M	M	H	N	M	H	M	H	M
CO-2	M	M	M	M	H	M	M	H	H

PSO – CO MAPPING

CO/PSO	PSO 1	PSO 2	PSO 3
CO-1	H	M	H
CO-2	M	M	H

Course Title	CORE COURSE 13 – COST ACCOUNTING II
Code	U23CC6CCT13
Course Type	Theory
Semester	VI
Hours/Week	6
Credits	4
Marks	100

CONSPECTUS

This course provides an in-depth knowledge of the Cost Accounting Principles and standards for identification, analysis and classification of cost components to facilitate managerial decision making.

COURSE OBJECTIVES

1. To understand the standards in Cost Accounting
2. To know the concepts of contract costing
3. To be familiar with the concept of process costing
4. To learn about operation costing
5. To gain insights into standard costing

UNIT I: COST ACCOUNTING STANDARDS 18 HRS

An Introduction to CAS – Purpose of CAS – Advantages of CAS – Difference between CAS and FAR Regulations – Different Degrees of CAS Coverage – Cost Accounting Standards - Responsibility Accounting and Divisional Performance Measurement

Extra Reading/ Keywords: *Format of the CAS Standards*

UNIT II: JOB COSTING, BATCH AND CONTRACT COSTING 18 HRS

Definitions - Features - A Comparison - Calculation of Profit on Contracts – Cost plus Contract - Preparation of Contract A/c.

Extra Reading/ Keywords: *Accounting software for Job costing.*

UNIT III: PROCESS COSTING 18 HRS

Process Costing – Meaning – Features of Process Costing – Application of Process Costing – Fundamental Principles of Process Costing – Preparation of Process Accounts - Treatment of Loss and Gain: Normal and Abnormal Loss - Abnormal Gain - Concept of Equivalent Production - Joint Products and By Products

Extra Reading/ Keywords: *Difference between Job costing and Process costing*

UNIT IV: OPERATING COSTING 18 HRS

Contract Costing - Cost Plus Contracts - Escalation Clause - Process costing - Normal loss – Abnormal loss - Abnormal gain (excluding Inter process profit & equivalent production) Operation Costing – Meaning – Preparation of Operating Cost Sheet – Transport Costing – Power Supply Costing–Hospital Costing–Simple Problems.

Extra Reading /Keywords: *Transportation problem*

UNIT V: STANDARD COSTING AND VARIANCE ANALYSIS

18 HRS

Definition – Objectives – Advantages – Standard Cost and Estimated Cost – Installation of Standard Costing System – Variance Analysis – Material, Labour, Overhead, and Sales Variances – Calculation of Variances.

Extra Reading /Keywords: *Types of Variance Costing*

Note: Texts given in the Extra Reading /Keywords must be tested only through Assignment and Seminar.

Theory - 20% Problems - 80%

TEXT BOOK

- Jain S.P. and Narang, K.L. (2020), *Cost Accounting Principles and Practices*, Kalyani Publishers, New Delhi

SUGGESTED READINGS

1. Khanna B.S., Pandey I.M., Ahuja G.K., and Arora M.N., *Practical Costing*, S Chand & Co, New Delhi.
2. Dr.S.N. Maheswari, *Principles of Cost Accounting*, Sultan Chand publications, New Delhi.
3. T.S. Reddy and Y. Hari Prasad Reddy, *Cost Accounting*, Margham publications, Chennai.
4. S.P. Iyengar, *Cost Accounting*, Sultan Chand Publications, New Delhi

WEB REFERENCES

1. <https://icmai.in/upload/Students/Syllabus2016/Inter/Paper-8-New.pdf>
2. <https://commerceiats.com/wp-content/uploads/2019/11/MATERIAL-CONTROL-IN-COST-ACCOUNTING-PDF-converted.pdf>
3. https://www.kngac.ac.in/elearning-portal/ec/admin/contents/5_18K4CO07%20%20%20%20%20%20%20%20_2021012812552059.pdf

Note: Learners are advised to use latest edition of books.

CO NO	Course Outcomes	Cognitive Level
CO 1	Remember and recall standards and skills in the preparation of cost accounts	K1
CO 2	Apply the basic concepts and processes in determination of cost of products and services	K2
CO 3	Analyze the various concepts in relation to a manufacturing environment	K3
CO 4	Understand and explain the concept of Standard Costing for variance analysis	K4
CO 5	Set up standards and fix prices of product produced in an organization	K5

CO 6	Create the conceptual framework of Cost Accounting	K6
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COURSE OUTCOMES (CO)

(K1- Remember, K2- Understand, K3 – Apply, K4 – Analyse, K5- Evaluate, K6-Create)

PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO 1	H	M	M	L	H	M	H	H	H
CO 2	H	M	M	L	H	M	H	H	H
CO 3	H	M	M	L	H	M	H	H	H
CO 4	H	M	M	L	H	M	H	H	H
CO 5	H	M	M	L	H	M	H	H	H
CO 6	H	M	M	M	H	M	H	H	H

PSO – CO MAPPING

CO/PSO	PSO 1	PSO 2	PSO 3
CO 1	H	H	M
CO 2	H	H	M
CO 3	H	H	M
CO 4	H	H	M
CO 5	H	H	M
CO 6	H	H	M

Course Title	CORE COURSE 14 INCOME TAX LAW AND PRACTICE II
Code	U23CC6CCT14
Course Type	Theory
Semester	VI
Hours/Week	6
Credits	4
Marks	100

CONSPECTUS

This course provides various provisions of the Income Tax Act relating to computation of income of an individual.

COURSE OBJECTIVES

- To understand provisions relating to capital gains
- To know the provisions for computation of income from other sources
- To familiarize law relating to set off and carry forward of losses and deductions from Gross Total Income.
- To learn about assessment of individuals
- To gain knowledge about assessment procedures

UNIT I: CAPITAL GAINS

18 HRS

Capital Assets – Transfer – Short term vs Long term capital assets - Computation of Capital Gains – Exemption under Section 54 , 54B, 54D, 54EC, 54F, 54GA

Extra Reading/ Keywords: *Capital Gains Tax*

UNIT II: INCOME FROM OTHER SOURCES & CLUBBING OF INCOME

18 HRS

Chargeability - Computation of Income from Other Sources – Deductions Allowed – Clubbing of Income – Concept.

Extra Reading/ Keywords: *Income from other sources in ITR.*

UNIT III: SET OFF AND CARRY FORWARD OF LOSSES AND DEDUCTIONS FROM GROSS TOTAL INCOME

18 HRS

Gross Total Income vs Total Income - Provisions for Set-off and Carry Forward of Losses (Simple Problems). Deductions U/S 80C, 80CC, 80CCB, 80CCC, 80CCD, 80 CCE, 80D, 80DD, 80DDB, 80E, 80EE, 80EEA, 80EEB, 80G, 80GG, 80GGA, 80TTA, 80TTB, and 80U only.

Extra Reading/ Keywords: *Business (PGBP) Loss*

UNIT IV: COMPUTATION OF TOTAL INCOME - INDIVIDUAL

18 HRS

Computation of Total Income - Tax Liability of an Individuals (Old regime vs New regime).

Extra Reading /Keywords: *Filing of Returns*

UNIT V: INCOME TAX AUTHORITIES

18 HRS

Administration of Income Tax Act – Income Tax Authorities – Powers of CBDT – Powers of Income Tax Officer - Procedure for Assessment – Filing of Return – Due Dates of Filing – Voluntary 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).

Extra Reading /Keywords: *Appointment of Income Tax Authorities*

Note: Texts given in the Extra Reading /Keywords must be tested only through Assignment and Seminar.

Theory - 20% Problems - 80%

TEXT BOOK

- V.P.Gaur, Narang, Puja Gaur and Rajeev Puri- Income Tax Law and Practice, Kalyani Publishers, New Delhi.

SUGGESTED READINGS

- T.S. Reddy and Hariprasad Reddy, Income Tax Law and Practice, Margham Publications, Chennai.
- Dinkar Pagare, Income Tax Law and Practice, Sultan & Chand Sons, New Delhi.
- Mehrotra H.C, Dr.Goyal S.P, Income Tax Law and Accounts, Sahitya Bhavan Publications, Agra.
- T. Srinivasan – Income Tax & Practice –Vijay Nicole Imprints Private Limited, Chennai

WEB REFERENCES

1. https://www.icsi.edu/media/webmodules/FINAL_TL&P.pdf
2. <https://www.studocu.com/in/document/sathyabama-institute-of-science-and-technology/financial-management/income-tax-study-material-5-units-pdf/33037483>

Note: *Learners are advised to use latest edition of books.*

COURSE OUTCOMES (CO)

CO NO	Course Outcomes	Cognitive Level
CO 1	Remember and recall provisions of Income Tax Act	K1
CO 2	Apply the knowledge about Income Tax and the Slab Rates	K2
CO 3	Analyse the set off and carry forward of losses provisions	K3
CO 4	Learn about filling of Income Tax Return	K4
CO 5	Apply to assess the income of an individual by taking benefit of the exemptions that are available	K5
CO 6	Create the awareness for Preparation of the Form – 16	K6

(K1- Remember, K2- Understand, K3 – Apply, K4 – Analyse, K5- Evaluate, K6-Create)

PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO 1	H	M	M	L	H	M	H	H	H
CO 2	H	M	M	L	H	M	H	H	H
CO 3	H	M	M	L	H	M	H	H	H
CO 4	H	M	M	L	H	M	H	H	H
CO 5	H	M	M	L	H	M	H	H	H
CO 6	H	M	M	M	H	M	H	H	H

PSO – CO MAPPING

CO/PSO	PSO 1	PSO 2	PSO 3
CO 1	H	H	M
CO 2	H	H	M
CO 3	H	H	M
CO 4	H	H	M
CO 5	H	H	M
CO 6	H	H	M

Course Title	ELECTIVE COURSE VII – ENTREPRENEURIAL DEVELOPMENT
Total Hours	75
Hours/Week	5
Code	U23CC6ECT13
Course Type	Theory
Credits	3
Marks	100

CONSPECTUS

The course aims to equip the learners with the basics of financial management and enable the learners to apply complex financial management decisions.

COURSE OBJECTIVES

1. To know the meaning and characteristics of entrepreneurship
2. To identify the various business opportunities
3. To understand the Process of setting up an enterprise
4. To gain knowledge in the aspects of legal Compliance of setting up of an enterprise
5. To develop an understanding of the role of MSME in economic growth

UNIT I: Introduction to Entrepreneur

15 HRS

Meaning of Entrepreneurship – Characteristics of Entrepreneurship – Types of Entrepreneurship – Self Employment – Difference between Entrepreneurship and Employment – Meaning of Entrepreneur – Traits – Classification – Functions – Entrepreneurial Scenario in India.

Extra Reading / Keyword: *Entrepreneurship development in India*

UNIT II: Design Thinking

15 HRS

Idea Generation – Identification of Business Opportunities – Design Thinking Process – Creativity – Invention – Innovation – Differences – Value Addition – Concept and Types – Tools and Techniques of Generating an Idea – Turning Idea into Business Opportunity.

Extra Reading / Keyword: *Phases of design thinking*

UNIT III: Setting up of an Enterprise

15 HRS

Process of Setting Up an Enterprise – Forms of an Enterprise – Sole Proprietorship – Partnership – Limited Liability Partnership Firm – Joint Stock Company – One Man partnership – Choice of Form of an Enterprise – Feasibility Study – Marketing, Technical, Financial, Commercial and Economical.

Extra Reading / Keyword: *Social Enterprise*

UNIT IV: Business Model Canvas and Formulation of Project Report

Introduction – Contents of Project Report – Project Description – Market Survey – Fund Requirement – Legal Compliance of setting Up of an Enterprise – Registration – Source of Funds – Modern Sources of Funds.

Extra Reading / Keyword: *Business plan entrepreneurship*

UNIT V: MSME's and Support Institutions

Government Schemes and Women Entrepreneurship – Importance of MSME for Economic Growth – MSME – Definition – Role of Government Organizations in Entrepreneurship Development – MSME DI – DIC – Khadi and Village Industries Commission – NSIC – NABARD, SICVI, SFC, SDC, EDII, EPCCB. Industrial Estates – Government Schemes – Prime Minister Employment Generation Programme – Women Entrepreneurship in India.

Extra Reading / Keyword: *eBook of schemes*

Note: Texts given in the Extra Reading /Keywords must be tested only through assignment and seminar.

TEXT BOOK:

- Jayashree Suresh, (Reprint 2017) Entrepreneurial Development, Margham Publications. Chennai.

Books for References:

- Dr. C.B. Gupta & Dr. S.S. Khanka (Reprint 2014). Entrepreneurship And Small Business Management, Sultan Chand & Sons, New Delhi.
- Charantimath Poornima, (Reprint 2014.), Entrepreneurship development-Small, Pearson Education, India.
- RajShankar, (Reprint 2016), Entrepreneurship Theory and Practice, Vijay Nicole and Imprints Pvt. Ltd, Chennai.
- Vasant Desai, (Reprint 2017). Dynamics of Entrepreneurial Development & Management Twenty Fourth Edition. Himalaya Publishing House. Mumbai.

Web Resources

- <https://www.interaction-design.org/literature/topics/design-thinking>
- <https://www.bms.co.in/steps-involved-in-setting-up-of-an-enterprise/>
- <http://www.msme.gov.in/>

CO. No	Course Outcomes	Cognitive Level
CO1	Recall the various aspects of an entrepreneur, design thinking, setting up of an enterprise, business model canvas and formulation of project report, MSME's and Support institutions	K1
CO2	Understands the concepts of an entrepreneur, design thinking, business model canvas and formulation of project report, MSME's and Support institutions	K2
CO3	Apply the procedures of an entrepreneurship, design thinking, business model canvas and formulation of project report, MSME's and Support institutions	K3
CO4	Evaluate the various aspects of an entrepreneur, design thinking, business model canvas and formulation of project report, MSME's and Support institutions	K4
CO5	Develop and formulate the concepts of an entrepreneur, design thinking, business model canvas and formulation of project report, MSME's and Support institutions	K5

(K1- Remember; K2- Understand; K3 – Apply; K4 – Analyse; K5- Evaluate; K6 – Create)

PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO 1	H	H	H	H	H	H	H	H	H
CO 2	H	H	H	H	H	H	H	H	H
CO 3	H	H	H	H	H	H	H	H	H
CO 4	H	H	H	H	H	H	H	H	H
CO 5	H	H	H	H	H	H	H	H	H
CO 6	H	H	H	H	H	H	H	H	H

PSO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3
CO 1	H	H	M
CO 2	H	H	M
CO 3	H	H	M
CO 4	H	H	M
CO 5	H	H	M
CO 6	H	H	M

Course Title	ELECTIVE COURSE VII–HUMAN RESOURCE MANAGEMENT
Code	U23CC6ECT14
Course type	Theory
Semester	VI
Hours/Week	5
Credits	3
Marks	100

CONSPECTUS

To expose the students to understand the basic knowledge and skills required in managing people in an organisation.

COURSE OBJECTIVES

1. To explore to the aspects relating of Human resource management
2. To equip with the various processes of Recruitment and Selection
3. To be acquainted with Training methods and the concept of Performance Appraisal
4. To learn about Industrial Relations.
5. To assimilate knowledge on employee welfare.

UNIT - I INTRODUCTION TO HUMAN RESOURCES MANAGEMENT 15 HRS

Definition of HRM, Objectives – Importance – Nature- Scope, Role and Qualities of a HR Manager - Human Resource Planning - Meaning, Definition, Importance, Factors Affecting HRP, Process Involved in Human Resource Planning. Human Resource Information System (HRIS) - Job Analysis, Need for Job Analysis, Steps in Job Analysis, Job Description and Specification. **Extra reading /Key words** : *Evolution of HRM, Human capital Management*

UNIT– II: RECRUITMENT AND SELECTION

15 HRS

Definition – Objectives – Factors affecting recruitment – internal and external source of recruitment – Selection Process – Curriculum Vitae –Test- types– Kinds of employment interview – Medical Screening – Appointment Order.

Extra reading /Key words : *Philosophies of Recruiting, Selection in India.*

UNIT – III: TRAINING AND DEVELOPMENT

15 HRS

Performance Appraisal: Meaning- objectives- Importance- Process- methods (Traditional and Modern methods), essentials of a sound appraisal system -problems of performance appraisal. Career Planning & Development: Definition- importance- process of career planning and development.

Extra reading /Key words : *Career Development.*

UNIT – IV INDUSTRIAL RELATIONS

15 HRS

Industrial Disputes and Settlements (Laws Excluded) – Settling Industrial Disputes in India – Arbitration – Adjudication – Settlement Labour Relation – Functions of Trade Unions – Forms of collective bargaining-Workers’ participation in management – Types and effectiveness.

fixation. Rewards: Meaning and Importance, Types of Rewards– monetary and non monetary rewards.

Extra reading /Key words : *Extent of pay, Justification for paying more*

UNIT -V: EMPLOYEE WELFARE**15 HRS**

Employee Welfare: Meaning, Objectives, Philosophy, Scope, Limitations, Types of Employee Welfare, Statutory and Non-Statutory Welfare Measures, and Labour Welfare Theories- Social Security, Health, Retirement & Other Benefits- Remuneration – Components of remuneration – Incentives – Benefits.

Extra reading /Key words : *Empowerment, Quality of work life.*

COURSE OUTCOMES

CO No.	Course Outcomes	Cognitive Level
CO-1	Recalls the basic concepts in HRM and motivating the employees	K1
CO-2	Explain the general factors of HRM in selecting and managing the employees	K2
CO-3	Apply the various operations of HRM in appraising and rewarding the employees.	K3
CO-4	Analyse the aspects of HRM and managing the stress of employees	K4
CO-5	Evaluate the functions of HRM and apply	K5
CO -6	Formulate strategies for employee welfare.	K6

PRESCRIBED TEXT BOOK

1. K Aswathappa and Sadhna Dash 2021 9th Edition , Human Resource Management, Third edition, McGraw Hill.

BOOK REFERENCE

1. Raymond J. Stone, Anne Cox, Mihajla Gavin (2021) 10th Edition Human Resource Management, Wiley India.
2. Adrian Wilkinson (2022) Human Resource Management: A Very Short Introduction, Oxford University Press.
3. **Susan L. Verhulst, David A. Decenzo , Wiley India (2022) 13Th Edition Human Resource Management, Wiley India.**

WEB REFERENCES

1. <https://www.coursera.org/learn/ai-for-everyone>
2. <https://www.coursera.org/learn/the-science-of-well-being>
3. <https://www.classcentral.com/course/managing-people-motivation-12718>
4. <https://www.udemy.com/courses/personal-development/>

Note: Learners are advised to use latest edition of books.

PO – CO MAPPING

CO/PO	PO 1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
CO 1	H	M	M	L	H	M	H	H	H
CO 2	H	M	M	L	H	M	H	H	H
CO 3	M	M	M	L	H	M	H	H	H
CO 4	H	M	M	L	H	M	H	H	H
CO 5	H	M	M	L	H	M	H	H	H
CO 6	H	M	M	L	H	M	H	H	H

PSO-CO MAPPING

CO-PSO	PSO 1	PSO 2	PSO 3
CO 1	H	H	M
CO 2	H	H	M
CO 3	H	H	M
CO 4	H	H	M
CO 5	H	H	M
CO 6	H	H	M

Course Title	ELECTIVE VIII : R LANGUAGE
Code	U23CC6ECP15
Course type	Practical
Semester	VI
Hours/Week	5
Credits	3
Marks	100

CONSPECTUS

To construct a web page and relate how PHP and SQL combine to produce the web page.

COURSE OBJECTIVES

1. To acquire programming skills in core R Programming
2. To acquire Object-oriented programming skills in R Programming.
3. To develop the skill of designing graphical-user interfaces (GUI) in R Programming
4. To acquire R Programming skills to move into specific branches

List of Exercises:

1. Data In R
2. Reading And Writing Data
3. R And Databases
4. Dates
5. Factors
6. Subscribing
7. Character Manipulation
8. Data Aggregation
9. Reshaping Data Basics
10. The R Environment
11. Probability And Distributions
12. Descriptive Statistics and Graphics
13. One- And Two-Sample Tests
14. Regression And Correlation
15. Analysis Of Variance And The Kruskal–Wallis Test
16. Tabular Data
17. Power And The Computation Of Sample Size
18. Advanced Data Handling
19. Multiple Regression
20. Linear Models
21. Logistic Regression
22. Survival Analysis
23. Rates And Poisson Regression
24. Nonlinear Curve Fitting

COURSE OUTCOMES

The learners will be able to

CO No.	Course Outcomes	Cognitive Level
CO-1	Recall the problem solving approaches	K1
CO-2	Understand the basic programming constructs in R Programming	K2
CO-3	Demonstrate various computing strategies for R Programming - based solutions to real world problems	K3
CO-4	Examine R Programming data structures - lists, tuples, dictionaries	K4
CO-5	Develop a R program for input/output with files.	K5
CO-6	Create a function to fit the target data and check their differences in fitting.	K6

(K1=Remember, K2=Understand, K3=Apply, K4=Analyze, K5=Evaluate, K6=Create)

PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO-1	L	M	H	M	H	M	H	H	H
CO-2	L	M	M	M	H	M	M	M	H
CO-3	L	H	H	M	H	M	H	H	H
CO-4	H	M	M	M	H	M	M	M	H
CO- 5	H	H	M	M	H	M	H	H	H

PSO – CO MAPPING

CO/PSO	PSO 1	PSO 2	PSO 3
CO-1	M	M	M
CO-2	M	M	H
CO-3	H	M	M
CO-4	H	M	M
CO - 5	H	M	M

Course Title	ELECTIVE COURSE VIII BUSINESS SOFTWARE – TALLY
Total Hours	30
Hours/Week	2
Code	U23CC4ECP16
Course Type	Practical
Credits	2
Marks	100

CONSPECTUS

This course aims to equip the students with the practical skills of Tally.

COURSE OBJECTIVES

6. To understand the concepts of computerised accounting.
7. To apply the procedures for entering different types of vouchers.
8. To analyse final accounts with adjustments.
9. To understand the preparation of stock ledger.
10. To analyse accounting for cost centre and cost category.

UNIT-I INTRODUCTION

6 HRS

Computerised Accounting – Meaning – Importance of Computerised accounting – Computerised accounting Vs Manual accounting. Introduction to architecture of Tally – Creation of company – Creation of groups – Various kinds of groups – Multiple and Single – Creation of ledgers – Various kinds of ledgers.

Extra Reading /Keywords: *Computerised Accounting*

UNIT- II VOUCHING

6 HRS

Entering vouchers – Journal voucher, Purchase voucher, Sales voucher, Receipt vouchers, Payment vouchers – Role and importance of function keys. **Extra Reading /Keywords:** *Function keys and Vouchers*

UNIT- III FINAL ACCOUNTS

6 HRS

Extraction of Trial Balance, Trading Account, Profit and Loss Account and Balance Sheet, Simple sums with and without adjustments – Alter – Select – Edit – Delete – Selection of company.

Extra Reading /Keywords: *Final Accounts with adjustments*

UNIT- IV INVENTORIES

6 HRS

Introduction to inventories – Creation of stock category – Stock groups – Stock items – Editing and deletion of stock items – Usage of stock in voucher entry – Stock voucher or purchase orders – Sales orders – Customer and supply analysis – Extracting simple reports and graphs with tally accounting package.

Extra Reading /Keywords: *Inventories, Stock vouchers*

UNIT-V COST CENTRE

6 HRS

Introduction to cost – Creation of cost category – Cost centre category – Editing and deleting cost centre. Usage of cost category and cost centre in voucher entry – Budgetcontrol – Creation of budgets – Editing and deleting budgets – Reports.

Extra Reading /Keywords: *Cost centre and Cost category.*

Note: Texts given in the Extra Reading /Keywords must be tested only through assignment and seminar.

Note: Learners are advised to use latest edition of books.

COURSE OUTCOMES (CO)

The learners:

CO No.	Course Outcomes	Cognitive Level
CO-1	Recall the concepts of Computerised accounting and Tally software	K1
CO-2	Identify the types of vouchers and procedure for preparing final accounts, inventory accounting, cost centers and cost categories.	K2
CO-3	Construct the final accounts with adjustments and create vouchers and inventory accounts and bill wise details of cost categories.	K3
CO-4	Demonstrate accounting skills and analytical skills in using Tally Software	K4
CO-5	Examine the accounting procedures to rectify the correctness of accounting procedure for companies	

(K1- Remember; K2- Understand; K3 – Apply; K4 –Analyse)

TEXT BOOK

ICAR and D Team, (2018) Tally 9, New Delhi, Vikas Publishing House Pvt. Ltd.

SUGGESTED READINGS

1. Asok K Nadhani (2018), Tally ERP. 9 Training Guide, New Delhi: BPB Publications.
2. Gaurav Agarawal (2021), Tally Prime with GST book Digital Mumeen Ji, 1st edition
3. Vikas Gupta (2020), Tally ERP with GST in simple steps, DT Editorial Services.
4. Vikas Gupta (2018) Comdex Tally. ERP .9 Dreamtech Press.
5. Srinivasa Vallaban (2019) Computer Applications in Business, New Delhi: Sultan and Sons.

WEB REFERENCES

1. <https://tallysolutions.com/tally/what-is-tally-erp-9-and-how-to-use-it/>
2. <https://tallysolutions.com/learning-hub/>
3. https://help.tallysolutions.com/article/Tally.ERP9/Voucher_Entry/Accounting_Vouchers/Voucher_Entry_in_Tally.htm#:~:text=A%20voucher%20is%20a%20document,financial%20position%20of%20the%20company.

COMPUTER PRACTICAL FOR BUSINESS SOFTWARE - FOR EXTERNAL EVALUATION

- Petty Cash Entries, Subsidiary Books
- Accounts Only – Accounts with Inventory
- Accounts with Inventory Tax Initialize
- Stock Categories
- Cost Centre
- Cost Categories
- Stock Journal
- Balance Sheet
- Final Accounts Without Adjustments
- Final Accounts with Adjustments
- Order Processing

- Price List
- Bill-wise Details
- Bank Reconciliation Statement
- Interest Calculation

Note: Learners are advised to use latest edition of books.

PO – CO MAPPING

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
CO -1	H	M	M	L	H	H	H	M	M
CO -2	H	M	M	L	H	H	H	M	M
CO -3	H	M	M	L	H	H	H	M	M
CO -4	H	M	M	L	H	H	H	H	H
CO-5	H	M	M	L	H	H	H	H	H

PSO – CO MAPPING

CO/PSO	PSO 1	PSO 2	PSO 3
CO -1	M	H	M
CO -2	H	H	H
CO -3	H	H	H
CO -4	H	H	H
CO- 5	H	H	H

Course Title	SKILL ENHANCEMENT COURSE VIII: Professional Competency Skill Enhancement Course: General Awareness for Competitive Exams
Code	U23CC6SET08
Course Type	Theory
Semester	VI
Hours/Week	2 Hrs/week
Credits	2
Marks	100

CONSPECTUS

To enable the students to be prepared for the competitive exams with general awareness knowledge.

COURSE OBJECTIVES

1. To create the opportunity for learning across different disciplines and builds experience for students as they grow into lifelong learners.
2. To build experiences for students as they grow into lifelong learners.
3. To know the basic concepts of various discipline

UNIT – I INDIAN POLITY

6 HRS

Basics concepts- Three organs of Indian government (Executives, Legislature, Judiciary), Introduction to Indian Constitution – Salient features of constitution, Preamble, Fundamental rights, Fundamental duties, Directive Principles of State policy, Types of Majority, Amendments to the Constitution, Basic structure Doctrine, Division of subjects between the union and the states local Governance, Elections in India and Election Commission, CAG.

Extra Reading /Keywords: *Political parties and leaders of India*

UNIT – II GEOGRAPHY

6 HRS

Major oceans of the world –Important Canals – Gulfs – Straits and passes – Indian Rivers and its Tributaries – Climatology – Atmosphere, Wind systems, Clouds systems, World climatic classification – Indian climate – Indian Monsoon – Indian’s physical features, Indian Soil types and Distribution – Importance Trade routes and projects, Indian natural vegetation – Indian agriculture- Major crops and its distribution, Indian Industries and its Distribution.

Extra Reading /Keywords: *Exports and Imports in India*

UNIT – III ECONOMY

6 HRS

National Income – Inflation – Money and Banking - Agriculture in India – Union Budget – Planning in India – Poverty – Unemployment – Inclusive Development and Development issues – Industrial polices – Financial Markets.

Extra Reading/ Keywords: *GDP,NDP, Deflation in India*

UNIT – IV HISTORY

6 HRS

Modern India – formation of Indian National Congress – Morley Minto Reforms, Revolutionary activities – World War I and India’s Response – Home Rule league – Montague Chelmsford reforms – Rowlett Act – Non –Cooperation Movement – Simon commission and Nehru Report – Civil Disobedience Movement and Round Table conferences – Quit India Movement and Demand for Pakistan – Cabinet Mission – Formation of Constituents Assembly and partition of India.

Extra Reading /Keywords: *History of neighboring countries*

UNIT – V ENVIRONMENT AND ECOLOGY

6 HRS

Basic concepts – Ecology, Biodiversity- Food chain and food web – Bio Geo Chemical Cycles – International Bio Diversity organisations- International Conventions – Conferences and Protocol – Indian Environmental laws and Environment Related organisation

Extra Reading /Keywords: *Environment Protection Act*

Note: Texts given in the Extra Reading /Keywords must be tested only through assignment and seminar.

COURSE OUTCOMES

The learners

CO No.	Course Outcomes	Cognitive levels
CO-1	Recall the politics of India and the world, its geographical features and environment and ecology.	K1
CO-2	Understand the political, Geographical features, India's Freedom struggle across countries and in India	K2
CO-3	Acquire knowledge on the aspects of Indian Economy	K3
CO-4	Analyze the different political changes across worldwide and Gain knowledge on Ecology and Environment	K4
CO-5	Develop board knowledge of the different components in polity, geographical features	K5

(K1- Remember; K2- Understand; K3 – Apply; K4 – Analyse; K5- Evaluate)

TEXT BOOK

1. Class XI and XII NCERT Geography
2. History – Old NCERT'S Class XI and XII

SUGGESTED READINGS

1. M. Laxmi Kant (2019), Indian polity, McGraw- Hill
2. Ramesh Singh (2022), Indian Economy, McGraw - Hill
3. G.C Leong, Physical and Human Geography, Oxford University Press
4. Majid Hussain- India Map Entries in Geography, GK Publications Pvt, Ltd.

WEB REFERENCES

1. <https://www.freebookkeepingaccounting.com/using-excel-in-accounts>
2. <https://courses.corporatefinanceinstitute.com/courses/free-excel-crash-course-for-finance>
3. https://www.youtube.com/watch?v=Nv_Nnw01FaU

PO – CO MAPPING

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CO 1	H	M	M	L	H	M	H	H	H
CO 2	H	M	M	L	H	M	H	H	H
CO 3	H	M	M	L	H	M	H	H	H
CO 4	H	M	M	L	H	M	H	H	H
CO 5	H	M	M	L	H	M	H	H	H
CO 6	H	M	M	M	H	M	H	H	H

PSO – CO MAPPING

CO/PSO	PSO 1	PSO 2	PSO 3
CO 1	H	H	M
CO 2	H	H	M
CO 3	H	H	M
CO 4	H	H	M
CO 5	H	H	M
CO 6	H	H	M