FATIMA COLLEGE (AUTONOMOUS)

Re-Accredited with "A" Grade by NAAC (3rd Cycle)
94th Rank in India Ranking 2019 (NIRF) by MHRD
Maryland, Madurai- 625 018, Tamil Nadu, India

NAME OF THE DEPARTMENT: INFORMATION TECHNOLOGY

NAME OF THE PROGRAMME : B. Sc.

PROGRAMME CODE : USIT

ACADEMIC YEAR : 2021-22

DATE

B.Sc INFORMATION TECHNOLOGY

Minutes of the meeting of the Board of studies for B.Sc IT held at Department of Information Technology on 12.4.21.

Members present:

1. Prof. Dr. S. Kannan,
Department of Computer Application,
School of Information Technology,
Madurai kamaraj university,
Madurai.

2. Dr. K. Kungumaraj, Head,
PG Department of computer Science,
Arulmigu palaniandavar Arts college for women,
palani.

3. Sr. Jothi, Head,
Department of computer Science,
Holy cross college,
Nagercoil

4. Mrs. M. Thilagavathi Madharan,
Senior programmer Analyst
Aparajitha Corporate Service pvt. Ltd.,
Madurai

5. Ms. T.G. Poornima devi, Faculty,
Dolphin Elite school,
Madurai.

12/4/21

DATE

Ms. A. Mable Jasmine Shobha — A. Mable Jasmine Shobha

Mrs. V. Mageshwari — -

Mrs. T. Leena Prema kumari — -

Mrs. T. Charanya Nagammal — -

Mrs. V. Jane Varamani Sulakka — -

ACTION TAKEN REPORT:

I. The Action Taken Report for the academic year 2020-21 was presented as,

Common Suggestions	Action taken
1. 'Dynamism' unit has to be introduced in all courses	The 'Dynamism' unit has been introduced.
2. Course outcome should be uniformly specified	Course outcome is updated
3. Self-study topics for IUG course to be reconsidered.	Self-study topics are changed according to the suggestion.

Change of course title - Nil ; New courses Introduced - Nil
Revised Courses - Nil.

II. DOER: The Digital Open Educational Resource for the courses was presented in the following format.

S.NO	COURSE CODE	COURSE TITLE	DETAILS OF UPDATION.

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iii. CHANGE OF COURSE TITLE:

S.No.	OLD COURSE CODE	NEW COURSE CODE	OLD COURSE TITLE	NEW COURSE TITLE	NEED FOR CHANGE
1.	19IICC1	21IICC1	Fundamentals of Computing	Programming in C	As suggested by Board members.
2.	19I6ME3	21I6ME3	Cloud Computing	Cloud Technologies	Syllabus is updated
3.	19I6ME4	21I6ME4	Mobile Computing	Mobile Communications	Syllabus is updated.

iv. NEW COURSES INTRODUCED:

S.NO	COURSE CODE	COURSE TITLE	RELEVANCE TO L	R	N	G	SCOPE FOR # EM	ETR	SD	NEED FOR INTRODUCTION
1.	21AC4ACI4	Accounting in Decision Making			✓		✓			Inter-disciplinary Allied paper to IT students
2.	21I4ACAC4	Web programming				✓	✓			Inter-disciplinary Allied paper to commerce students

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S.NO.	COURSE CODE	COURSE TITLE	RELEVANCE TO L	R	N	G	SCOPE FOR # EM	ET	SD	NEED FOR INTRODUCTION
3.	21I3SB1	Excel using VBA				✓	✓			Industrial Requirement.
4.	21I5SB3	Basics of HTML 5				✓	✓			Industrial Requirement
5.	21I5SB4	Web Programming using PHP				✓	✓			To develop web Designing skills.
6.	21I6SB5	Advanced HTML 5				✓	✓			Enhance Employability Skill.
7.	21I6SB6	Fundamentals of Android programming				✓	✓			Industrial Requirement
8.	21I1SLK1	Trends in Information Technology				✓	✓			To enrich the knowledge in IT
9.	21I2SL1	privacy & security in online social media				✓	✓			To create awareness about security issues
10.	21I3SL1	Video Editing Tools				✓		✓		Industrial Requirement.

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S.NO	COURSE CODE	COURSE TITLE	RELEVANCE TO L	R	N	G	SCOPE FOR # EMP	ENT	SD	NEED FOR INTRODUCTION
11.	21I4SL1	Introduction to compute Forensics				✓	✓		✓	To impart basic knowledge in compute Forensics
12.	21I5SL1	Green Computing				✓			✓	Industrial Requirements.
13.	21J6SLI1	Data Science & Tools				✓	✓		✓	To know how to implement tools in Data Science.

V. REVISED COURSES:

S.NO	COURSE CODE	COURSE TITLE	REVISED CONTENT	% of REVISION	NEED FOR REVISION	RELEVANCE TO * L	R	N	G	SCOPE FOR * EM	ET	SD
1.	21I1CC1	Programming in C	unit 1: fundamental Concepts is removed. unit 5: C Graphics has been introduced.	30%	Board members suggestions				✓		✓	
2.	19I4CC7	Programming in JAVA	AWT concept in unit 4 is removed	15%	This can be given only for PG				✓		✓	

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S. NO	COURSE CODE	COURSE TITLE	REVISED CONTENT	% of REVISION	NEED FOR REVISION	RELEVANCE FOR REVISIONS				SCOPE FOR *		
						L	R	N	G	EM	ET	SD
3.	21I6mE3	Cloud Technologies	unit 5: cloud computing Architecture is introduced	20%	Board members suggestions				✓		✓	
4.	21I6mE4	Mobile Communication	unit 4: Wireless Application Protocol is introduced. unit 5: wireless LAN is introduced	20%	TO know more about Mobile Application protocol.				✓		✓	

V. Value-added course that is offered other than already being offered - Nil.

VI. Approval of Ph.D course work Syllabus - Nil.

VII. RUBRICS FOR PROJECT

S.NO	C1 20 MKS	C2 20 MKS	CIA TOTAL 40 MKS	EXTERNAL 60 MKS
1.	Review I: * Selection * Presentation	Review II: * Presentation * Documentation * Completion	C1 + C2	* Presentation * Implementation

COMMENDATIONS:

* Self-Learning courses for Advanced Learners were appreciated.

SEMESTER I:

21I1CC1 - Programming in C

19I1CC2 - LAB I: Programming in C

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19I1ACG1 - Discrete Mathematics
19I1NME - Non-Major Elective
GIVE1 - value Education

SEMESTER II:

19I2CC3 - Data structure using c++
19I2CC4 - Lab II: Data structure using c++
19I2ACG2 - Operations Research
19I2NME - Non-Major Elective
G2VE2 - value Education

SEMESTER III:

19I3CC5 - Data Base Management System
19I3CC6 - Lab III: RDBMS
19P3ACI3 - Digital principles and Computer Architecture
21I3SB1 - Excel using VBA

SEMESTER IV:

19I4CC7 - Programming in JAVA
19I4CC8 - Lab IV: programming in JAVA
21AG4ACI4 - Accounting in Decision Making
19I4SB2 - Analytical Skills

SEMESTER V:

19I5CC9 - .NET Programming
19I5CC10 - LAB V: .NET programming
19I5CC11 - Software Engineering
19I5CC12 - Operating System
19I5ME1 / 19I5ME2 - Data Mining / Network Security
21I5SB4 - Web programming using PHP
21I5SB3 - Basics of HTML 5

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SEMESTER VI:

19I6CC13 - Python programming
19I6CC14 - Lab VI: Python programming
19I6CC15 - Data communication & Networking
19I6CC16 - Project
19I6ME3 / 19I6ME4 - cloud technologies / Mobile communication
19I6ME5 / 19I6ME6 - Information Storage and Management / computer Graphics
21I6SB5 - Advanced HTML5
21I6SB6 - Fundamentals of Android programming

Members:

Prof. Dr. S. Kannan - S.Kannan

Dr. K. Kungumaraj - [illegible]

Sr. Jothi

Mrs. M. Thilagavathi Madhavan - M.Thilagavathi

Mr. T. G. Poornimadevi - [illegible]

Ms. A. Mabel Jasmine Shobha - A. Mabel Jasmine Shobha.

Mrs. V. Nageshwari - [illegible]

Mrs. T. Leena premakumari - [illegible]

Mrs. T. Charanya Nagammal - T. Charanya

Mrs. V. Jane Varamani Sulekha - V.J.V. Sulekha

12/04/2021

FATIMA COLLEGE (AUTONOMOUS), MADURAI-18

DEPARTMENT OF INFORMATION TECHNOLOGY

For those who joined in June 2021 onwards

PROGRAMME CODE : USIT

PART – I – TAMIL / FRENCH / HINDI– 12 CREDITS

PART – I – TAMIL

Offered by The Research Centre of Tamil

S. NO	SEM.	COURSE CODE	COURSE TITLE	HRS	CREDIT	CIA Mks	ESE Mks	TOT. MKs
1.	I	19TLC1	Language-Modern Literature nghJj;jkpo; - ,f;fhy ,yf;fpak;	5	3	40	60	100
2.	II	19TLC2	Language - Bakthi Literature nghJj;jkpo; - gf;jp ,yf;fpak;	5	3	40	60	100
3.	III	19TLC3	Language- Epic Literature nghJj;jkpo; - fhg;gpa ,yf;fpak;	5	3	40	60	100
4.	IV	19TLC4	Language-Sangam Literature nghJj;jkpo; - rq;f ,yf;fpak;	5	3	40	60	100
			Total	20	12			

PART – I –FRENCH

Offered by The Department of French

S. NO	SEM.	COURSE CODE	COURSE TITLE	HRS	CREDIT	CIA Mks	ESE Mks	TOT. MKs
1.	I	19RLC1	PART 1 LANGUAGE FRENCH	5	3	40	60	100
2.	II	19RLC2	PART 1 LANGUAGE FRENCH	5	3	40	60	100
3.	III	19RLC3	PART 1 LANGUAGE FRENCH	5	3	40	60	100
4.	IV	19RLC4	PART 1 LANGUAGE FRENCH	5	3	40	60	100
			Total	20	12			

PART – I – HINDI

Offered by The Department of Hindi

S. NO	SEM.	COURSE CODE	COURSE TITLE	HRS	CREDIT	CIA Mks	ESE Mks	TOT. MKs
1.	I	19DLC1	PART 1 LANGUAGE HINDI	5	3	40	60	100
2.	II	19DLC2	PART 1 LANGUAGE HINDI	5	3	40	60	100
3.	III	19DLC3	PART 1 LANGUAGE HINDI	5	3	40	60	100
4.	IV	19DLC4	PART 1 LANGUAGE HINDI	5	3	40	60	100
			Total	20	12			

PART – II -ENGLISH – 12 CREDITS

Offered by The Research Centre of English

S. NO	SEM.	COURSECODE	COURSE TITLE	HRS	CREDIT	CIA Mks	ESE Mks	TOT. MKs
1.	I	19E1LB1	BASIC COMMUNICATIVE ENGLISH	5	3	40	60	100
2.		19E1LI1	INTERMEDIATE COMMUNICATIVE ENGLISH	5	3	40	60	100
3.		19E1LA1	ADVANCED COMMUNICATIVE ENGLISH	5	3	40	60	100
4.	II	19E2LB2	ENGLISH COMMUNICATION SKILLS (BASIC)	5	3	40	60	100
5.		19E2LI2	ENGLISH FOR EMPOWERMENT (INTERMEDIATE)	5	3	40	60	100
6.		19E2LA2	ENGLISH FOR CREATIVE WRITING (ADVANCED)	5	3	40	60	100
7.	III	19ELC3	ENGLISH FOR DIGITAL ERA	5	3	40	60	100
8.	IV	19ELC4	ENGLISH FOR INTEGRATED DEVELOPMENT	5	3	40	60	100
			Total	**20**	**12**			

PART – III -MAJOR, ALLIED & ELECTIVES – 95 CREDITS

MAJOR CORE COURSES INCLUDING PRACTICALS : 60 CREDITS

S.NO	SEM.	COURSECODE	COURSE TITLE	HRS	CREDIT	CIA Mks	ESE Mks	TOT. Mks
1.	I	19I1CC1	PROGRAMMING IN C	6	4	40	60	100
2.		19I1CC2	LAB I : PROGRAMMING IN C	6	3	40	60	100
3.	II	19I2CC3	DATA STRUCTURES USING C++	6	4	40	60	100
4.		19I2CC4	LAB II: DATA STRUCTURES USING C++	6	3	40	60	100
5.	III	19I3CC5	DATABASE MANAGEMENT SYSTEM	6	4	40	60	100
6.		19I3CC6	LAB III: RDBMS	6	3	40	60	100
7.	IV	19I4CC7	PROGRAMMING IN JAVA	6	4	40	60	100
8.		19I4CC8	LAB IV: JAVA PROGRAMMING	6	3	40	60	100
9.	V	19I5CC9	.NET PROGRAMMING	5	5	40	60	100
10.		19I5CC10	LAB V: .NET PROGRAMMING	6	3	40	60	100
11.		19I5CC11	SOFTWARE ENGINEERING	5	3	40	60	100
12.		19I5CC12	OPERATING SYSTEM	5	5	40	60	100
13.	VI	19I6CC13	PYTHON PROGRAMMING	5	5	40	60	100
14.		19I6CC14	LAB VI PYTHON PROGRAMMING	6	3	40	60	100
15.		19I6CC15	DATA	5	5	40	60	100

S.NO	SEM.	COURSECODE	COURSE TITLE	HRS	CREDIT	CIA Mks	ESE Mks	TOT. Mks
			COMMUNICATION AND NETWORKING					
16.		19I6CC16	PROJECT	-	3	40	60	100

ALLIEDCOURSES- 20 CREDITS

S.NO	SEM.	COURSECODE	COURSE TITLE	HRS	CREDIT	CIA Mks	ESE Mks	TOT. MKs
1.	I	19G1ACI1	DISCRETE MATHEMATICS	5	5	40	60	100
2.	II	19G2ACI2	OPERATIONS RESEARCH	5	5	40	60	100
3.	III	19P3ACI3	DIGITAL PRINCIPLES AND COMPUTER ARCHITECTURE	5	5	40	60	100
4.	IV	21AC4ACI4	ACCOUNTING IN DECISION MAKING	5	5	40	60	100

ELECTIVES-15 CREDITS

S.No	SEM.	COURSECODE	COURSE TITLE	HRS	CREDIT	CIA Mks	ESE Mks	TOT. Mks
1.	V	19I5ME1/19I5ME2	DATA MINING CONCEPTS/NETWORK SECURITY	5	5	40	60	100
2.	VI	21I6ME3/ 21I6ME4	CLOUD TECHNOLOGY/ MOBILE COMMUNICATION	5	5	40	60	100

S.No	SEM.	COURSECODE	COURSE TITLE	HRS	CREDIT	CIA Mks	ESE Mks	TOT. Mks
3.		19I6ME5/ 19I6ME6	INFORMATION STORAGE AND MANAGEMENT /COMPUTER GRAPHICS	5	5	40	60	100

PART – IV – 20 CREDITS

- **VALUE EDUCATION**
- **ENVIRONMENTAL AWARENESS**
- **NON MAJOR ELECTIVE**
- **SKILL BASED COURSES**

S. No	SEM.	COURSECODE	COURSE TITLE	HRS	CREDIT	CIA Mks	ESE Mks	TOT. Mks
1.	I	19G1VE	Value Education (Including Meditation in Action Movement)	1	1	40	60	100
2.		19I1NME	Non Major Elective–Image Editing Tool (Offered to other major Students)	2	2	40	60	100
3.	II	19G2VE	Value Education	1	1	40	60	100
4.		19I2NME	Non Major Elective - Image Editing Tool (Offered to other major Students)	2	2	40	60	100
5.	III	I3EN1	Environmental Education	1	1	40	60	100
6.		21I3SB1	Skill based–Excel using VBA	2	2	40	60	100
7.	IV	I4EN1	Environmental Education	1	1	40	60	100
8.		19I4SB2	Skill based - Analytical Skills	2	2	40	60	100
9.	V	21I5SB3	Skill based – Basics of HTML5	2	2	40	60	100

S. No	SEM.	COURSECODE	COURSE TITLE	HRS	CREDIT	CIA Mks	ESE Mks	TOT. Mks
10.		21I5SB4	Skill based –Web Programming using PHP	2	2	40	60	100
11.	VI	21I6SB5	Skill based – Advanced HTML5	2	2	40	60	100
12.		21I6SB6	Skill based – Fundamentals of Android Programming	2	2	40	60	100

PART – V – 1 CREDIT

OFF-CLASS PROGRAMMES - ALL PART-V

SHIFT - II

S. No	SEM.	COURSECODE	COURSE TITLE	HRS	CREDIT	TOT. Mks
1.	I - IV	*	Physical Education	30/ SEM	1	100
2.		*	Youth Red Cross			
3.		*	NSS			
4.		*	Rotaract			
5.		*	Women Empowerment Cell			
6.		*	AICUF			

OFF-CLASS PROGRAMME

ADD-ON COURSES

COURSE CODE	Courses	Hrs.	Credits	Semester in which the course is offered	CIA Mks	ESE Mks	Total Marks
21UAD2CA	**COMPUTER APPLICATIONS**	40	2	I&II	40	60	100
	ONLINE SELF LEARNING COURSE- Foundation Course for Arts	40	3	I	50	-	50
	ONLINE SELF LEARNING COURSE- Foundation Course for Science	40	3	II	50	-	50
	ETHICAL STUDIES-Value Education	15	2	III-VI	50 each Semester	-	100
	HUMAN RIGHTS	15	2	V	-	-	100
	OUTREACH PROGRAMME- Reach Out to Society through Action **ROSA**	100	3	V & VI	-	-	100
	PROJECT	30	4	VI	40	60	100
	READING CULTURE	10/Semester	1	II-VI	-	-	-
	MOOC COURSES(Department Specific	-	Minimum 2 Credits	-	-	-	

COURSE CODE	Courses	Hrs.	Credits	Semester in which the course is offered	CIA Mks	ESE Mks	Total Marks
	Courses/any other courses) * Students can opt other than the listed course from UGC-SWAYAM UGC / CEC						
	TOTAL		22 +				

EXTRA CREDIT COURSES

COURSE CODE	COURSE	HRS.	CREDITS	SEMESTER IN WHICH THE COURSE IS OFFERED	CIA MKS	ESE MKS	TOTAL MARKS
21I1SLK1	SELF LEARNING COURSES for ADVANCED LEARNERS: **TRENDS IN INFORMATION TECHNOLOGY**	-	2	I	40	60	100
21I2SL1	**SELF LEARNING COURSES for ADVANCED LEARNERS: PRIVACY AND SECURITY IN ONLINE SOCIAL MEDIA.**	-	2	II	40	60	100
21I3SL1	**SELF LEARNING COURSES for ADVANCED LEARNERS:**	-	2	III	40	60	100

	VIDEO EDITING TOOLS						
21I4SL1	**SELF LEARNING COURSES for ADVANCED LEARNERS: INTRODUCTION TO COMPUTER FORENSICS**	-	2	IV	40	60	100
21I5SL1	**SELF LEARNING COURSES for ADVANCED LEARNERS: GREEN COMPUTING**	-	2	V	40	60	100
21J6SLI1	**SELF LEARNING COURSES for ADVANCED LEARNERS: DATA SCIENCE & TOOLS**	-	2	VI	40	60	100
	MOOC COURSES / International Certified online Courses (Department Specific Courses/any other courses) * Students can opt other than the listed course from UGC-SWAYAM UGC / CEC	-	Minimum 2 Credits	I – VI	-	-	

OFF CLASS PROGRAMMES:

19UGVAI1 - Crash Course: Animation Software
21UGVAI2 - Dynamic web site design using HTML 5

II B.Sc.

SEMESTER –IV

For those who joined in 2021 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
USIT	21I3SB1	EXCEL USING VBA	Lecture	2	2

COURSE DESCRIPTION

This course is designed to learn the best practices followed in industries to develop simple projects.

COURSE OBJECTIVES

To facilitate the student to understand excel with VBA concepts and make them to automate the backend processing.

UNITS

UNIT –I VBA BASICS : (6HRS.)

Getting started with Excel VBA – Working with cells, rows, and columns to copy/paste, count, find the last used row or column, assigning formulas, working with sheets- Communicate with the end-user with message boxes and take user input with input boxes.

UNIT –II CONDITIONAL LOGIC & LOOPS : (6HRS.)

Comparing values and conditions, if statements and select cases - Repeat processes with For loops and Do While or Do Until Loops

UNIT –III ARRAYS (6HRS.)

Dynamic arrays- populating arrays-Array declaration and resizing-Jagged arrays.

UNIT –IV EVENTS & SETTINGS : (6HRS.)

Trigger procedures to run when certain events happen like activating a worksheet, or changing cell values- Speed up your code and improve the user experience

UNIT –V FUNCTIONS & PROCEDURES : (6HRS.)

Public variables, functions, and passing variables to other procedures- Programmatically work with series of values without needing to interact with Excel objects.

LAB PROGRAMS :

1. Working with cells
2. Naming Ranges
3. Working with Input box and Message box
4. Decision making and Looping
5. Work with arrays
6. Using Named Range in VBA
7. Conditional Formatting using VBA
8. Functions and Procedures.
9. Working with Events
10. Error handlers

TEXT BOOKS:

1. “Excel 2019 Power Programming with VBA”, by Micheal Alexander, Dick Kusleika, Wiley Publishers Pvt., Ltd.,

REFERENCES :

1. “Excel VBA Programming for Dummies”, by John Walkenbach, Wiley Publisher, ISBN : 9781118490389,
2. “Excel 2016 Power Programming with VBA”, by Micheal Alexander, Richard Kusleika, Wiley Publishers, ISBN : 9781119067726.
3.

Digital Open Educational Resources (DOER):

1. https://goalkicker.com/ExcelVBABook
2. https://www.automateexcel.com/learn-vba-tutorial/
3. https://www.tutorialspoint.com/vba/vba_excel_macros.htm

COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
UNIT -1 VBA BASICS				
1.1	Getting started with Excel VBA – Working with cells, rows, and columns to copy/paste, count, find the last used row or column	2	Lecture	Green Board Charts
1.2	Assigning formulas, working with sheets	1	Chalk & Talk	Green Board
1.3	Communicate with the end-user with message boxes and	1	Chalk & Talk	Green Board
1.4	Take user input with input boxes.	1	Discussion	Google Classroom
UNIT -2 CONDITIONAL LOGIC & LOOPS				
2.1	Comparing values and conditions	2	Lecture	Green Board Charts
2.2	if statements and select cases	1	Chalk & Talk	Green Board
2.3	Repeat processes with For loops and Do While	2	Chalk & Talk	Green Board
2.4	Do Until Loops	1	Discussion	Google Classroom

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
UNIT -3 SWINGS MENUS				
3.1	Dynamic arrays	1	Chalk & Talk	Black Board
3.2	populating arrays	1	Chalk & Talk	LCD
3.3	Array declaration and resizing.	2	Lecture	Smart Board
3.4	Jagged arrays	2	Discussion	Google Classroom
UNIT -4 EVENTS & SETTINGS				
4.1	Trigger procedures to run when certain events happen like activating a worksheet,	3	Chalk & Talk	Black Board
4.2	or changing cell values- Speed up your code and improve the user experience	3	Lecture	Smart Board
UNIT -5 FUNCTIONS & PROCEDURES				
5.1	Public variables, functions, and passing variables to other procedures-	3	Lecture	Smart Board
5.2	Programmatically work with series of values without needing to interact with Excel objects .	3	Chalk & Talk	Black Board

COURSE OUTCOMES

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

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Understand fundamentals of VBA	K1	PSO1
CO 2	Apply different conditional logics and loops	K1 & K3	PSO1,PSO4
CO 3	Build forms with interactivity	K2 & K3	PSO2,PSO4
CO 4	Apply Events and Setting in Excel sheets.	K2 & K3	PSO2,PSO4
CO 5	Develop Procedures and Array concepts.	K3	PSO4

Mapping of C0s with PSOs

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8
CO1	3	3	3	2	2	1	1	1
CO2	3	3	3	2	2	2	2	1
CO3	3	3	3	2	2	1	2	2
CO4	3	3	3	1	2	2	2	2
CO5	3	3	3	1	1	1	3	1

Mapping of C0s with POs

CO/ PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	3	1	1	1	1	1	1
CO2	1	1	3	1	2	1	1
CO3	1	2	1	3	1	2	1
CO4	1	1	1	1	1	3	1
CO5	1	1	1	1	1	3	3

Note: ♦ Strongly Correlated – **3** ♦ Moderately Correlated – **2**
♦ Weakly Correlated -**1**

COURSE DESIGNER:

1. **Staff Name: MRS. V. MAGESHWARI**

Forwarded By

V. Mageshwari

HOD'S Signature

& Name

III B.Sc.

SEMESTER – V

For those who joined in 2019 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
USIT	19I5SB3	SKILL BASED-BASICS OF HTML-5	Practical	2	2

COURSE DESCRIPTION

This course provides the programming techniques to develop the static web pages.

COURSE OBJECTIVES

To introduce the concepts of designing the web page using HTML, CSS & HTML5.

UNITS

UNIT –I INTRODUCTION (6HRS.)

Getting Started – Introduction to HTML – The Evolution of HTML – What's in HTML5 – Working with HTML & CSS – Choosing an Editor – Validating your documents - Hosting your website – Introducing the URL.

UNIT II: INTRODUCTION TO HTML (6 HRS.)

Introduction: Overview of HTML **HTML Tags:** concept of Tag, types of HTML tags, structure of HTML program **Text formatting through HTML:** Paragraph breaks, line breaks, background and BGcolor attributes **Emphasizing material in a web page:** Heading styles, drawing lines, text styles. **Text styles and other text effects-**centering, spacing, controlling font size & color **Lists: Using unordered, ordered, definition lists**

Adding Graphics To HTML Documents: Using Image tag, attributes of

Image tag, changing width & height of image

UNIT III: TABLES, FRAMES AND LINKING DOCUMENTS

Handling Tables: To define header rows & data rows, use of table tag and its attributes. Use of caption tag

Linking Documents: Concept of hyperlink, types of hyperlinks, linking to the beginning of document, linking to a particular location in a document, Images as hyperlinks

Frames: Introduction To frames, using frames & frameset tags, named frames how to fix the size of a frame, targeting named frames.

UNIT IV: INTRODUCTION TO CSS

Introducing CSS, font attributes, color and background attributes, text attributes, border attributes, margin related attributes, list attributes Using class and span tag , External Style Sheets

UNIT V: INTRODUCTION TO HTML5

Features of HTML5: MIME Types, diving in, Detection techniques, Modernizer: An HTML5 Detection Library, Canvas, Canvas Text, Video Video Formats, Local Storage, Web Workers, Offline Web Applications Geo location, Input Types, Placeholder Text, Form Autofocus, Microdata

Elements of HTML5: The Doctype, the Root Element, The <head> Element New Semantic Elements in HTML5, Handling of Unknown Elements by the Browsers Headers, Articles, Dates and Times, Navigation, Footers.

Drawing Surface: Introduction to Canvas, Simple Shapes, Canvas Coordinates, paths, Text, Gradients, Images.

Program List:

1. Create a web page using basic HTML tags
2. Create a webpage using Formatting tags
3. Create a webpage using Paragraph alignment tags
4. Create a webpage using the concepts of Lists

5. Create a webpage using Image tags.
6. Create a webpage using Table tags
7. Create a webpage using Hyperlink tags
8. Create a webpage using CSS bordering
9. Create a webpage using CSS Alignment tags
10. Develop a program using HTML5 with scripting
11. Develop a program to implement HTML5 element

TEXT BOOK:

1. Foundation HTML5 with CSS – Craig Cook & Jason Garber, Bytheway Publishing services.

REFERENCES:

1. Responsive Web Design with HTML5 and CSS: Ben Frain, 3rd Edition, Kindle Edition.
2. HTML5 and CSS3 All-in-One For Dummies 3rd Edition, Kindle Edition by Andy Harris.

Digital Open Educational Resources (DOER):

1. https://www.tutorialspoint.com/html5
2. https://www.w3schools.com/html
3. https://www.javatpoint.com/html5-tutorial

COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
UNIT -1 INTRODUCTION				
1.1	Getting Started – Introduction to HTML – The Evolution of HTML – What's in HTML5	2	Demonstration	Desktop PC
1.2	Working with HTML & CSS Choosing an Editor	1	Demonstration	Desktop PC
1.3	Validating your documents	2	Demonstration	Desktop PC
1.4	Hosting your website Introducing the URL.	1	Demonstration	Desktop PC
UNIT -2 INTRODUCTION TO HTML				
2.1	HTML Tags: Types of HTML tags, structure of HTML program, Text formatting through HTML	2	Demonstration	Desktop PC
2.2	Emphasizing material in a web page: Heading styles, drawing lines, text styles. Text styles and other text effects-centering, spacing, controlling font size & color	1	Demonstration	Desktop PC
2.3	Lists: Using unordered, ordered, definition lists	2	Demonstration	Desktop PC
2.4	Adding Graphics To HTML Documents: Using Image tag,	1	Demonstration	Desktop PC

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
	attributes of Image tag, changing width & height of image.			
UNIT -3 TABLES , FRAMES & LINKS				
3.1	**Handling Tables:** To define header rows & data rows, use of table tag and its attributes. Use of caption tag	1	Demonstration	Desktop PC
3.2	Linking Documents: Concept of hyperlink, types of hyperlinks, linking to the beginning of document.	2	Demonstration	Desktop PC
3.3	Linking to a particular location in a document, Images as hyperlinks.	1	Demonstration	Desktop PC
3.4	Frames: Introduction To frames, using frames & frameset tags, named frames how to fix the size of a frame, targeting named frames.	2	Demonstration	Desktop PC
UNIT -4 INTRODUCTION TO CSS				
4.1	Introducing CSS, font attributes, color and background attributes.	2	Demonstration	Desktop PC
4.2	Text attributes, border attributes, margin related	1	Demonstration	Desktop PC

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
	attributes, list attributes			
4.3	Using class and span tag, External Style Sheets	1	Demonstration	Desktop PC
UNIT 5 – INTRODUCTION TO HTML5				
5.1	Features of HTML5: An HTML5 Detection Library, Canvas, Canvas Text, Video Formats, Local Storage, Web Workers, Offline Web Applications Geo location, Input Types, Placeholder Text, Form Autofocus, Microdata	2	Demonstration	Desktop PC
5.2	Elements of HTML5: The Doctype, the Root Element, The <head> Element New.	2	Demonstration	Desktop PC
5.3	Semantic Elements in HTML5, Handling of Unknown Elements by the Browsers Headers, Articles, Dates and Times, Navigation, Footers.	2	Demonstration	Desktop PC
5.4	Drawing Surface: Introduction to Canvas, Simple Shapes, Canvas Coordinates, paths, Text, Gradients, Images.			

COURSE OUTCOMES

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

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Identify how to create a webpage with basic designing concepts.	K2 & K3	PSO1& PSO2
CO 2	Apply basic tags for table creation and alignments in a static webpage.	K2 & K3	PSO2 &PSO3
CO 3	Design and edit images in the web pages.	K2 & K3	PSO2 &PSO3
CO 4	Apply various tags for the creation of dynamic webpage.	K2 & K3	PSO2 &PSO3
CO 5	Develop effective graphics for web.	K3 & K4	PSO6& PSO8

Mapping of C0s with PSOs

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8
CO1	3	3	2	2	2	1	1	1
CO2	1	3	3	2	2	2	2	1
CO3	1	3	3	2	2	2	2	2
CO4	2	3	2	2	2	2	2	2
CO5	1	2	1	1	1	3	1	3

Mapping of C0s with POs

CO/ PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	1	1	1	1	1	1	3
CO2	1	1	1	1	2	3	1
CO3	1	2	1	1	1	3	1

CO4	**1**	**1**	**1**	**1**	**3**	**1**	**3**
CO5	**1**	**1**	**1**	**1**	**1**	**3**	**1**

Note: ♦ Strongly Correlated – **3** ♦ Moderately Correlated – **2**
♦ Weakly Correlated -**1**

COURSE DESIGNER:

1. **Staff Name: MRS. T. CHARANYA NAGAMMAL**

Forwarded By

V. Mageshwari

HOD'S Signature

& Name

III B.Sc.

SEMESTER – V

For those who joined in 2021onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
USIT	19I5SB4	SKILL BASED – WEB PROGRAMMING USING PHP	Practical	2	2

COURSE DESCRIPTION

This is a Web scripting language PHP able to build dynamic Web applications. Semantics and syntax of the PHP language, including discussion on the practical problems that PHP solves.

COURSE OBJECTIVES

The objective of this course is to provide the necessary knowledge to design and develop dynamic, database-driven web applications using PHP.

UNITS

Unit 1: PHP in Web (6 HRS)

Dynamic Content and the Web - PHP and MySQL's Place in Web Development - The components of a PHP Application - Integrating Many Sources of Information - Requesting Data from a Web Page. Developing Locally - working remotely.

Unit II: Introduction to PHP (6 HRS)

Exploring PHP-PHP and HTML text - coding building blocks. PHP decision making-Expressions - Operator Concepts - Conditionals-Looping. Functions - calling functions - defining functions- Object-Oriented Programming. Arrays: Array fundamentals. Database basics: Data base design-Structured Query Language

Unit III: PHP with MYSQL (6 HRS)

Using MySQL: MySQL Database - Managing the Database - Backing up and Restoring Data - Advanced SQL. Getting PHP to talk to MySQL: The process-querying the database with PHP functions - Using PEAR. Working with Forms: Building a form - Templates.

Unit IV: PHP Functions (6 HRS)

String functions-Date and time functions - File Manipulation – Calling System Calls - Modifying MySQL objects and PH data: Changing database objects from PHP - Manipulating table data-displaying results with Embedded links- presenting a form to add and process in one file - updating data – deleting data – performing a subquery

Unit V: Cookies, Sessions and Access Control (6 HRS)

Cookies, Sessions and Access Control: Cookies - PHP and HTTP Authentication – sessions - using Auth_HTTP to Authenticate. Security: Session security. Validation and Error handling: Validating user input with JavaScript- Pattern Matching - Redisplaying a form after PHP validation fails. Building a Blog

REFERENCES:

1. Dave W Mercer, Allan Kent, Steven D Nowicki, David Mercer, Dan Squier, Wankyu Choi - Beginning PHP‖, Wiley Publishing, Inc

2. Ivan Bayross -“HTML, DHTML, JavaScript, Pearl & CGI”, Fourth Revised Edition, BPB Publication

3. “Programming PHP”,RasmusLerdorf and Kevin Tatore, Shroff Publishers & Distributors Pvt.Ltd

4. “Beginning PHP”, Dave W Mercer, Allan Kent, Steven D Nowicki, David Mercer, Dan Squier, Wankyu Choi, Wiley Publishing

Digital Open Educational Resources (DOER):

1. https://www.tutorialspoint.com › php
2. https://www.php.net › manual › tutorial

Program List:

1. Develop a Program with basic expressions.
2. Develop a Program with decision making statements
3. Develop a Program with Looping statements
4. Develop a Program for the implementation of database
5. Develop a Program for database connectivity
6. Develop a Program with string functions
7. Develop a Program with manipulation function.
8. Develop a Program with cookies
9. Develop a Program with session control
10. Develop a Program for authentication process.

COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
UNIT -1 PHP IN WEB				
1.1	Dynamic Content and the Web PHP and MySQL's Place in Web Development	2	Demonstration	Desktop PC
1.2	The components of a PHP Application - Integrating Many Sources of Information -	1	Demonstration	Desktop PC
1.3	Requesting Data from a Web Page. Developing Locally, working remotely	1	Demonstration	Desktop PC
UNIT -2 INTRODUCTION TO PHP				
2.1	Exploring PHP-PHP and HTML text - coding building blocks. PHP decision making-Expressions Operator	2	Demonstration	Desktop PC

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
	Concepts, Conditionals Looping.			
2.2	Functions - calling functions - defining functions-	1	Demonstration	Desktop PC
2.3	Object-Oriented Programming. Arrays: Array fundamentals.	2	Demonstration	Desktop PC
2.4	Database basics: Data base design-Structured Query Language	1	Demonstration	Desktop PC
UNIT -3 PHP WITH MYSQL				
3.1	Using MySQL: MySQL Database Managing the Database .	1	Demonstration	Desktop PC
3.2	Backing up and Restoring Data - Advanced SQL.	1	Demonstration	Desktop PC
3.3	Getting PHP to talk to MySQL: The process-querying the database with PHP functions - Using PEAR	1	Demonstration	Desktop PC
3.4	Working with Forms: Building a form - Templates.	1	Demonstration	Desktop PC
UNIT -4 PHP FUNCTIONS				
4.1	String functions, Date and time functions, File Manipulation Calling System Calls	2	Demonstration	Desktop PC
4.2	Modifying MySQL objects and PH data: Changing database objects from PHP	2	Demonstration	Desktop PC
4.3	Manipulating table data-displaying results with Embedded links-	1	Demonstration	Desktop PC
4.4	presenting a form to add and process in one file, updating data , deleting data , performing a subquery	1	Demonstration	Desktop PC
UNIT -5 COOKIES, SESSION AND ACCESS CONTROL				
5.1	PHP and HTTP Authentication , Sessions - using Auth_HTTP to Authenticate.	1	Demonstration	Desktop PC

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
5.2	Security: Session security.	1	Demonstration	Desktop PC
5.3	Validation and Error handling: Validating user input with JavaScript- Pattern Matching	1	Demonstration	Desktop PC
5.4	Redisplaying a form after PHP validation fails. Building a Blog	1	Demonstration	Desktop PC

COURSE OUTCOMES

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

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Describe fundamentals of web in PHP scripts to handle HTML forms.	K2 & K3	PSO1& PSO2
CO 2	Describe the importance regular expressions including modifiers, operators, and metacharacters	K2 & K3	PSO2 &PSO3
CO 3	Create PHP programs that use various PHP library functions, and that manipulate files and directories	K2 & K3	PSO2, PSO3&PSO7
CO 4	Analyze and solve various database tasks using the PHP language.	K2 & K3	PSO2, PSO3 &PSO7
CO 5	Analyze and solve common Web application tasks by writing PHP programs.	K3 & K4	PSO7& PSO8

Mapping of C0s with PSOs

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8
CO1	3	3	2	2	2	1	1	1
CO2	1	3	3	2	2	2	2	1
CO3	1	3	3	2	2	2	3	2
CO4	2	3	3	2	2	2	3	2
CO5	1	2	1	1	1	2	3	3

Mapping of C0s with POs

CO/ PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	3	1	1	1	1	1	1
CO2	1	3	1	1	2	3	1
CO3	1	2	3	1	1	3	1
CO4	1	1	1	1	3	1	1
CO5	1	1	1	1	1	3	1

Note: ♦ Strongly Correlated – **3** ♦ Moderately Correlated – **2**
♦ Weakly Correlated -**1**

COURSE DESIGNER:

1. Staff Name: MRS.T.CHARANYA NAGAMMAL

Forwarded By

V. Mageshwari

HOD'S Signature

& Name

III B.Sc.

SEMESTER – VI

For those who joined in 2019 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
USIT	19I6SB5	ADVANCED HTML5	Practical	2	2

COURSE DESCRIPTION

This paper is designed to understand the principles of creating an effective web page, including an in-depth consideration of information architecture.

COURSE OBJECTIVES

To impart the creation of Web pages using the HTML5 structure elements, embed video and audio, and develop cross-browser user-input forms.

UNITS

UNIT –I Using Advanced CSS3 Techniques (6HRS.)

Introduction to Advanced CSS3 techniques – CSS3 2D & 3D transformation – CSS3 Transitions – CSS3 Animations – User Interfaces – Creating Buttons and Menus

UNIT –II JavaScript in HTML5 (6 HRS.)

Embedding Javascript in HTML5 documents – Objects, Properties , Method – Variables –Expression & Operators – Javascript Functions – Defining a Function – Calling a function – Method as Function - Errors in Javascript

UNIT –III Using HTML5 API (6 HRS.)

Document Object Model – Common HTML APIs – The Canvas API – The Offline Apache API – Geolocation API – File API – Drag & Drop API – Retrieving data with XMLHttp request.

UNIT –IV HTML5 FORMS (6 HRS.)

Introduction to HTML5 forms - Cross-Browser Compatible HTML5 Forms – HTML5 Form Input Types – New Form Elements in HTML5 – Global Attributes for Form elements.

UNIT –V VALIDATING HTML5 FORMS (6 HRS.)

Improving Forms with HTML5 - HTML5 Attributes for the <form> Element - HTML5 Attributes for the <input> Element – Submitting forms with <button> elements - Validating User Input with HTML5 Attributes - Validating User Input with JavaScript.

PROGRAM LIST

1. Embedding video with the HTML5 <video> element
2. Embedding video with the HTML5 <audio> element
3. Using the JavaScript *alert()* method
4. Using the JavaScript *prompt()* method
5. Using the JavaScript *document.write()* method
6. Using the HTML5 Canvas API.
7. Using the HTML5 File API.
8. Using the HTML5 Drag & Drop API
9. Using the Geolocation API to obtain geographical information.
10. Creating an offline Web application with HTML5

REFERENCES:

1. HTML5 and CSS3 – Elizabeth Castro & Bruce Hyslop, Seventh Edition, Visual Quick Start Guide.

Digital Open Educational Resources (DOER):

1. https://ptgmedia.pearsoncmg.com/images/9780321719614/samplepages/0321719611.pdf
2. https://books.goalkicker.com/HTML5Book/

COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
UNIT -1 USING ADVANCED CSS3 TECHNIQUES				
1.1	Introduction to Advanced CSS3 techniques	2	Demonstration	Desktop PC
1.2	CSS3 2D & 3D transformation CSS3 Transitions	1	Demonstration	Desktop PC
1.3	CSS3 Animations, User Interfaces	2	Demonstration	Desktop PC
1.4	Creating Buttons and Menus	1	Demonstration	Desktop PC
UNIT -2 JAVASCRIPT IN HTML5				
2.1	Embedding Javascript in HTML5 documents, Objects, Properties , Methods	2	Demonstration	Desktop PC
2.2	Variables, Expression & Operators	1	Demonstration	Desktop PC
2.3	Javascript Functions, Defining a Function, Calling a function	2	Demonstration	Desktop PC
2.4	Method as Function - Errors in Javascript	1	Demonstration	Desktop PC
UNIT -3 USING HTML5 API				
3.1	Document Object Model, Common HTML APIs	1	Demonstration	Desktop PC
3.2	The Canvas API – The Offline Apache API – Geolocation API	2	Demonstration	Desktop PC

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
3.3	File API ,Drag & Drop API	2	Demonstration	Desktop PC
3.4	Retrieving data with XMLHttp request.	1	Demonstration	Desktop PC
UNIT -4 HTML5 FORMS				
4.1	Introduction to HTML5 forms, Cross-Browser Compatible HTML5 Forms	2	Demonstration	Desktop PC
4.2	HTML5 Form Input Types – New Form Elements in HTML5	2	Demonstration	Desktop PC
4.3	Global Attributes for Form elements.	2	Demonstration	Desktop PC
UNIT -5 VALIDATING HTML5 FORMS				
5.1	Improving Forms with HTML5, HTML5 Attributes for the <form> Element, HTML5 Attributes for the <input> Element	2	Demonstration	Desktop PC
5.2	Submitting forms with <button> elements , Validating User Input with HTML5 Attributes	2	Demonstration	Desktop PC
5.3	Validating User Input with JavaScript	2	Demonstration	Desktop PC

COURSE OUTCOMES

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

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Understand advanced techniques in CSS3.	K2 & K3	PSO1& PSO2
CO 2	Identify to adding videos and graphics with html5.	K2 & K3	PSO3
CO 3	Identify building web page layouts with CSS & HTML5 APIs.	K2 & K3	PSO3 & PSO6
CO 4	Developing forms with advanced GUI interface.	K2 & K3	PSO1& PSO2
CO 5	Validating Forms in the web.	K2 & K3	PSO7 & PSO8

Mapping of C0s with PSOs

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8
CO1	3	3	2	2	2	1	1	1
CO2	1	1	3	2	2	2	2	1
CO3	1	2	3	1	2	3	2	2
CO4	3	3	3	2	2	3	2	2
CO5	1	2	1	1	1	1	3	3

Mapping of C0s with POs

CO/ PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	3	1	1	1	1	1	2
CO2	1	1	1	1	3	1	1
CO3	1	3	1	1	1	3	1
CO4	1	1	1	1	3	1	3

CO5	**1**	**1**	**1**	**1**	**1**	**3**	**1**

Note: ♦ Strongly Correlated – **3** ♦ Moderately Correlated – **2**
♦ Weakly Correlated -**1**

COURSE DESIGNER:

1. **Staff Name: Mrs. T. CHARANYA NAGAMMAL**

Forwarded By

V. Mageshwari

HOD'S Signature
& Name

III B.Sc.

SEMESTER – VI

For those who joined in 2021 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
USIT	21I6SB6	FUNDAMENTALS OF ANDROID PROGRAMMING	Practical	2	2

COURSE DESCRIPTION

This course introduces to learn basic Android programming concepts and build a variety of apps by using the concepts Android Architecture Components.

COURSE OBJECTIVES

To facilitate the student to understand the Mobile Application Programming sequence.

UNITS

UNIT –I INTRODUCING ANDROID STUDIO (6HRS.)

Installing the Java Development Kit on Windows – Installing Android Studio

Creating First Android Project - Using Android Virtual Device Manager

UNIT –II NAVIGATING ANDROID STUDIO (6 HRS.)

The Editor – The Gutter – Navigation Tool Windows – Navigation tool Windows – The Project Tool Window – The Structure Tool Window - The Main Menu Bar

UNIT –III PROGRAMMING IN ANDROID STUDIO (6 HRS.)

Using code Folding – Performing Code Completion – Commenting Code – Using Code Generation – Constructors – Override Methods – toString Method

UNIT –IV CREATING APPLICATIONS (6 HRS.)

Introducing the application Manifest File – Using the Manifest Editor – Introducing Layouts.

UNIT –V FILES, SAVING STATE AND PREFERENCES (6 HRS.)

Saving simple Application data – Creating and saving Shared Preferences – Retrieving shared Preferences.

PROGRAM LIST

1. To study Android Studio and android studio installation.
2. To understand Activity, Intent, Create sample application.
3. To design simple GUI application with activity and intents e.g. calculator.
4. To write an application that draws basic graphical primitives on the screen
5. Create an android app for database creation

REFERENCES:

1. Learn Android Studio –Adam Gerber, Clifton Craig-Apress.
2. Android Application Development – Reto Meier.

Digital Open Educational Resources (DOER):

1. http://yuliana.lecturer.pens.ac.id/Android/Buku/professional_android_4_application_development.pdf
2. https://www.tutorialspoint.com/android/android_tutorial.pdf
3. http://barbra-coco.dyndns.org/student/learning_android_studio.pdf

COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
UNIT -1 INTRODUCING ANDROID STUDIO				
1.1	Installing the Java Development Kit on Windows	2	Demonstration	Desktop PC
1.2	Installing Android Studio	1	Demonstration	Desktop PC
1.3	Creating First Android Project	1	Demonstration	Desktop PC
1.4	Using Android Virtual Device Manager	1	Demonstration	Desktop PC
UNIT -2 NAVIGATING ANDROID STUDIO				
2.1	The Editor ,The Gutter	2	Demonstration	Desktop PC
2.2	Navigation tool Windows	1	Demonstration	Desktop PC
2.3	The Project Tool Window	2	Demonstration	Desktop PC
2.4	The Structure Tool Window The Main Menu Bar	1	Demonstration	Desktop PC
UNIT -3 PROGRAMMING IN ANDROID STUDIO				
3.1	Using code Folding – Performing Code Completion	1	Demonstration	Desktop PC
3.2	Using Code Generation	1	Demonstration	Desktop PC

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
3.3	Commenting Code Constructors	1	Demonstration	Desktop PC
3.4	Override Methods – toString Method	1	Demonstration	Desktop PC
UNIT -4 CREATING APPLICATIONS				
4.1	Introducing the application Manifest File —	2	Demonstration	Desktop PC
4.2	Using the Manifest Editor	2	Demonstration	Desktop PC
4.3	Introducing Layouts	2	Demonstration	Desktop PC
UNIT -5 FILES,SAVING STATE & PREFERENCES				
5.1	Saving simple Application data	1	Demonstration	Desktop PC
5.2	Creating and saving Shared Preferences	1	Demonstration	Desktop PC
5.3	Retrieving shared Preferences	1	Demonstration	Desktop PC

COURSE OUTCOMES

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

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Able to Install Java Development Toolkit.	K2 & K3	PSO1& PSO2
CO 2	Install and configure Android application development tools	K2 & K3	PSO2 &PSO3
CO 3	Design and develop user Interfaces for the Android platform.	K2 & K3	PSO2, PSO3&PSO7
CO 4	Identify the Application & Layouts Concepts.	K2 & K3	PSO2, PSO3 &PSO7
CO 5	Save state information across important operating system events.	K3 & K4	PSO7& PSO8

Mapping of C0s with PSOs

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8
CO1	3	3	2	2	2	1	1	1
CO2	1	3	3	2	2	2	2	1
CO3	1	3	3	1	2	2	3	2
CO4	2	3	3	2	2	1	3	2
CO5	1	2	1	1	1	1	3	3

Mapping of COs with POs

CO/ PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	3	1	1	1	1	1	3
CO2	1	1	1	3	2	1	1
CO3	1	3	1	1	1	3	1
CO4	1	1	3	1	1	1	3
CO5	1	1	1	1	1	3	1

Note: ♦ Strongly Correlated – **3** ♦ Moderately Correlated – **2**
♦ Weakly Correlated -**1**

COURSE DESIGNER:

Staff Name: Mrs.T.Charanya Nagammal

Forwarded By

V. Mageshwari

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& Name

I YEAR

SEMESTER –I

For those who joined in 2021 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	HRS/WEEK	CREDITS
USIT	21UG1SLIT	TRENDS IN INFORMATION TECHNOLOGY	-	2

COURSE DESCRIPTION

The new trends and disruptive technologies in IT (Information Technology) emphasis is given to the way technologies create a competitive edge and generate business value. This year the course will have a special emphasis in cloud computing, artificial intelligence, internet of things, and big data.

COURSE OBJECTIVES

To impact the knowledge about the recent trends in IT

UNITS

UNIT –I E-COMMERCE INTRODUCTION

E-commerce Infrastructure: Introduction, E-commerce Infrastructure-An Overview, Hardware, Server Operating System, Software, Network Website

UNIT –II MANAGING THE E-ENTERPRISE

Managing the e-Enterprise: Introduction, e-Enterprise, Managing the e-Enterprise, E-business Enterprise, Comparison between Conventional Design and E-organisation, Organisation of Business in an e-Enterprise

UNIT –III TRANSACTION PROCESSING SYSTEMS

Transaction Processing Systems - Features of TPS -**E-World:** Features Of E-Commerce - Importance Of E-Commerce - Types of Electronic Commerce - E-Commerce Activities -E-Learning - E-Banking - E-Governance - E-Agriculture- E-Logistics..

UNIT –IV TYPES OF WIRELESS SERVICES

Benefits - Working of Biometric Systems – Uses – Types - **RFID:** Components - Working of RFID - Advantages. Embedded Systems – UAV(Unmanned Aerial Vehicle) - GPS - 3G - 4G - 5G - Wi-Fi - Wi-Max – Bluetooth- Infrared Communication - Firewall - Data Security and Cryptography - Parallel and Distributed Computing – VLSI - Smart Card.

UNIT –V BIG DATA

Knowledge Management – CRM - BPO – KPO – NLP - Artificial Intelligence - Big data - Big data Analytics – Cloud – Mobile - Internet of things - Image Processing - Nano technology - Semantic web - Social media - Soft Computing -Speech Recognition - Virtual Reality and Augmented reality - Third Eye: A Shopping Assistant for the Visually Impaired - Machine Learning - Neural Network.

UNIT –VI DYNAMISM(for CIA only)

Applications of wireless services

TEXT BOOK:

1) Peter Nortorn‟s, “ Introduction to Computer”, TMH, 2004, ISBN-0-07-05-3142-0
2) ChetanShrivastava“ Fundamentals of Information Technology”, Kalyani publishers, 2002,
ISBN-81-7663-576-6
3) DrMadhulikaJain,“Information Technology Concept”, BPB,2006,ISBN – 81-7656-276-9
4) Alexis and Mathews Leon, “Fundamentals of Information Technology”, Leon Press, ISBN
:8182090105
5) Verma,“Computer, Internet & Multimedia – Dictionary”, Universities Press

REFERENCE BOOKS:

1) Suresh K. Basandra, Computers Today, Galgotia Publications Pvt Ltd., New Delhi.
2) Computer Applications In Business, R. Parameswaran
3) ITL Education Solutions Limited, Introduction to Information Technology,PearsonEducation,New Delhi.
4) Perry, P.J., Worldwide Web secrets, Comdex Publishing, New Delhi..
5) Davis,Gordon.B, and Olson, Malgrethe H., Management Information systems, Mcgraw Hill Book company

6) Emerging Trends in Information Technology, Mrs. Jigisha D. Pardesi
7) Textbook of Emerging Trends in Information Technology Paperback – 2011,by Ravi P Patki
8) E-world: Emerging Trends in Information Technology.by ArpitaGopal&Chandrani Singh
9)

Digital Open Educational Resources (DOER) :.

1. https://www.tutorialspoint.com/fundamentals_of_science_and_technology/information_technology.htm
2. https://www.tutorialspoint.com/fundamentals_of_science_and_technology/information_technology.htm

INTERNAL - UG

Levels	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total	% of Assessment
	T1 10 Mks.	T2 10 Mks.	Quiz 5 Mks.	Assignment 5 Mks	OBT/PPT 5 Mks	35 Mks.	5 Mks.	40Mks.	
K1	2	2	-	-	-	4	-	4	10 %
K2	2	2	5	-	-	9	-	9	22.5 %
K3	3	3	-	-	5	11	-	11	27.5 %
K4	3	3	-	5	-	11	-	11	27.5 %
Non Scholastic	-	-	-	-	-		5	5	12.5 %
Total	10	10	5	5	5	35	5	40	100 %

End Semester - UG

Levels	Section A (i) 5 Mks.	Section A (ii) 5 Mks	Section B 8 Mks.	Section C 12 Mks	Section D 20 Mks.	Section E 10 Mks.	Total 60Mks.	
K1	5	5	-	4	-	-	14	23.33 %
K2	-	-	8	4	-	-	12	20 %
K3	-	-	-	-	20	-	20	33.33 %
K4	-	-	-	4	-	10	14	23.34 %
Total	5	5	8	12	20	10	60	100 %

CIA	
Scholastic	**35**
Non Scholastic	**5**
	40

EVALUATION PATTERN

SCHOLASTIC					NON - SCHOLASTIC	MARKS		
C1	**C2**	**C3**	**C4**	**C5**	**C6**	**CIA**	**ESE**	**Total**
10	**10**	**5**	**5**	**5**	**5**	**40**	**60**	**100**

UG CIA Components

			Nos		
C1	-	Test (CIA 1)	1	-	10 Mks
C2	-	Test (CIA 2)	1	-	10 Mks
C3	-	Assignment	1	-	5 Mks
C4	-	Open Book Test/PPT	2 *	-	5 Mks
C5	-	Quiz	2 *	-	5 Mks
C6	-	Attendance		-	5 Mks

**** The best out of two will be taken into account***

COURSE OUTCOMES

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

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	To understand how virtualization improves cloud computing and common standards for cloud.	K1	PSO1
CO 2	Understand different cloud platforms, application and programming support for it.	K1, K2,	PSO2
CO 3	Understand Big Data primitives	K1 & K3	PSO5
CO 4	Understand and demonstrate Big Data processing skills by developing applications	K1, K2, K3 &	PSO4
CO 5	Understand the applications & impact of big data technologies	K2 & K4	PSO3

Mapping of C0s with PSOs

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8
CO1	3	1	2	2	2	1	1	1
CO2	1	3	1	2	2	2	2	1
CO3	1	2	1	1	3	2	2	2
CO4	1	1	1	3	2	1	2	2
CO5	1	2	3	1	1	1	1	1

Mapping of C0s with POs

CO/ PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	1	1	1	1	1	3	2
CO2	1	1	1	1	3	1	1

CO3	**1**	**3**	**1**	**1**	**1**	**3**	**1**
CO4	**1**	**1**	**1**	**1**	**3**	**1**	**3**
CO5	**1**	**1**	**1**	**1**	**1**	**3**	**3**

Note: ♦ Strongly Correlated – **3** ♦ Moderately Correlated – **2**
♦ Weakly Correlated -**1**

COURSE DESIGNER:

1. **Staff Name: Mrs. T. CHARANYA NAGAMMAL**

Forwarded By

V. Mageshwari

HOD'S Signature

& Name

I YEAR

SEMESTER –II

For those who joined in 2021 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	HRS/ WEEK	CREDITS
USIT	21UG2SLIT	PRIVACY AND SECURITY IN ONLINE SOCIAL MEDIA	-	2

COURSE DESCRIPTION

With increase in the usage of the Internet, there has been an exponential increase in the use of online social media and networks on the Internet. Privacy and security of online social media need to be investigated, studied and characterized from various perspectives. The course content plays a vital role in making the students to understand the basic issues related to privacy and security in online social media.

COURSE OBJECTIVES

To facilitate the student to understand, privacy and security issues in Online Social Media.

UNITS

UNIT –I INTRODUCTION

Fundamentals of Social Networks – Introduction to Security and Privacy in social Networks

UNIT –II DATA AND SOCIAL MEDIA

Data collection from Social Networks – Challenges – Opportunities and Pitfalls in Online Social Networks

UNIT –III THREATS IN SOCIAL MEDIA

Privacy and Security Threats in Online Social Media - Defenses - Controlled Information Sharing in Online Social Media

UNIT –IV ISSUES IN ONLINE SOCIAL MEDIA

Identity Management in Online Social Networks - Privacy – Security

UNIT –V ETHICS AND POLICIES

Policies and Privacy – Crowdsourcing – Ethics and social Media

UNIT –VI DYNAMISM (for CIA only)

Ethics

TEXT BOOK:

1) Material

REFERENCE BOOKS:

1) Chbeir, Richard. Security and privacy preserving in social networks.Ed. Bechara Al Bouna. Berlin: Springer, 2013.
2) Cross, Michael. Social media security: Leveraging social networking while mitigating risk.Newnes, 2013.
3) Ahn, Gail-Joon, Mohamed Shehab, and Anna Squicciarini. "Security and privacy in social networks." IEEE Internet Computing 15.3 (2011): 10-12.

Digital Open Educational Resources (DOER) :.

1. https://www.tutorialspoint.com/fundamentals_of_science_and_technology/information_technology.htm
2. https://www.tutorialspoint.com/fundamentals_of_science_and_technology/information_technology.htm

Levels	C1	C2	C3	C4	Total Scholastic Marks	Non Scholastic Marks C5	CIA Total	% of Assessment
	Session - wise Average 5 Mks.	Better of W1, W2 5 Mks	M1+M2 5+5=10 Mks.	MID-SEM TEST 15 Mks	35 Mks.	5 Mks.	40Mks.	
K1	**5**	**-**	**-**	**2 ½**	**7.5**	-	**7.5**	18.75 %
K2	**-**	**5**	**4**	**2 ½**	**11.5**	-	**11.5**	28.75 %
K3	**-**	**-**	**3**	**5**	**8**	-	**8**	20 %
K4	**-**	**-**	**3**	**5**	**8**	-	**8**	20 %
Non Scholastic	**-**	**-**	**-**	-		**5**	**5**	12.5 %
Total	**5**	**5**	**10**	**15**	**35**	**5**	**40**	**100 %**

EVALUATION PATTERN

SCHOLASTIC					NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	C6	CIA	ESE	Total
10	10	5	5	5	5	40	60	100

UG CIA Components

			Nos		
C1	-	Test (CIA 1)	1	-	10 Mks
C2	-	Test (CIA 2)	1	-	10 Mks
C3	-	Assignment	1	-	5 Mks
C4	-	Open Book Test/PPT	2 *	-	5 Mks
C5	-	Quiz	2 *	-	5 Mks
C6	-	Attendance		-	5 Mks

COURSE OUTCOMES

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

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Understand basic concepts in Social Media.	K1	PSO3
CO 2	Explain the challenges in social media.	K1, K2	PSO3
CO 3	Understand the threats in Social Media	K1 & K3	PSO3
CO 4	Explain the issues in Social Media	K1, K2, K3	PSO6
CO 5	Understand Policies and ethics related to Social Media	K1 & K3	PSO6

Mapping COs Consistency with PSOs

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8
CO1	1	1	3	1	1	2	1	1
CO2	1	1	3	1	1	2	1	1
CO3	1	1	3	1	1	2	1	1
CO4	1	1	2	1	1	3	1	1
CO5	1	1	2	1	1	3	1	1

Mapping of COs with Pos

CO/ PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	3	1	1	1	1	1	1
CO2	3	1	1	1	1	1	1
CO3	3	1	1	1	1	1	1
CO4	3	1	1	1	1	1	1
CO5	1	1	1	1	1	3	1

Note: ♦ Strongly Correlated – **3** ♦ Moderately Correlated – **2**
♦ Weakly Correlated -**1**

COURSE DESIGNER:

1. **Staff Name: Dr. V. Jane Varamani Sulekha**

Forwarded By

HOD'S Signature

& Name

II YEAR

SEMESTER –III

For those who joined in 2021 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	HRS/WEEK	CREDITS
USIT	21UG3SLIT	VIDEO EDITING TOOLS	-	2

COURSE DESCRIPTION

Video Editing is all about practice. In the course, you will come across different subjects and concepts. The basics include editing videos, removing and including sound, correcting the colours, managing the picture, bringing continuity in the video, and adding some special effects.

COURSE OBJECTIVES

- To allow course participants to know how to edit video and produce quality videos with simple editing tools such as filmora, video pad and adobe premiere pro.
- To allow course participants to have the required skillset to produce videos for personal usage, corporate usage, marketing and even for events.

UNITS:

Unit I : KDEnlive: The Interface-Cut/shorten video with the razor tool-Add/remove/swap audio from video-Cut, copy, and move clips- Video and audio effects-Artistic effects and filters.

Unit II : **KDEnlive**: - Video speed and slow-Using video and audio tracks-Add intro & outro to video- Adjust audio levels & volume control- Picture slide show- **Transform,** crop and resize video.

Unit III : **OpenShot Video Editor**: Introduction-Installation-Main Window-Files-Clips-Transitions-Animation-Titles-Profiles.

Unit IV : Blender The Blender Interface- Working with Viewports- Applying Textures- Lighting and Cameras - Render Settings .

Unit V : Blender: Ray-Tracing (mirror, transparency, shadows)- Animation Basics Video Sequence Editor.

UNIT –VI DYNAMISM (for CIA only)

Case study review

TEXT BOOK:

1) Material

REFERENCE BOOKS:

1. "Digital Nonlinear Editing: New Approaches to Editing Film and Video" by Thomas A Ohanian.
2. Some Procedures for Sound Editing on Videotape: Using JVC Editing Control Unit RM-86U and 6-Channel Mixer MI 5000" by Richard Raskin.
3. "Editing Digital Video: The Complete Creative and Technical Guide (Digital Video and Audio Series)" by Robert M Goodman and Patrick Mcgrath

Digital Open Educational Resources (DOER) :.

1. https://www.tjfree.com/free-creative-tools/kdenlive-2/
2. https://cdn.openshot.org/static/files/user-guide/developers.html
3. https://www.cdschools.org/cms/lib04/PA09000075/Centricity/Domain/81/BlenderBasics_4thEdition2011.pdf.

II YEAR

SEMESTER –IV

For those who joined in 2021 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	HRS/ WEEK	CREDITS
USIT	21UG4SLIT	INTRODUCTION TO COMPUTER FORENSICS	-	2

COURSE DESCRIPTION

The course content plays a vital role in making the students to understand the basic concepts in Computer Forensics.

COURSE OBJECTIVES

To facilitate the student to understand, the basics in digital forensics and techniques for conducting the forensic examination on different digital devices.

UNITS

UNIT –I INTRODUCTION

Computer forensics fundamentals - Benefits of forensics - computer crimes - computer forensics evidence and courts, legal concerns and private issues.

UNIT –II INVESTIGATIONS

Understanding Computing Investigations – Procedure for corporate High-Tech investigations - understanding data recovery work station and software - conducting and investigations.

UNIT –III DATAACQUISITION

Understanding storage formats and digital evidence - determining the best acquisition method - acquisition tools - validating data acquisitions - performing RAID data acquisitions - remote network acquisition tools - other forensics acquisitions tools.

UNIT –IV PROCESSING CRIMES AND INCIDENT SCENES

Securing a computer incident or crime - seizing digital evidence at scene - storing digital evidence - obtaining digital hash - reviewing case.

UNIT –V TOOLS

Current computer forensics tools- software, hardware tools - validating and testing forensic software - addressing data-hiding techniques - performing remote acquisitions - E-Mail investigations- investigating email crime and violations - understanding E-Mail servers - specialized E-Mail forensics tool.

UNIT –VI DYNAMISM (for CIA only)

Reviewing cases

TEXT BOOK:

1) Warren G. Kruse II and Jay G. Heiser, "Computer Forensics: Incident Response Essentials", Addison Wesley, 2002.
2) Nelson, B, Phillips, A, Enfinger, F, Stuart, C., "Guide to Computer Forensics and Investigations, 2nd ed., Thomson Course Technology, 2006, ISBN: 0-619-21706-5.

REFERENCE BOOKS:

1) Vacca, J, Computer Forensics, Computer Crime Scene Investigation, 2nd Ed, Charles River Media, 2005, ISBN: 1-58450-389.

Digital Open Educational Resources (DOER) :.

1) https://www.geeksforgeeks.org/introduction-of-computer-forensics/

INTERNAL - UG

Levels	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total	% of Assessment
	T1 10 Mks.	T2 10 Mks.	Quiz 5 Mks.	Assignment 5 Mks	OBT/PPT 5 Mks	35 Mks.	5 Mks.	40Mks.	
K1	2	2	-	-	-	4	-	4	10 %

K2	**2**	**2**	**5**	**-**	**-**	**9**	-	**9**	22.5 %
K3	**3**	**3**	**-**	**-**	**5**	**11**	-	**11**	27.5 %
K4	**3**	**3**	**-**	**5**	**-**	**11**	-	**11**	27.5 %
Non Scholastic	**-**	**-**	**-**	**-**	-		**5**	**5**	12.5 %
Total	**10**	**10**	**5**	**5**	**5**	**35**	**5**	**40**	**100 %**

End Semester - UG

Levels	Section A (i) 5 Mks.	Section A (ii) 5 Mks	Section B 8 Mks.	Section C 12 Mks	Section D 20 Mks.	Section E 10 Mks.	Total 60Mks.	
K1	**5**	**5**	**-**	**4**	**-**	-	**14**	23.33 %
K2	**-**	**-**	**8**	**4**	**-**	-	**12**	20 %
K3	**-**	**-**	**-**	**-**	**20**	-	**20**	33.33 %
K4	**-**	**-**	**-**	**4**	**-**	10	**14**	23.34 %
Total	**5**	**5**	**8**	**12**	**20**	**10**	**60**	**100 %**

CIA	
Scholastic	**35**
Non Scholastic	**5**
	40

EVALUATION PATTERN

SCHOLASTIC					NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	C6	CIA	ESE	Total
10	10	5	5	5	5	40	60	100

UG CIA Components

			Nos		
C1	-	Test (CIA 1)	1	-	10 Mks
C2	-	Test (CIA 2)	1	-	10 Mks
C3	-	Assignment	1	-	5 Mks
C4	-	Open Book Test/PPT	2 *	-	5 Mks
C5	-	Quiz	2 *	-	5 Mks
C6	-	Attendance		-	5 Mks

**** The best out of two will be taken into account***

COURSE OUTCOMES

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

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Understand basic concepts in Computer forensics.	K1	PSO3
CO 2	Explain different investigation procedures.	K1, K2	PSO3
CO 3	Understand different Data acquisition mode.	K1 & K3	PSO3
CO 4	Understand investigation process using computer forensics.	K1, K2, K3	PSO6
CO 5	Know how to apply forensic analysis tools to recover	K1 & K3	PSO6

	important evidence for identifying computer crime.		

Mapping of CO s with PSOs

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8
CO1	1	1	3	1	1	2	1	1
CO2	1	1	3	1	1	2	1	1
CO3	1	1	3	1	1	2	1	1
CO4	1	1	2	1	1	3	1	1
CO5	1	1	2	1	1	3	1	1

Mapping of CO s with POs

CO/ PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	3	1	1	1	1	1	1
CO2	3	1	1	1	1	1	1
CO3	3	1	1	1	1	1	1
CO4	3	1	1	1	1	1	1
CO5	1	1	1	1	1	3	1

Note: ♦ Strongly Correlated – **3** ♦ Moderately Correlated – **2**
♦ Weakly Correlated -**1**

COURSE DESIGNER:

1. **Staff Name: Dr. V. Jane Varamani Sulekha**

Forwarded By

V. Mageshwari

HOD'S Signature & Name

III YEAR

SEMESTER –V

For those who joined in 2021 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	HRS/ WEEK	CREDITS
USIT	21UG5SLIT	GREEN COMPUTING	-	2

COURSE DESCRIPTION

The course content plays a vital role in making the students to understand the basic concepts in Green Computing.

COURSE OBJECTIVES

To facilitate the student to learn the fundamentals of Green Computing and to understand the issues related with Green compliance

UNITS

UNIT –I INTRODUCTION

Green IT Fundamentals - Business, IT, and the Environment – Green computing: carbon foot print, scoop on power – Green IT Strategies: Drivers, Dimensions, and Goals – Environmentally Responsible Business: Policies, Practices, and Metrics.

UNIT –II GREEN ASSETS AND MODELING

Green Assets: Buildings, Data Centers, Networks, and Devices – Green Business Process Management: Modeling, Optimization, and Collaboration – Green Enterprise Architecture – Environmental Intelligence – Green Supply Chains – Green Information Systems: Design and Development Models.

UNIT –III GRID FRAMEWORK

Virtualization of IT systems – Role of electric utilities, Telecommuting, teleconferencing and teleporting – Materials recycling – Best ways for Green PC – Green Data center – Green Grid framework.

UNIT –IV GREEN COMPLIANCE

Socio-cultural aspects of Green IT – Green Enterprise Transformation Roadmap – Green Compliance: Protocols, Standards, and Audits – Emergent Carbon Issues: Technologies and Future.

UNIT –V CASE STUDIES

The Environmentally Responsible Business Strategies (ERBS) – Case Study Scenarios for Trial Runs – Case Studies – Applying Green IT Strategies and Applications to a Home, Hospital, Packaging Industry and Telecom Sector.

UNIT –VI DYNAMISM (for CIA only)

Case study review

TEXT BOOK:

1) Bhuvan Unhelkar, —Green IT Strategies and Applications-Using Environmental Intelligence, CRC Press, June 2014.
2) Woody Leonhard, Katherine Murray, —Green Home computing for dummies, August 2012.

REFERENCE BOOKS:

1) Alin Gales, Michael Schaefer, Mike Ebbers, —Green Data Center: steps for the Journey, Shroff/IBM rebook, 2011.
2) John Lamb, —The Greening of IT, Pearson Education, 2009.
3) Jason Harris, —Green Computing and Green IT- Best Practices on regulations & industry, Lulu.com, 2008
4) Carl speshocky, —Empowering Green Initiatives with IT, John Wiley & Sons, 2010.
5) Wu Chun Feng (editor), —Green computing: Large Scale energy efficiency, CRC Press

Digital Open Educational Resources (DOER) :.

1) https://www.tutorialspoint.com/environmental_studies/environmental_studies_towards_sustainable_future.htm

Levels	C1	C2	C3	C4	Total Scholastic Marks	Non Scholastic Marks C5	CIA Total	% of Assessment
	Session - wise Average 5 Mks.	Better of W1, W2 5 Mks	M1+M2 5+5=10 Mks.	MID-SEM TEST 15 Mks	35 Mks.	5 Mks.	40Mks.	
K1	**5**	**-**	**-**	**2 ½**	**7.5**	-	**7.5**	18.75 %
K2	**-**	**5**	**4**	**2 ½**	**11.5**	-	**11.5**	28.75 %
K3	**-**	**-**	**3**	**5**	**8**	-	**8**	20 %
K4	**-**	**-**	**3**	**5**	**8**	-	**8**	20 %
Non Scholastic	**-**	**-**	**-**	-		**5**	**5**	12.5 %
Total	**5**	**5**	**10**	**15**	**35**	**5**	**40**	**100 %**

EVALUATION PATTERN

SCHOLASTIC					NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	C6	CIA	ESE	Total
10	10	5	5	5	5	40	60	100

UG CIA Components

			Nos		
C1	-	Test (CIA 1)	1	-	10 Mks
C2	-	Test (CIA 2)	1	-	10 Mks
C3	-	Assignment	1	-	5 Mks
C4	-	Open Book Test/PPT	2 *	-	5 Mks
C5	-	Quiz	2 *	-	5 Mks
C6	-	Attendance		-	5 Mks

COURSE OUTCOMES

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

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Acquire knowledge to adopt green computing practices to minimize negative impacts on the environment.	K1	PSO3
CO 2	Enhance the skill in energy saving practices in their use of hardware.	K1, K2	PSO3
CO 3	Evaluate technology tools that can reduce paper waste and carbon footprint by the stakeholders.	K1 & K3	PSO3
CO 4	Explain issues related to green compliances.	K1, K2, K3	PSO6
CO 5	Understand the ways to minimize equipment disposal requirements	K1 & K3	PSO6

Mapping COs Consistency with PSOs

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8
CO1	1	1	3	1	1	2	1	1
CO2	1	1	3	1	1	2	1	1
CO3	1	1	3	1	1	2	1	1
CO4	1	1	2	1	1	3	1	1
CO5	1	1	2	1	1	3	1	1

Mapping of COs with Pos

CO/ PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	3	1	1	1	1	1	1
CO2	3	1	1	1	1	1	1
CO3	3	1	1	1	1	1	1
CO4	3	1	1	1	1	1	1
CO5	1	1	1	1	1	3	1

Note: ♦ Strongly Correlated – **3** ♦ Moderately Correlated – **2**
♦ Weakly Correlated -**1**

COURSE DESIGNER:

1. **Staff Name: Dr. V. Jane Varamani Sulekha**

Forwarded By

HOD'S Signature

& Name

III YEAR

SEMESTER –VI

For those who joined in 2021 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS	CREDITS
USCA	21UG6SLJ	DATA SCIENCE AND TOOLS	PRACTICAL	40	2

COURSE DESCRIPTION

This course gives basic understanding about big data analytics using R language and to disseminate knowledge in cutting edge technologies to store and visualize huge data.

COURSE OBJECTIVES

1. Recognize the essential notion of data science
2. Examine the Tools and skills of a data scientist
3. Figure out the working of R Tool

UNITS

UNIT I : DATA SCIENCE AND DATA SCIENTISTS (6 HRS)

Introduction – Need of Data Science – Business Intelligence Vs Data Analysis – Features – Life Cycle – Discovery – Data Preparation – Model Planning – Model Building – Operationalize – Communicate Results – Who are Data Scientists? – Skills needed for Data Scientists

UNIT II : TOOLS FOR DATA SCIENCE (6 HRS)

EXCEL – R Tool - Apache Hadoop – BigML – SaS – MATLAB – WEKA – Tableau – QlikView

UNIT III : R TOOL (6 HRS)

Startup – The Workspace – Variable – Constants – Data Types – R Operators

UNIT IV : R STATEMENTS AND FUNCTIONS (6 HRS)

Control Statements – If – If.. Else – Switch – Looping Statements – Functions – Strings

UNIT V : R INTERFACES AND VISUALIZATION (6 HRS)

CSV Files – Excel Files – XML Files – R Database – Pie Chart – Bar Chart – Histograms – Line Graphs – Statistical Display of Results

WEB REFERENCES :

https://data-flair.training/blogs/data-science-tools/

OER REFERENCES :

https://github.com/chaconnewu/free-data-science-books

COURSE OUTCOMES

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

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Foresee the life cycle of data science and the skills of data scientists.	**K1**	**PSO1& PSO2**
CO 2	Compare the pros and cons of the tools of data science	**K1, K2**	**PSO2, PSO3**
CO 3	Analyze the methodologies R Tool	**K1 & K3**	**PSO3, PSO5**
CO 4	Implement the programming erect of R.	**K1, K2 & K3**	**PSO5, PSO8**

CO 5	Design the code for the problems related to data science using R	**K3 & K4**	**PSO8**

Levels	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total	% of Assessment
	T1 10 Mks.	T2 10 Mks.	Quiz 5 Mks.	Assignment 5 Mks	OBT/ PPT 5 Mks	35 Mks.	5 Mks.	40 Mks.	
K1	2	2	-	-	-	4	-	4	10 %
K2	2	2	5	-	-	9	-	9	22.5 %
K3	3	3	-	-	5	11	-	11	27.5 %
K4	3	3	-	5	-	11	-	11	27.5 %
Non Scholastic	-	-	-	-	-		5	5	12.5 %
Total	10	10	5	5	5	35	5	40	100 %

CIA	
Scholastic	**35**
Non Scholastic	**5**
	40

EVALUATION PATTERN

SCHOLASTIC					NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	C6	CIA	ESE	Total
10	10	5	5	5	5	40	60	100

UG CIA Components

			Nos		
C1	-	Test (CIA 1)	1	-	10 Mks
C2	-	Test (CIA 2)	1	-	10 Mks
C3	-	Assignment	1	-	5 Mks
C4	-	Open Book Test/PPT	2 *	-	5 Mks
C5	-	Quiz	2 *	-	5 Mks
C6	-	Attendance		-	5 Mks

The best out of two will be taken into account

Mapping COs Consistency with PSOs

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8
CO1	3	1	2	2	2	1	1	1
CO2	1	3	1	2	2	2	2	1
CO3	1	2	1	1	3	2	2	2
CO4	1	1	1	3	2	1	2	2
CO5	1	2	3	1	1	1	1	1

Mapping of C0s with Pos

CO/ PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7

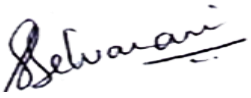
CO1	**1**	**1**	**1**	**1**	**1**	**3**	**2**
CO2	**1**	**1**	**1**	**1**	**3**	**1**	**1**
CO3	**1**	**3**	**1**	**1**	**1**	**3**	**1**
CO4	**1**	**1**	**1**	**1**	**3**	**1**	**3**
CO5	**1**	**1**	**1**	**1**	**1**	**3**	**3**

Note: ♦ Strongly Correlated – **3** ♦ ModeratelyCorrelated – **2** ♦ WeaklyCorrelated -**1**

COURSE DESIGNER:

1. **Staff Name : Ms. S. Selvarani**

Forwarded By



(S.Selvarani)

HOD'S Signature & Name

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SEMESTER –IV

For those who joined in 2021 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	HRS/WEEK	CREDITS
USCC	21I4ACAC4	WEB PROGRAMMING	5	5

COURSE DESCRIPTION

This course is designed to provide the student with foundational programming knowledge and skills for application development on the Internet. The student will learn to plan, design, construct, and integrate basic server-side components of modern web applications including databases and scripts.

COURSE OBJECTIVES

The main objectives of this course are to:

- To enhance the knowledge of students in web programming
- To learn about the scripting languages HTML and its elements
- To understand concept of DHTML to integrate dynamic web pages

UNITS

UNIT –I INTRODUCTION TO WEB (15 HRS)

Introduction to Internet: Computers in Business –Networking – Internet – E-mail – resource Sharing – Gopher – WWW – Usenet-Telnet –Internet Technologies: Modem – Internet addressing – Physical Connections – Telephone lines – Internet Browsers.

UNIT –II HTML (15 HRS)

Designing a Home Page – History of HTML – HTML generations – HTML Documents – Anchor Tag – Hyperlinks – Head & Body Sections : Header – Title- Prologue – Links – Colourful Web Page – Comment Lines.

UNIT –III DESIGNING WEB (15 HRS)

Designing Body Section: Heading Printing – Aligning- Horizontal Rule – Paragraph – Tab Settings – Images & Pictures – Embedding PNG formats. Order & Unordered List – Table Handling

UNIT –IV DHTML & STYLE SHEETS (15 HRS)

Defining Styles – Elements of Styles – Linking a style sheets to an HTML

document – In-line Styles –External style Sheets – Internal Style Sheets – Multiple Styles - Frames: Frameset Definition - Nested Frameset.

UNIT –V FORMS & WEBPAGE DESIGN PROJECT (15 HRS)

Forms – Action attributes – Method attribute – Enctype attribute – Dropdown list – Design Project.

UNIT –VI DYNAMISM (for CIA only)

Designing the Web Pages using the web concepts.

Text Books:

World Wide Web Design with HTML, By C.Xavier, Tata McGraw Hill Education(India) Private Limited.

Reference Books:

1. Web Programming – Building internet applications- Chris Batos.
2. Internet and Web design – Ramesh Bangia
3. Dynamic Html – Bruce Campbell, Rick Darnell

Open Educational Resources:

1. https://www.tutorialspoint.com › html
1. CSS Tutorial - W3Schools - https://www.w3schools.com › css
2. DHTML Tutorial - W3Schools - http://w3schools.sinsixx.com › dhtml › default.asp.htm

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SEMESTER –IV

For those who joined in 2021 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	HRS/WEEK	CREDITS
USIT	21AC4ACI4	Accounting in decision making	5	5

COURSE DESCRIPTION

This course enables the students of Economics major to understand the various aspects of Accounting for decision making and the primary intention is to impart knowledge to make future decision.

COURSE OBJECTIVES

This course enables the students to:

1. Know the basics of cost costing as a discipline of accounting
2. Prepare cost sheet
3. Control material costs through understanding techniques of material control and price issue of materials
4. Understand marginal cost accounting terminologies and apply the same, in computational simple problems.
5. Prepare simple and common budgets, for business

UNIT –I Cost Accounting (10 HRS.)

Cost Accounting – Definition- Principles of cost accounting –Relationship of cost accounting with financial accounting and Management Accounting -

UNIT –II Cost Sheet (20 HRS.)

Cost Sheet - Elements of Cost - Statement of cost and profit

UNIT –III Materials (15 HRS.)

Materials- Meaning of Material Control- Objectives – Advantages- Issue of Materials- Methods of Pricing-FIFO-LIFO.

UNIT –IV Marginal Costing (15 HRS.)

Meaning – Creation of a company –creating groups and ledger- display of Trial Balance, Profit and loss and Balance sheet. Create stock – unit – Good own.

UNIT – V Budgetary Control [15 HRS]

Budgetary control- Meaning and need for budget- Cash budget-Sales budget-

Flexible budget (only simple problems

UNIT –VI DYNAMISM (for CIA only)

Cost Control and Reduction : Meaning – Features of cost control and cost reduction – Cost control Vs Cost reduction - Need for cost control and cost reduction – Advantages and disadvantages

Text Book:

1. Cost Accounting – T.S.Reddy&Y.Hari Prasad Reddy, Margham Publications, 2017 (reprint)
2. Management Accounting – Dr.A.Ramachandran&Dr.Srinivasan, 2016

Reference Book :

1. Cost and management accounting-S.P.Jain&K.L.Narang, Kalyani Publications, 2017
2. Management Accounting, B.S. Raman, United Publishers, 2016.

COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
UNIT -1 Cost Accounting				
1.1	Cost Accounting – Definition- Principles of cost accounting	3	Chalk & Talk	Black Board
1.2	Principles of cost accounting	3	Chalk &Talk	LCD
1.3	Relationship of cost	4	Lecture	PPT & White

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
	accounting with financial accounting and Management Accounting			board
UNIT -2 Cost Sheet				
2.1	Cost Sheet	6	Lecture	Black Board
2.2	Elements of Cost	8	Discussion	Google classroom
2.3	Statement of cost and profit.	6	Discussion	Google classroom
UNIT 3Materials				
3.1	Materials- Meaning of Material Control	3	Discussion	Google classroom
3.2	Objectives – Advantages-Issue of Materials.	4	Discussion	Google classroom
3.3	Methods of Pricing-FIFO	4	Discussion	Google classroom
3.4	Methods of Pricing-L4IFO	4	Discussion	Google classroom
UNIT 4 Marginal Costing				
4.1	Marginal costing-Meaning	3	Discussion	Google classroom
4.2	Contribution-Breakeven point	6	Discussion	Google classroom
4.3	P/V Ratio (Simple Problems).	6	Discussion	Google classroom
UNIT 5- Budgetary Control				
5.1	Budgetary control- Meaning and need for budget	3	Discussion	Google classroom

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
5.2	Cash budget-Simple Problems	4	Discussion	Google classroom
5.3	Sales budget -Simple Problems	4	Discussion	Google classroom
5.4	Flexible budget (only simple problems)	4	Discussion	Google classroom

INTERNAL - UG

Levels	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total	% of Assessment
	T1 10 Mks.	T2 10 Mks.	Quiz 5 Mks.	Assignment 5 Mks	OBT/ PPT 5 Mks	35 Mks.	5 Mks.	40Mks.	
K1	2	2	-	-	-	4	-	4	10 %
K2	2	2	5	-	-	9	-	9	22.5 %
K3	3	3	-	-	5	11	-	11	27.5 %
K4	3	3	-	5	-	11	-	11	27.5 %
Non Scholastic	-	-	-	-	-		5	5	12.5 %
Total	10	10	5	5	5	35	5	40	100 %

End Semester - UG

Levels	Section A (i) 5 Mks.	Section A (ii) 5 Mks	Section B 8 Mks.	Section C 12 Mks	Section D 20 Mks.	Section E 10 Mks.	Total 60Mks.	
K1	**5**	**5**	**-**	**4**	**-**	-	**14**	23.33 %
K2	**-**	**-**	**8**	**4**	**-**	-	**12**	20 %
K3	**-**	**-**	**-**	**-**	**20**	-	**20**	33.33 %
K4	**-**	**-**	**-**	**4**	**-**	10	**14**	23.34 %
Total	**5**	**5**	**8**	**12**	**20**	**10**	**60**	**100 %**

CIA	
Scholastic	**35**
Non Scholastic	**5**
TOTAL	**40**

EVALUATION PATTERN

SCHOLASTIC					NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	C6	CIA	ESE	Total
10	10	5	5	5	5	40	60	100

UG CIA Components

			Nos		
C1	-	Test (CIA 1)	1	-	10 Mks
C2	-	Test (CIA 2)	1	-	10 Mks
C3	-	Assignment	1	-	5 Mks
C4	-	Open Book Test/PPT	2 *	-	5 Mks
C5	-	Quiz	2 *	-	5 Mks
C6	-	Attendance		-	5 Mks

UG CIA Components					
			Nos		
C1	-	Test (CIA 1)	1	-	10 Mks
C2	-	Test (CIA 2)	1	-	10 Mks
C3	-	Assignment	1	-	5 Mks
C4	-	Open Book Test/PPT	2 *	-	5 Mks
C5	-	Quiz	2 *	-	5 Mks
C6	-	Attendance		-	5 Mks

COURSE OUTCOMES

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

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Recall the basics of cost and management accounting and shall be able to appraise the intricate differences between the two branches of accounting	K1	PSO1& PSO2
CO 2	Construct cost sheet, after categorizing costs and derive profit or loss on product costing	K1, K2,	PSO3
CO 3	Recognize the need for material control and choose among the different methods of material cost control and that of stores ledger accounts given the typicality of circumstance	K1 & K3	PSO5
CO 4	Construct and illustrate Break Even Analysis and arrive at significance use	K1, K2, K3 &	PSO 3
CO 5	Use of tools of marginal costing	K2 & K4	

Mapping C0s Consistency with PSOs

CO/ PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	3	2	2
CO2	3	2	3	2	1
CO3	3	3	2	3	2
CO4	3	2	2	3	2
CO5	2	3	3	2	1

Note: ♦ Strongly Correlated – **3** ♦ Moderately Correlated – **2**

♦ Weakly Correlated -**1**

Mapping of C0s with POs

CO/ PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	3	3	3	3	3	3	3
CO2	3	3	3	3	3	3	3
CO3	3	3	3	3	3	3	3
CO4	3	3	3	3	3	3	3
CO5	3	3	3	3	3	3	3

COURSE DESIGNER:

Ms.F.Gnanadeepam

Forwarded by

Dr. B. SAHAYARANI FERNANDO
HOD & ASSOCIATE PROFESSOR
DEPARTMENT OF COMMERCE
FATIMA COLLEGE
MADURAI - 625 018

I B.Sc. Information Technology

SEMESTER –I

For those who joined in 2021 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
USIT	21I1CC1	Programming In C	Lecture	6	4

COURSE DESCRIPTION

This course content plays a vital role in building the fundamental knowledge in programming.

COURSE OBJECTIVES

To impart knowledge on basic concepts in Computer and to demonstrate the fundamental programming techniques in C.

UNITS

UNIT –I INTRODUCTION TO C: (17HRS.)

Overview of C: Introduction – Importance of C – Sample C Program – Basic Structure of C Program – Programming Style – Executing a C Program. Keywords and Identifiers – Constants –Variables - Data types – Declaration of Variables- Assigning values to variables – Defining symbolic constants - Operators and Expressions.

UNIT –II DECISION-MAKING STATEMENTS(17 HRS.)

Decision Making and Branching: Introduction – Decision making with IF statement- Simple IF statement- the IF-Else statement- Nesting of If-Else statement- The Else-if ladder- The switch statement- The ?: operator- **The Go to statement(Self Study).**

Decision Making and Looping: Introduction – The While statement- The Do statement – The For statement – Jumps in loops.

UNIT –III: ARRAYS, STRUCTURES& UNIONS (17 HRS.)

Arrays : Introduction – One Dimensional arrays – Two Dimensional Arrays- Initializing Two dimension Arrays – Multi Dimensional arrays

Structures &Unions : Introduction – Defining Structures- Declaring Structure Variables – Accessing Structure Members - Structure Initialization- **Unions (Self Study).**

UNIT –IV FUNCTIONS (17HRS.)

FUNCTIONS User Defined Functions: Definitions of Functions – Return Values and their types – Function Calls –Function Declarations – Category of Functions - Nesting of Functions – Recursion- Passing Arrays to Functions – **Passing Strings to Functions (Self Study).**

Pointers : Introduction – Accessing the Address of a Variable – Declaring pointer variable – Pointers and Arrays- Array of Pointers – Pointers as Function Arguments – Functions Returning Pointers – Pointers to Functions – **Pointers and Structures(Self Study).**

UNIT –V FILE MANAGEMENT & GRAPHICS (17 HRS.)

File Management in C: Introduction – Defining and Opening a file – Closing file- Input Output operations on files – Error Handling during I/O operations – Random Access to files.

C Graphics: Introduction to graphics- colours in c graphics-graphics functions.

UNIT –VI DYNAMISM (Evaluation Pattern-CIA only) (5HRS.)

Real- time Applications using C

TEXT BOOK:

1. Balagurusamy, E. Programming in ANSI C , 7e. Tata McGraw-Hill Education, 2018. (Chapters: 1, 2, 3, 5, 6, 7, 9, 10, 12)

REFERENCES:

1. Byron Gottfried, “Programming with C”, 2nd edition, (Indian Adapted Edition), TMH Publication.
2. Yashavant Kanetkar, “Let us C”, 16th Edition, BPB publication, 2017

OPEN EDUCATIONAL RESOURCES:

1. C Tutorial - Learn C Programming - W3schools.in
   https://www.w3schools.in/c-tutorial.
2. C Tutorial
   https://www.tutorialspoint.com/cprogramming/index.htm

COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
UNIT -1INTRODUCTION TO COMPUTER SYSTEM				
1.1	Introduction – Importance of C	1	Discussion	Black Board
1.2	Sample C Program	2	Chalk & Talk	Black Board
1.3	Programming Style	1	Lecture	LCD
1.4	Executing a C Program	1	Discussion	Google classroom
1.5	Keywords and Identifiers	1	Chalk & Talk	Black Board
1.6	Constants –Variables	2	Discussion	Google classroom
1.7	Data types	2	Lecture	PPT & White board
1.8	Declaration of Variables	2	Chalk & Talk	Black Board
1.9	Assigning values to variables	2	Chalk & Talk	Black Board
1.10	Defining symbolic constants	2	Chalk & Talk	Black Board
1.11	Operators and Expressions.	1	Chalk & Talk	Black Board
UNIT -2DECISION-MAKING STATEMENTS				
2.1	Decision Making and Branching Introduction	1	Lecture	PPT & White board
2.2	Decision making with IF statement, Simple IF statement	2	Chalk &Talk	Green Board

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
2.3	The IF-Else statement, Nesting of If-Else statement	2	Chalk & Talk	Black Board
2.4	The Else-if ladder, The switch statement	2	Chalk & Talk	Black Board
2.5	The ?: operator	2	Chalk & Talk	Black Board
2.6	The Go to statement (Self Study).	2	Discussion	Google classroom
2.7	Decision Making and Looping Introduction	2	Lecture	Google classroom
2.8	The While statement	2	Chalk & Talk	Black Board
2.9	The Do statement	1	Chalk & Talk	Black Board
2.10	The For statement, Jumps in loops	1	Chalk & Talk	Black Board
UNIT – 3 ARRAYS ,STRUCTURES & UNIONS				
3.1	Arrays Introduction	1	Discussion	PPT & White board
3.2	One Dimensional arrays	2	Chalk & Talk	Green Board
3.3	Two Dimensional Arrays	1	Chalk & Talk	Black Board
3.4	Initializing Two dimension Arrays	2	Chalk & Talk	Black Board
3.5	Multi-Dimensional arrays	2	Discussion	Black Board
3.6	Structures & Unions Introduction	1	Lecture	PPT & White board
3.7	Defining Structures	1	Lecture	Black Board
3.8	Declaring Structure Variables	1	Chalk & Talk	Black Board
3.9	Accessing Structure Members	2	Chalk & Talk	Black Board
3.10	Structure Initialization	2	Chalk & Talk	Black Board

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
3.11	Unions (Self Study)	2	Discussion	Google classroom
UNIT – 4 FUNCTIONS				
4.1	User Defined Functions	1	Discussion	PPT & White board
4.2	Definitions of Functions	2	Chalk & Talk	Green Board
4.3	Return Values and their types	2	Chalk & Talk	Black Board
4.4	Function Calls, Function Declarations	2	Chalk & Talk	Black Board
4.5	Category of Functions, Nesting of Functions	2	Discussion	Black Board
4.6	Recursion, Passing Arrays to Functions	2	Lecture	Green Board
4.7	Accessing the Address of a Variable – Declaring pointer variable	2	Discussion	Black Board
4.8	Pointers and Arrays- Array of Pointers – Pointers as Function Arguments	2	Chalk & Talk	Black Board
4.9	Functions Returning Pointers	1	Chalk & Talk	Black Board
4.10	Pointers to Functions	1	Discussion	Google classroom
UNIT – 5 POINTERS AND FILE MANAGEMENT				
5.1	Introduction – Defining and Opening a file	2	Lecture	PPT & White board
5.2	Closing file	1	Chalk & Talk	Black Board
5.3	Input Output operations on files	2	Lecture	Black Board
5.4	Error Handling during I/O operations	2	Chalk & Talk	Black Board
5.5	Random Access to files	2	Chalk & Talk	Black Board
5.6	Introduction to graphics	2	Chalk &	Black

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
			Talk	Board
5.7	colours in c graphics	1	Discussion	Google classroom
5.8	Graphics functions.	1	Chalk & Talk	Black Board
5.9	Graphics functions.	2	Chalk & Talk	Black Board
5.10	Graphics functions.	2	Lecture	Black Board
UNIT –6 DYNAMISM				
6.1	Real- time Applications using C	2	Discussion	Black Board
6.2	Real- time Applications using C	3	Discussion	Black Board

INTERNAL - UG

Levels	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total	% of Assessment
	T1	T2	Quiz	Assignment	OBT/PPT				
	10 Mks.	10 Mks.	5 Mks.	5 Mks	5 Mks	35 Mks.	5 Mks.	40Mks.	
K1	**2**	**2**	**-**	**-**	**-**	**4**	-	**4**	10 %
K2	**2**	**2**	**5**	**-**	**-**	**9**	-	**9**	22.5 %
K3	**3**	**3**	**-**	**-**	**5**	**11**	-	**11**	27.5 %
K4	**3**	**3**	**-**	**5**	**-**	**11**	-	**11**	27.5 %
Non Scholastic	**-**	**-**	**-**	**-**	-		**5**	**5**	12.5 %
Total	**10**	**10**	**5**	**5**	**5**	**35**	**5**	**40**	**100 %**

End Semester - UG

Levels	Section A (i)	Section A (ii)	Section B	Section C	Section D	Section E	Total	

	5 Mks.	5 Mks	8 Mks.	12 Mks	20 Mks.	10 Mks.	60Mks.	
K1	**5**	**5**	**-**	**4**	**-**	-	**14**	23.33 %
K2	**-**	**-**	**8**	**4**	**-**	-	**12**	20 %
K3	**-**	**-**	**-**	**-**	**20**	-	**20**	33.33 %
K4	**-**	**-**	**-**	**4**	**-**	10	**14**	23.34 %
Total	**5**	**5**	**8**	**12**	**20**	**10**	**60**	**100 %**

CIA	
Scholastic	**35**
Non Scholastic	**5**
	40

EVALUATION PATTERN

SCHOLASTIC					NON - SCHOLASTIC	MARKS		
C1	**C2**	**C3**	**C4**	**C5**	**C6**	**CIA**	**ESE**	**Total**
10	**10**	**5**	**5**	**5**	**5**	**40**	**60**	**100**

UG CIA Components

			Nos		
C1	-	Test (CIA 1)	1	-	10 Mks
C2	-	Test (CIA 2)	1	-	10 Mks
C3	-	Assignment	1	-	5 Mks
C4	-	Open Book Test/PPT	2 *	-	5 Mks
C5	-	Quiz	2 *	-	5 Mks
C6	-	Attendance		-	5 Mks

****The best out of two will be taken into account***

COURSE OUTCOMES

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

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Understand the basic concepts in Computer & C Programming.	K1	PSO1& PSO2
CO 2	Identify and Apply different construct available for iteration such as 'for', 'while' and 'do-while'.	K1, K2	PSO2
CO 3	Understand various storage concepts.	K1 & K3	PSO4
CO 4	Develop C programs using functions.	K1, K2 &K3	PSO3
CO 5	Summarize the concepts of Pointers and Files.	K2 & K4	PSO6

Mapping of COs with PSOs

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8
CO1	3	3	2	2	2	1	1	1
CO2	2	3	2	2	2	2	2	1
CO3	2	2	2	3	2	2	2	2
CO4	2	2	3	2	2	2	2	2
CO5	2	2	2	2	2	3	1	1

Mapping of COs with POs

CO/ PSO	PO1	PO2	PO3	PO4
CO1	3	1	1	1
CO2	1	1	3	1
CO3	1	2	1	3
CO4	1	1	1	1
CO5	1	1	1	1

Note: ♦ Strongly Correlated – **3** ♦ ModeratelyCorrelated – **2**
♦ WeaklyCorrelated -**1**

COURSE DESIGNER:

1. **Staff Name: Mrs.T. Leena Prema Kumari**

Forwarded By

V. Mageshwari

HOD'S

Signature