FATIMA COLLEGE (AUTONOMOUS)

Re-Accredited with "A++" Grade by NAAC (4th Cycle)
Maryland, Madurai- 625 018, Tamil Nadu, India

NAME OF THE DEPARTMENT : INFORMATION TECHNOLOGY

NAME OF THE PROGRAMME : B. Sc.

PROGRAMME CODE : USIT

ACADEMIC YEAR : 2023-24

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 6.4.23

Members Present:

1. Mrs. V. Mageshwari, Head, Dept. of IT -
2. Dr. K. Perumal, Prof.,
   Department of Computer Applications,
   School of Information Technology,
   Madurai kamaraj university,
   Madurai.
3. Dr. K. Kungumaraj,
   Head & Asst. prof.,
   PG Department of Computer Science,
   Arulmigu Palaniandavar college,
   Palani.
   6/4/2023
4. Dr. P. Joseph Charles,
   Head & prof.,
   Department of Information Technology,
   St. Joseph college,
   Trichy.
   6/4/23
5. Mr. S. Senthil kumar, CEO,
   Eminent Technologies solutions
   Madurai.
6. Ms. T. G. Poornima devi, Faculty,
   Dolphin Elite CBSE School,
   Madurai.
   6/4/23

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7. Dr. K. Sangeetha, -
Dean of Academic Affairs (SF)
Fatima college, Madurai

8. Staff members:

* Mrs. T. Leena Prema kumari -
* Mrs. T. Charanya Nagammal -
* Dr. V. Jane varamani Sulekha -
* Dr. N. Kalaichelvi -
* Mrs. I. Razul Beevi -

ACTION TAKEN REPORT:

The Action Taken Report for the academic year 2022-23 was presented as,

SUGGESTIONS	ACTION TAKEN
* Automation Skills, Image manipulation tools are to be introduced as new courses.	* As specified, Automation skills and Image manipulation tools were introduced as new courses.
* Major portion of "programming in JAVA", ".NET programming" has to revised.	* As per the board members suggestions, the courses have been revised.

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MINUTES OF THE BOARD OF STUDIES:

CORE COURSES INTRODUCED (PART-III).

S.NO.	COURSE CODE	COURSE TITLE	RELEVANCE TO				SCOPE FOR			NEED FOR INTRODUCTION
			L	R	N	Q	EMP	ENT	SD	
		SEM 1:								
1.	CC1	C Programming				✓	✓			members
2.	CC2	C programming Lab				✓	✓			Suggested
		SEM 2:								
3.	CC3	Java programming				✓			✓	members
4.	CC4	Java programming Lab.				✓	✓			Suggested
		SEM 3:								
5.	CC5	Web Application Development				✓			✓	Board members
6.	CC6	Web practicals.				✓		✓		Suggested
		SEM 4:								
7.	CC7	Industrial Statistics				✓		✓		Industrial
8.	CC8	Software Engineering				✓			✓	Need.
		SEM 5:								
9.	CC9	Computer Networks				✓			✓	Board
10.	CC10	DataBase Management System				✓	✓			members Suggested
11.	CC11	DBms Lab				✓	✓			
12	CC12	Project with Viva voce.				✓		✓		Industrial Need.

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S.NO	COURSE CODE	COURSE TITLE	RELEVANCE TO L	R	N	G	SCOPE FOR EMP	ENT	SD	NEED FOR INTRODUCTION
		SEM 6:								
13.	CC13	Machine Learning				✓			✓	Members
	CC14	Data Analytics				✓			✓	Suggestion &
	CC15	Android				✓	✓			Industrial
		programming								need.

ELECTIVE COURSES INTRODUCED (PART-III).

S.NO	Generic/ Discipline specific	COURSE CODE	COURSE TITLE	RELEVANCE TO L	R	N	G	SCOPE FOR EMP	ENT	SD	NEED FOR INTRODUCTION
	SEM I:-										
1.	Generic Elective	EC1	i) Principles of Information Technology			✓				✓	members suggested
			ii) cyber Security				✓			✓	
2.	SEM II: Generic Elective	EC2	i) Enterprise Resource planning			✓				✓	members
			ii) Business Information System.			✓				✓	suggested
3.	SEM III Generic Elective	EC3	i) privacy & security in social media				✓			✓	members
			ii) Green IT				✓			✓	suggested

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S.NO	GENERIC/ DISCIPLINE SPECIFIC	COURSE CODE	COURSE TITLE	RELEVANCE TO				SCOPE FOR			NEED FOR INTRODUCTION
				L	R	N	G	Emp	ET	SD	
4.	SEM IV Generic	EC4	i) Introduction to networks				✓			✓	Members Suggested
			ii) Open Source Technologies				✓	✓			
5.	SEM V Discipline Specific	EC5	i) Data Mining				✓			✓	Members Suggested
			ii) multimedia Systems.				✓	✓			
		EC6	i) mobile Adhoc networks.				✓	✓			Members Suggested
			ii) cloud computing				✓			✓	
6.	SEM VI. Discipline Specific	EC7	i) Network Security				✓			✓	Members
			ii) Computer Graphics				✓			✓	Suggested
		EC8	i) Information Storage & management				✓			✓	members
			ii) Soft computing				✓			✓	Suggested

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SKILL ENHANCEMENT/ FOUNDATION/ ABILITY ENHANCEMENT COURSE (PART IV).

S.NO	SEC/ FC AECC WITH SEM	COURSE CODE	COURSE TITLE	RELEVANCE TO				SCOPE FOR			NEED FOR INTRODUCTION
				L	R	N	G	EMP	ENT	SD	
	SEM I:										
1.	SEC	SEC 1	Image Editing Tool - 1				✓	✓			Industrial need.
2.	FC	FC1	problem Solving Techniques.				✓			✓	Members suggested
3.	AECC	AECC1	Soft Skill - 1.								
	SEM II.										
4.	SEC	SEC2	Advanced Excel				✓	✓			Industrial need
5.		SEC3	Quantitative Aptitude				✓	✓			Industrial need
6.	AECC	AECC2	Soft Skill -2								
	SEM III:										
7.	SEC	SEC4	Image Editing Tool - II				✓	✓			Industrial need
8.		SEC5	R programming Lab				✓	✓			Industrial need
9.	AECC	AECC3	Soft Skill - 3.								
	SEM IV:										
10.	SEC	SEC6	Internet of Things.				✓	✓			members suggested
11.		SEC7	Data Mining tool				✓	✓			Industrial need.
12.	AECC	AECC4	Soft Skill - 4.								

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REVISED COURSES:

S.NO	COURSE CODE	COURSE TITLE	REVISED CONTENT	% OF REVISION	RELEVANCE TO				SCOPE FOR			NEED FOR REVISION
					L	R	N	Q	Emp	ET	SD	
1.	19I3CC5	DataBase Management System	unit III & IV Interchanged					✓	✓			member suggestion
2.	22I4CC7	Programming in JAVA	All units are changed	90%.				✓	✓			member suggestion
3.	19I4SB2	Analytical skills	Puzzle list, Games, base Concepts are removed	5%.			✓		✓			member suggestion
4.	23I5CC9	.NET Programming	All units are Changed	90%.				✓	✓			member suggestion
5.	23I6CC13	python programming	core concepts included in all units	95%.				✓	✓			member suggestion
6.	22I6ME32	cloud Technology	Grid concepts are included	5%.				✓	✓			member suggestion

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S.NO	COURSE CODE	COURSE TITLE	REVISED CONTENT	% of REVISION	RELEVANCE TO				SCOPE FOR			NEED FOR REVISION
					L	R	N	G	Emp	ET	SD	
7.	19I6ME5	Information Storage and Management	FC Connectivity included	5%				✓			✓	Member Suggestion
8.	21I6ME4	mobile computing	wireless LAN Concepts removed	5%				✓			✓	Member Suggestion
9.	21I6SB6	Fundamentals of Android Programming	unit III & IV Interchanged					✓			✓	Member Suggestion

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1) INTRODUCTION OF VALUE-ADDED COURSE - CERTIFICATE

S.NO	COURSE CODE	COURSE TITLE	MOU WITH INDUSTRY	SKILLS SHARPENED	COURSE OUTCOME
1.	23UGVA1	Animation using Scratch	-	Creativity	Able to develop games, animated videos.
2.	23UGVA2	Android programming	-	Programming Skill	Develop codes for mobile applications.

2) INTRODUCTION OF PURELY SKILL EMBEDDED CERTIFICATE COURSE

S.NO	COURSE CODE	COURSE TITLE	MOU WITH INDUSTRY	SKILLS SHARPENED	COURSE OUTCOME
1.	23UGVA3	Image Editing tools.	-	programming skill	Develop codes for Android Development.

3) Approval of Ph.D Course work Syllabus - NIL.

COMMENDATIONS:

* All Theoritical Concepts has to be practically implemented as per the possibility.

* Skill based courses should be given as practical course.

DATE

MEMBERS:

* Mrs. V. Mageshwari – 6/4/23.
* Dr. K. Perumal – 6/4/2023
* Dr. K. Kungumaraj – 6/4/2023
* Dr. P. Joseph charles – 6/4/23
* Mr. S. Senthil kumar –
* Ms. T.G. Poornima Devi – 6/4/23
* Dr. K. Sayeetha –
* Mrs. T. Leenaprema kumari –
* Mrs. T. Charanya Nagammal –
* Dr. V. Jane varanani Sulekha –
* Dr. N. Kalaichelvi –
* Mrs. I. Razul Beevi –

06/04/2023

VISION OF THE DEPARTMENT

The vision is to be the center of excellence in training the students in Information Technology to excel both as a professional and as a human in the society.

MISSION OF THE DEPARTMENT

- Empower women by teaching them technology and life lessons.
- Encourage students to be the change in the society.
- Educate students and prepare them in various aspects of IT industry.
- Provide leadership quality for effective strategic and tactical planning in use of technology.
- Instill the power of faith and hope so they could be the blessing to their next generation.

PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

A graduate of B.Sc.ITprogramme after five years will be

PEO 1	Our graduates will be academic, digital and information literates, creative, inquisitive, innovative and desirous for the "more" in all aspects
PEO 2	They will be efficient individual and team performers, exhibiting progress, flexibility, transparency and accountability in their professional work
PEO 3	The graduates will be effective managers of all sorts of real – life and professional circumstances, making ethical decisions, pursuing excellence within the time framework and demonstrating apt leadership skills

PEO 4	They will engage locally and globally evincing social and environmental stewardship demonstrating civic responsibilities and employing right skills at the right moment.

GRADUATE ATTRIBUTES (GA)

Fatima College empowers her women graduates holistically. A Fatimite achieves all-round empowerment by acquiring Social, Professional and Ethical competencies. A graduate would sustain and nurture the following attributes:

I. SOCIAL COMPETENCE	
GA 1	Deep disciplinary expertise with a wide range of academic and digital literacy
GA 2	Hone creativity, passion for innovation and aspire excellence
GA 3	Enthusiasm towards emancipation and empowerment of humanity
GA 4	Potentials of being independent
GA 5	Intellectual competence and inquisitiveness with problem solving abilities befitting the field of research
GA 6	Effectiveness in different forms of communications to be employed in personal and professional environments through varied platforms
GA 7	Communicative competence with civic, professional and cyber dignity and decorum
GA 8	Integrity respecting the diversity and pluralism in societies, cultures and religions
GA 9	All – inclusive skill sets to interpret, analyse and solve social and environmental issues in diverse

	environments
GA 10	Self awareness that would enable them to recognise their uniqueness through continuous self-assessment in order to face and make changes building on their strengths and improving their weaknesses
GA 11	Finesse to co-operate exhibiting team-spirit while working in groups to achieve goals
GA 12	Dexterity in self-management to control their selves in attaining the kind of life that they dream for
GA 13	Resilience to rise up instantly from their intimidating setbacks
GA 14	Virtuosity to use their personal and intellectual autonomy in being life-long learners
GA 15	Digital learning and research attributes
GA 16	Cyber security competence reflecting compassion, care and concern towards the marginalised
GA 17	Rectitude to use digital technology reflecting civic and social responsibilities in local, national and global scenario
II. PROFESSIONAL COMPETENCE	
GA 18	Optimism, flexibility and diligence that would make them professionally competent
GA 19	Prowess to be successful entrepreuners and become employees of trans-national societies
GA 20	Excellence in Local and Global Job Markets
GA 21	Effectiveness in Time Management
GA 22	Efficiency in taking up Initiatives
GA 23	Eagerness to deliver excellent service
GA 24	Managerial Skills to Identify, Commend and tap

	Potentials
III. ETHICAL COMPETENCE	
GA 25	Integrity and be disciplined in bringing stability leading a systematic life promoting good human behaviour to build better society
GA 26	Honesty in words and deeds
GA 27	Transparency revealing one's own character as well as self-esteem to lead a genuine and authentic life
GA 28	Social and Environmental Stewardship
GA 29	Readiness to make ethical decisions consistently from the galore of conflicting choices paying heed to their conscience
GA 30	Right life skills at the right moment

PROGRAMME OUTCOMES (PO)

The learners will be able to

PO 1	Apply acquired scientific knowledge to solve complex issues.
PO 2	Attain Analytical skills to solve complex cultural, societal and environmental issues.
PO 3	Employ latest and updated tools and technologies to analyse complex issues.
PO 4	Demonstrate Professional Ethics that foster Community, Nation and EnvironmentBuilding Initiatives.

PROGRAMME SPECIFIC OUTCOMES (PSO)

On completion of B.Sc. Information TechnologyProgramme, the graduates would be able to

PSO 1	Apply computational techniques and software principles for designing of software systems.
PSO 2	Develop efficient and effective software systems using modern computer techniques.
PSO 3	Acquire fundamental concepts, methods and practices of Information Technology to develop theoretical and practical skill sets.
PSO 4	Justify the optimum technique to allocate memory resources, processors, I/O peripherals to provide optimal programmatic solution to a real world problem.
PSO 5	Support to gain skills on basic as well as trendy software languages and packages to design web sites, web apps, mobile apps and real time software projects.
PSO 6	Promote the students to generalize and distinguish the characters of different systems for different environment.
PSO 7	Trigger the students to enroll in to the research areas of IT industry like cloud computing and data analytics.
PSO 8	Able to become entrepreneur and to pursue career in IT industries.

PROGRAMME CODE : USIT

PART – III -MAJOR, ALLIED & ELECTIVES

S.NO	SEM.	COURSECODE	COURSE TITLE	HRS	CREDIT	CIA Mks	ESE Mks	TOT. Mks
1.	I	23I1CC1	PROGRAMMING IN C	5	4	40	60	100
2.		23I1CC2	C PROGRAMMING PRACTICAL	5	5	40	60	100
3.		23I1FC	FUNDAMENTALS OF COMPUTER	2	2	40	60	100
4.	II	23I2CC3	JAVA PROGRAMMING	5	5	40	60	100
5.		23I2CC4	JAVA PROGRAMMING & DATA STRUCTURES PRACTICAL	5	5	40	60	100
6.		23I2SE3	AUTOMATION SKILLS	2	2	40	60	100
7.	III	19I3CC5	DATABASE MANAGEMENT SYSTEM	6	4	40	60	100
8.		19I3CC6	LAB III - RDBMS	6	3	40	60	100
9.	IV	22I4CC7	PROGRAMMING IN JAVA	6	4	40	60	100
10.		22I4CC8	LAB IV - JAVA PROGRAMMING	6	3	40	60	100
11.	V	23I5CC9	.NET PROGRAMMING	5	5	40	60	100
12.		23I5CC10	LAB V - .NET PROGRAMMING	6	3	40	60	100

S.NO	SEM.	COURSECODE	COURSE TITLE	HRS	CREDIT	CIA Mks	ESE Mks	TOT. Mks
13.		19I5CC11	SOFTWARE ENGINEERING	5	3	40	60	100
14.		19I5CC12	OPERATING SYSTEM	5	5	40	60	100
15.	VI	23I6CC13	PYTHON PROGRAMMING	5	5	40	60	100
16.		23I6CC14	LAB VI - PYTHON PROGRAMMING	6	3	40	60	100
17.		19I6CC15	DATA COMMUNICATION AND NETWORKING	5	5	40	60	100
18.		21I6PR	PROJECT	-	3	40	60	100

ALLIEDCOURSES

S.NO	SEM.	COURSECODE	COURSE TITLE	HRS	CREDIT	CIA Mks	ESE Mks	TOT. MKs
1.	I	23G1GEI1	DISCRETE MATHEMATICS	5	5	40	60	100
2.	II	23G2GEI2	OPERATIONS RESEARCH	5	5	40	60	100
3.	III	21P3ACI3	DIGITAL PRINCIPLES AND COMPUTER ARCHITECTURE	5	5	40	60	100
4.	IV	21AC4ACI4	ACCOUNTING IN DECISION MAKING	5	5	40	60	100

ELECTIVES

S.No	SEM.	COURSECODE	COURSE TITLE	HRS	CREDIT	CIA Mks	ESE Mks	TOT. Mks
1.	V	**19I5ME1/19I5ME2**	DATA MINING/NETWORK SECURITY	5	5	40	60	100
2.	VI	**22I6ME3/ 21I6ME4**	CLOUD TECHNOLOGY/ MOBILE COMMUNICATION	5	5	40	60	100
3.		**19I6ME5/ 19I6ME6**	INFORMATION STORAGE AND MANAGEMENT /COMPUTER GRAPHICS	5	5	40	60	100

PART – IV

- **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	**23G1VE**	Value Education (Including Meditation in Action Movement)	1	1	40	60	100
2.		**23I1SE1**	Non Major Elective– Office Automation (Offered to other major Students)	2	2	40	60	100
3.	II	**23G2VE**	Value Education	1	1	40	60	100
4.		**23I2SE2**	Non Major Elective – Multimedia Lab (Offered	2	2	40	60	100

S. No	SEM.	COURSECODE	COURSE TITLE	HRS	CREDIT	CIA Mks	ESE Mks	TOT. Mks
			to other major Students)					
5.	III	**21G3EE**	Environmental Studies	1	1	40	60	100
6.		**22I3SB1**	Skill based– Excel using VBA	2	2	40	60	100
7.	IV	**21G4GS**	Gender Studies	1	1	40	60	100
8.		**19I4SB2**	Skill based - Analytical Skills	2	2	40	60	100
9.	V	**23I5SB3**	Skill based – Basics of HTML5	2	2	40	60	100
10.		**23I5SB4**	Skill based – Web Programming using PHP	2	2	40	60	100
11.	VI	**23I6SB5**	Skill based – Advanced HTML5	2	2	40	60	100
12.		**23I6SB6**	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.	COURSE CODE	COURSE TITLE	HRS	CREDIT	TOT. Mks
1.	I - IV	21S4PED	Physical Education	30/ SEM	1	100
2.		21S4YRC	Youth Red Cross			
3.		21S4NSS	NSS			
4.		21S4RTC	Rotaract			
5.		21S4WEC	Women Empowerment Cell			
6.		21S4ACUF	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 Courses/any	-	Minimum 2 Credits	-	-	-	

COURSE CODE	Courses	Hrs.	Credits	Semester in which the course is offered	CIA Mks	ESE Mks	Total Marks
	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
21I3SL1	**SELF LEARNING COURSES for ADVANCED LEARNERS: GREEN COMPUTING**	-	2	III	40	60	100
21J5SLI1	**SELF LEARNING COURSES for ADVANCEDLEARNERS: DATA**	-	2	V	40	60	100

	SCIENCE & TOOLS						
	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
23UGVA12 – Image Manipulation Tools

Skill Development 100%

I B.Sc. Information Technology

SEMESTER –I

For those who joined in 2023 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
USIT	23I1CC1	PROGRAMMING IN C	Lecture	5	4

COURSE DESCRIPTION

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

COURSE OBJECTIVES

- To familiarize the students with the understanding of code organization
- To improve the programming skills
- Learning the basic programming constructs.

UNITS

UNIT –I STUDYING CONCEPTS OF PROGRAMMING LANGUAGES

(15 HRS.)

Language Evaluation Criteria - Language design - Language Categories - Implementation Methods – Programming Environments - Overview of C: History of C- Importance of C- Basic Structure of C Programs-Executing a C Program- Constants, Variables and Data types - Operators and Expressions - Managing Input and Output Operations

UNIT –II DECISION MAKING AND BRANCHING (15 HRS.)

Decision Making and Looping - Arrays - Character Arrays and Strings

UNIT –III USER DEFINED FUNCTIONS (15 HRS.)

Elements of User Defined Functions- Definition of Functions- Return Values

and their Types- Function Call- Function Declaration- Categories of Functions- Nesting of Functions-Recursion

UNIT –IV STRUCTURES AND UNIONS (13 HRS.)

Introduction- Defining a Structure- Declaring Structure Variables Accessing Structure Members- Structure Initialization- Arrays of Structures- Arrays within Structures- Unions- Size of Structures.

UNIT –V POINTERSAND FILES (15 HRS.)

Understanding Pointers- Accessing the Address of a Variable- Declaring Pointer Variables- Initializing of Pointer Variables- Accessing a Variable through its Pointer- Chain of Pointers- Pointer Expressions- Pointer and Scale Factor- Pointer and Arrays- Pointers and Character Strings- Array of Pointers- Pointer as Function Arguments- Functions Returning Pointers- Pointers to Functions- **File Management in C**

UNIT –VI DYNAMISM (Evaluation Pattern-CIA only) (2HRS.)

Advanced Concepts in C.

TEXT BOOK:

1. Robert W. Sebesta, (2012), ―Concepts of Programming Languages‖, Fourth Edition, Addison Wesley (Unit I : Chapter – 1)
2. E. Balaguruswamy, (2010), ―Programming in ANSI C‖, Fifth Edition, Tata McGraw Hill Publications

REFERENCES:

1. Ashok Kamthane, (2009), ―Programming with ANSI & Turbo C‖, Pearson Education
2. Byron Gottfried, (2010), ―Programming with C‖, Schaums Outline Series, Tata McGraw Hill Publications

OPEN EDUCATIONAL RESOURCES:

1. http://www.tutorialspoint.com/cprogramming/
2. http://www.cprogramming.com/

3. http://www.programmingsimplified.com/c-program-examples
4. http://www.programiz.com/c-programming
5. http://www.cs.cf.ac.uk/Dave/C/CE.html
6. http://fresh2refresh.com/c-programming/c-function/

COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
UNIT -1STUDYING CONCEPTS OF PROGRAMMING LANGUAGES				
1.1	Language Evaluation Criteria - Language design - Language Categories	4	Discussion	Black Board
1.2	Implementation Methods – Programming Environments - Overview of C: History of C- Importance of C	3	Chalk & Talk	Black Board
1.3	Basic Structure of C Programs-Executing a C Program- Constants, Variables and Data types	4	Lecture	LCD
1.4	Operators and Expressions - Managing Input and Output Operations	4	Discussion	Google classroom
UNIT -2DECISION MAKING AND BRANCHING				
2.1	Decision Making and Looping	5	Lecture	PPT & White board
2.2	Arrays	5	Chalk & Talk	Green Board
2.3	Character Arrays and Strings	5	Chalk & Talk	Black Board
UNIT – 3 USER DEFINED FUNCTIONS				
3.1	Elements of User Defined Functions	4	Discussion	PPT & White board
3.2	Definition of Functions- Return Values and their Types-	4	Chalk &Talk	Green Board

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
	Function Call			
3.3	Function Declaration	4	Chalk & Talk	Black Board
3.4	Categories of Functions- Nesting of Functions-Recursion	3	Chalk & Talk	Black Board
UNIT – 4STRUCTURES AND UNIONS				
4.1	Introduction	3	Discussion	PPT &White board
4.2	Defining a Structure- Declaring Structure Variables Accessing Structure Members	3	Chalk & Talk	Green Board
4.3	Structure Initialization- Arrays of Structures	3	Chalk & Talk	Black Board
4.4	Arrays within Structures	3	Chalk &Talk	Black Board
4.5	Unions- Size of Structures.	3	Discussion	Black Board
UNIT – 5 POINTERSAND FILES				
5.1	Understanding Pointers- Accessing the Address of a Variable	3	Lecture	PPT & White board
5.2	Declaring Pointer Variables- Initializing of Pointer Variables- Accessing a Variable through its Pointer	3	Chalk & Talk	Black Board
5.3	Chain of Pointers- Pointer Expressions- Pointer and Scale Factor- Pointer and Arrays	3	Lecture	Black Board
5.4	Pointers and Character Strings- Array of Pointers- Pointer as Function Arguments	3	Chalk & Talk	Black Board
5.5	Functions Returning Pointers- Pointers to Functions- **File Management in C**	3	Chalk & Talk	Black Board
UNIT –6 DYNAMISM				
6.1	Advanced Concepts	2	Discussion	Black Board

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 %

CIA	
Scholastic	35
Non Scholastic	5
	40

EVALUATION PATTERN

SCHOLASTIC				NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	CIA	ESE	Total
5	10	15	5	5	40	60	100

C1 – Average of Two Session Wise Tests

C2 – Average of Two Monthly Tests

C3 - Mid Sem Test

C4 – Best of Two Weekly Tests

C5 – Non – Scholastic

COURSE OUTCOMES

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

NO.	COURSE OUTCOMES
CO1	Outline the fundamental concepts of C programming languages, andits features
CO2	Demonstrate the programming methodology.
CO3	Identify suitable programming constructs for problem solving.
CO4	Select the appropriate data representation, control structures, functions and concepts based on the problem requirement.
CO5	Evaluate the program performance by fixing the errors.

Mapping of COs with PSOs

CO/PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	3	2	2	3	2	2
CO2	3	3	2	3	2	2
CO3	3	3	3	3	2	2
CO4	3	3	2	3	2	2
CO5	3	3	2	3	2	2
Weightage ofcoursecontributedtoeachPSO	15	14	11	15	10	10

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

Forwarded By

Employability 100%

I B.Sc. Information Technology

SEMESTER –I

For those who joined in 2023 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
USIT	23I1CC2	C PROGRAMMING PRACTICAL	PRACTICAL	5	5

COURSE DESCRIPTION

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

COURSE OBJECTIVES

- The Course aims to provide exposure to problem-solving through C programming
- It aims to train the student to the basic concepts of the C -Programming language
- Apply different concepts of C language to solve the problem

PROGRAM LIST

1. Programs using Input/ Output functions
2. Programs on conditional structures
3. Command Line Arguments
4. Programs using Arrays
5. String Manipulations
6. Programs using Functions
7. Recursive Functions

8. Programs using Pointers
9. Files
10. Programs using Structures & Unions

COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
1	Programs using Input/ Output functions	6	Demonstration	Desktop PC
2	Programs on conditional structures	6	Demonstration	Desktop PC
3	Command Line Arguments	6	Demonstration	Desktop PC
4	Programs using Arrays	6	Demonstration	Desktop PC
5	String Manipulations	6	Demonstration	Desktop PC
6	Programs using Functions	6	Demonstration	Desktop PC
7	Recursive Functions	6	Demonstration	Desktop PC
8	Programs using Pointers	6	Demonstration	Desktop PC
9	Files	6	Demonstration	Desktop PC
10	Programs using Structures & Unions	6	Demonstration	Desktop PC

COURSE OUTCOMES

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

NO.	COURSE OUTCOMES

CO1	Demonstrate the understanding of syntax and semantics of C programs.
CO2	Identify the problem and solve using C programming techniques.
CO3	Identify suitable programming constructs for problem solving.
CO4	Analyze various concepts of C language to solve the problem in an efficient way.
CO5	Develop a C program for a given problem and test for its correctness.

CIA	
Scholastic	**23**
Non Scholastic	**2**
	25

Mapping of COs with PSOs

CO/PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	3	2	2	3	2	2
CO2	3	3	2	3	2	2
CO3	3	3	3	3	2	2
CO4	3	3	2	3	2	2
CO5	3	3	2	3	3	2
Weightage ofcoursecontributedtoeachPSO	15	14	11	15	11	10

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& Name

Skill Development 100%

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	**23G1GEI1**	**DISCRETE MATHEMATICS**	**Lecture**	**5**	**5**

COURSE DESCRIPTION

This course content is enables students to strengthen and increase the understanding of Discrete Mathematics with special emphasis on Computer science applications.

COURSE OBJECTIVES

To impart the mathematical skill to develop logical thinking.

UNITS

UNIT –I SETS, RELATIONS (14HRS.)

Sets – Definition- Venn Diagram- Operations on sets Properties of Relations- Inverserelation- Equivalence classes- Partition of a set- Fundamental theorem on equivalencerelations- Graphs of relations and Hasse Diagram.

UNIT –II LOGIC (14 HRS.)

Connectives- Equivalence Formulas- Tautological Implication- Normal Forms- InferenceTheory- Predicate Calculus-Inference theory for Predicate Calculus.

UNIT –III THEORY OF MATRICES (14

HRS.)

Matrix Inversion- System of equations- Consistency of systems of linear equations- EigenValues- Eigen Vectors- Digitalization Process- Induction Principle- Peano's Postulates.

UNIT –IV RECURRENCE RELATIONS AND GENERATING FUNCTIONS (14 HRS.)

Polynomial expression- Sequences- Recurrence relations- Generating Functions- Propertiesof Generating Functions- Solution of Recurrence Relations using Generating Functions.

UNIT –V BOOLEAN ALGEBRA (14 HRS.)

Boolean Algebra- Simplification of Boolean Functions by the map method -Introduction tothe Applications of Boolean Algebra to Switching Theory-Turing Machine Problem.

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

Recent advancement in discrete mathematics.

TEXT BOOK:

1. V Sundaresan, K S Ganapathy Subramanian, K Ganesan, Discrete mathematics, A.R. Publications, 2002.Chapters: 1(excluding Functions), 2, 3, 6(excluding 6.1, 6.2).

REFERENCES:

1. Doerr, Alan, and Kenneth Levasseur.Applied discrete structures for computer science.Galgotia Publications, New Delhi.

2. J P Tremblay and R Manohar, Discrete Mathematical Structures with Applications to Computer Science, Tata McGraw-Hill Publishing Company Limited.

OPEN EDUCATIONAL RESOURCES:

1. Discrete Mathematics Tutorial

https://www.tutorialspoint.com/discrete_mathematics/index.htm

COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
UNIT -1 SETS, RELATIONS				
1.1	Sets – Definition- Venn Diagram	4	Discussion	Black Board
1.2	Operations on sets Properties of Relations- Inverserelation- Equivalence classes- Partition of a set	4	Chalk & Talk	Black Board
1.3	Fundamental theorem on equivalence relations	4	Lecture	LCD
1.4	Graphs of relations and Hasse Diagram.	2	Discussion	Google classroom
UNIT -2 LOGIC				
2.1	Connectives- Equivalence Formulas	4	Lecture	PPT & White board
2.2	Tautological Implication- Normal Forms- Inference Theory	4	Chalk & Talk	Green Board
2.3	Predicate Calculus	4	Chalk & Talk	Black Board
2.4	Inference theory for Predicate Calculus.	2	Chalk & Talk	Black Board
UNIT – 3 MATRICES				
3.1	Matrix Inversion- System of equations	4	Discussion	PPT & White board
3.2	Consistency of systems of linear equations- Eigen Values	4	Chalk & Talk	Green Board
3.3	Eigen Vectors- Digitalization Process	4	Chalk & Talk	Black Board

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
3.4	Induction Principle- Peano's Postulates	2	Chalk & Talk	Black Board
UNIT – 4 RECURRENCE RELATIONS AND GENERATING FUNCTIONS				
4.1	Polynomial expression- Sequences	4	Discussion	PPT & White board
4.2	Recurrence relations- Generating Functions	4	Chalk & Talk	Green Board
4.3	Properties of Generating Functions	4	Chalk & Talk	Black Board
4.4	Solution of Recurrence Relations using Generating Functions.	2	Chalk & Talk	Black Board
UNIT – 5 BOOLEAN ALGEBRA				
5.1	Boolean Algebra- Simplification of Boolean Functions by the map method	4	Lecture	PPT & White board
5.2	Introduction to the Applications of Boolean Algebra to Switching Theory	4	Chalk & Talk	Black Board
5.3	Turing Machine Problem	4	Lecture	Black Board
5.4	Turing Machine Problem	2	Chalk & Talk	Black Board
UNIT –6 DYNAMISM				
6.1	Recent advancement in discrete mathematics	2	Discussion	Black Board
6.2	Recent advancement in discrete mathematics	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) 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 the basic principles of sets and operations in sets.	K1	PSO1& PSO2
CO 2	Write arguments using logical notation.	K1, K2	PSO2& PSO3
CO 3	Implement various concepts in theory of Matrices	K1, K3	PSO6
CO 4	Demonstrate an understanding of relations and functions and be able to determine their properties.	K1, K2& K3	PSO2 & PSO3
CO 5	Write the diversified solutions for various recurrence relations and Boolean algebra.	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** ♦ Moderately Correlated – **2**
♦ Weakly Correlated -**1**

COURSE DESIGNER:

1. **Staff Name: MRS. R. RAJESWARI**

Forwarded By

V. Mageshwari

HOD'S Signature

& Name

Skill Development 100%

I B.Sc. Information Technology

SEMESTER –I

For those who joined in 2023 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
USIT	23I1FC	FUNDAMENTALS OF COMPUTERS	Lecture	2	2

COURSE DESCRIPTION

This course focuses on computer literacy that prepares students for life-long learning of computer concepts and skills.

COURSE OBJECTIVES

- To analyze a problem with appropriate problem solving techniques
- To understand the main principles of imperative, functional and logic oriented programming languages and
- to increase the ability to learn new programming languages.

UNITS

UNIT –I INTRODUCTION (6HRS.)

Characteristics of Computers - Evolution of Computers **Basic Computer Organization:** I/O Unit - Storage Unit - Arithmetic Logic Unit - Control Unit - Central Processing Unit

UNIT –II COMPUTER SOFTWARE (6 HRS.)

Types of Software - System Architecture **Computer Languages:** Machine Language - Assembly Language - High Level Language - Object Oriented Languages

UNIT –III PROBLEM SOLVING CONCEPTS (6 HRS.)

Problem Solving in Everyday life - Types of Problems - Problem solving with computers - Difficulties with Problem Solving

UNIT –IV PROBLEM SOLVING CONCEPTS FOR THE COMPUTER (6 HRS.)

Constant Variables - Data Types - Functions -Operators - Expressions and Equations - **Organizing the Solution:** Analyzing the problem - Algorithm - Flowchart - Pseudo code

UNIT –V PROGRAMMING STRUCTURE (6 HRS.)

Structuring a solution - Modules and their function - Local and Global variables - Parameters - Return values - Sequential Logic Structure - Problem solving with Decision - Problem Solving with Loops

TEXT BOOK:

1. PradeepK.Sinha and PritiSinha, (2004) ―Computer Fundamentals‖, Sixth Edition, BPB Publications. (Unit I : Chapter 1 & 2, Unit II : Chapter 10 & 12)
2. Maureen Sprankle and Jim Hubbard, (2009) ―Problem Solving and Programming Concept, Ninth Edition, Prentice Hall. (Unit III: Chapter 1,2 &3) Unit IV : Chapter 3, Unit V : Chapter 4,5 ,6,7 & 8)

REFERENCES:

1. R.G. Dromey, (2007), ―How to Solve it by Computer‖, Prentice Hall International Series in Computer Science.
2. C. S. V. Murthy, (2009), ―Fundamentals of Computers‖, Third Edition, Himalaya Publishing House.

OPEN EDUCATIONAL RESOURCES:

1. http://www.tutorialspoint.com/computer_fundamentals/
2. http://www.comptechdoc.org/basic/basictut/
3. http://www.homeandlearn.co.uk/
4. http://www.top-windows-tutorials.com/computer-basics/
5. https://www.programiz.com/article/flowchart-programming

(Algorithm and flow chart)

COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
UNIT -1INTRODUCTION				
1.1	Characteristics of Computers - Evolution of Computers **Basic**	2	Discussion	Black Board
1.2	**Computer Organization:** I/O Unit - Storage Unit - Arithmetic Logic Unit	2	Chalk & Talk	Black Board
1.3	Control Unit - Central Processing Unit	2	Lecture	LCD
UNIT -2COMPUTER SOFTWARE				
2.1	Types of Software - System Architecture	2	Lecture	PPT & White board
2.2	**Computer Languages:** Machine Language - Assembly Language	2	Chalk & Talk	Green Board
2.3	High Level Language - Object Oriented Languages	2	Chalk &Talk	Black Board
UNIT – 3 PROBLEM SOLVING CONCEPTS				
3.1	Problem Solving in Everyday life -	2	Discussion	PPT & White board
3.2	Types of Problems - Problem solving with computers -	2	Chalk &Talk	Green Board
3.3	Difficulties with Problem Solving	2	Chalk & Talk	Black Board
UNIT – 4 STRUCTURES AND UNIONS				
4.1	Introduction	2	Discussion	PPT &White board
4.2	Defining a Structure- Declaring	2	Chalk & Talk	Green Board

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
	Structure Variables Accessing Structure Members			
4.3	Structure Initialization- Arrays of Structures	2	Chalk & Talk	Black Board
UNIT – 5 POINTERSAND FILES				
5.1	Understanding Pointers- Accessing the Address of a Variable	2	Lecture	PPT & White board
5.2	Declaring Pointer Variables- Initializing of Pointer Variables- Accessing a Variable through its Pointer	2	Chalk & Talk	Black Board
5.3	Chain of Pointers- Pointer Expressions- Pointer and Scale Factor- Pointer and Arrays	2	Lecture	Black Board

INTERNAL -UG

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 %**

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

EVALUATION PATTERN

SCHOLASTIC				NON - SCHOLASTIC	MARKS		
C1	**C2**	**C3**	**C4**	**C5**	**CIA**	**ESE**	**Total**
5	**10**	**15**	**5**	**5**	**40**	**60**	**100**

C1 – Average of Two Session Wise Tests

C2 – Average of Two Monthly Tests

C3 - Mid Sem Test

C4 – Best of Two Weekly Tests

C5 – Non – Scholastic

COURSE OUTCOMES

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

NO.	COURSE OUTCOMES
CO1	Outline the Computer fundamentals and various problem solving concepts in Computers
CO2	Describe the basic computer organization, software, computer languages, software development life cycle and the need of structured programming in solving a

	computer problem
CO3	Identify the types of computer languages, software, computer problems and examine how to set up expressions and equations to solve the problem.
CO4	Choose most appropriate programming languages, constructs and features to solve the problems in diversified domains.
CO5	Analyze the design of modules and functions in structuring the solution and various Organizing tools in problem solving.

Mapping of C0s with PSOs

CO/PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	**3**	**2**	**2**	**2**	**2**	**3**
CO2	**3**	**2**	**2**	**2**	**3**	**2**
CO3	**3**	**3**	**3**	**3**	**2**	**2**
CO4	**3**	**2**	**2**	**2**	**2**	**3**
CO5	**3**	**3**	**2**	**2**	**3**	**2**
Weightage ofcoursecontributed toeachPSO	**15**	**12**	**11**	**11**	**12**	**12**

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

Entrepreneurship 100%

I B.Sc. Information Technology

SEMESTER –I

For those who joined in 2023 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
USIT	23I1SE1	OFFICE AUTOMATION	Practical	2	2

COURSE DESCRIPTION

This course trains students how to use MS Office applications use in office work such as creating professional-quality documents, store, organize and analyze information, arithmetic operations, functions and create dynamic slide presentations with animation, narration, images, and much more, digitally and effectively.

COURSE OBJECTIVES

To impart knowledge on various concepts in MS Word, Excel, PowerPoint & Publisher.

UNITS

UNIT –I WORD (6 HRS.)

Windows Basics – Introduction to word – Editing a document - Move and Copy text - Formatting text & Paragraph – Enhancing document – Columns, Tables and Other features.

UNIT –II EXCEL (6 HRS.)

Introduction to worksheet – getting started with Excel – Editing cell & using Commands and functions – Moving & Copying , Inserting & Deleting Rows & Columns - Printing work sheet.

UNIT –III ADVANCED FEATURES IN EXCEL (6 HRS.)

Creating charts – Naming ranges and using statistical, math and financial functions, in a worksheet – Additional formatting commands and toolbar – other commands & functions.

UNIT –IV POWERPOINT (6 HRS.)

Overview of Power point – presenting shows for corporate and commercial using Power point

UNIT –V ADVANCED FEATURES OF POWER POINT (6 HRS.)

Formatting text and objects to customize the look of publication- Add, Resize, Rotate, and Group objects- Creation of Product Catalogue- Create bookmarks and hyperlinks.

PROGRAM LIST

MS-WORD

1. **Text Manipulation:**Writinga paragraph about the institution and Change the font size and type, Spell check, Aligning and justification of Text
2. **Bio data:** Preparing Bio-data.
3. **Find and Replace:**Writinga paragraph about individual and do the following. Find and Replace, Use Numbering Bullets, Footer and Headers.
4. **Tables and manipulation:** Creation, Insertion, Deletion (Columns and Rows). Create a mark sheet.
5. **Mail Merge:** Prepare an invitation to invite friends for birthday party. Prepare at leastfive letters.

MS-EXCEL

1. Data sorting-Ascending and Descending (both numbers and alphabets)
2. Mark list preparation for a student
3. Individual Pay Bill preparation.
4. Invoice Report preparation.
5. Drawing Graphs. Take your own table.

MS-POWERPOINT

1. Create a slide show presentation for a seminar.
2. Preparation of Organization Charts
3. Create a slide show presentation to display percentage of marks in each semester for all students
4. Use bar chart(X-axis: Semester, Y-axis: % marks).
5. Use different presentation template different transition effect for each

slide.

REFERENCES:

1. Holden, Greg. Microsoft Office 2007 in Simple Steps. Prentice Hall Press, 2009.

Digital Open Educational Resources (DOER):

1. Free Microsoft Office Tutorials At Gcfglobal

https://edu.gcfglobal.org/en/subjects/office/

COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
UNIT -1 WORD				
1.1	Text Manipulation	2	Demonstration	Desktop PC
1.2	Preparing Bio-data.	1	Demonstration	Desktop PC
1.3	Find and Replace	2	Demonstration	Desktop PC
1.4	Tables and manipulation	1	Demonstration	Desktop PC
UNIT -2 EXCEL				
2.1	Data sorting-Ascending and Descending (both numbers and alphabets)	2	Demonstration	Desktop PC
2.2	Mark list preparation for a student	2	Demonstration	Desktop PC
2.3	Individual Pay Bill preparation.	2	Demonstration	Desktop PC
UNIT -3 ADVANCED FEATURES IN EXCEL				
3.1	Invoice Report preparation.	2	Demonstration	Desktop PC
3.2	Drawing Graphs.	2	Demonstration	Desktop PC
3.3	Creating Table	2	Demonstration	Desktop PC
UNIT -4 POWER POINT				
4.1	Create a slide show presentation for a seminar.	2	Demonstration	Desktop PC
4.2	Preparation of Organization Charts	2	Demonstration	Desktop PC
4.3	Create a slide show presentation to display percentage of marks in each semester for all students	2	Demonstration	Desktop PC

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
UNIT -5 ADVANCED FEATURES OF POWER POINT				
5.1	Use bar chart(X-axis: Semester, Y-axis: % marks).	2	Demonstration	Desktop PC
5.2	Use different presentation template different transition effect for each slide.	2	Demonstration	Desktop PC
5.3	Create a slide show presentation and converting into video	2	Demonstration	Desktop PC

COURSE OUTCOMES

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

NO.	COURSE OUTCOMES
CO 1	Use Word to prepare organizational documents.
CO 2	Design financial & other business applications requiring mathematical calculations using spread sheet software.
CO 3	Develop various charts--pie, bar, line, column, & area using spread sheet software.
CO 4	Create Dynamic presentations with animation.
CO 5	Demonstrate presentations with narration and images.

Mapping of C0s with PSOs

CO/PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	3	2	2	2	2	3
CO2	3	2	2	2	3	2
CO3	3	3	3	3	2	2
CO4	3	2	2	2	2	3
CO5	3	3	2	2	3	2
Weightage ofcoursecontributed toeachPSO	15	12	11	11	12	12

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

Forwarded By

HOD'S Signature

& Name

Skill Development 100%

I B.Sc. Information Technology

SEMESTER –II

For those who joined in 2023 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
USIT	23I2CC3	JAVA PROGRAMMING	Lecture	5	4

COURSE DESCRIPTION

This course enable the students to build object oriented java programs using the concept of abstraction, encapsulation, exception handling, packages, interfaces, threads and AWT controls. It also imparts the ability to develop projects in java with JDBC connectivity.

COURSE OBJECTIVES

- To provide knowledge on fundamentals of object-oriented programming
- To have the ability to use the SDK environment to create, debug and run servlet programs

UNIT –I INTRODUCTION (15 HRS.)

FundamentalsofObject-OrientedProgramming:Introduction–ObjectOrientedParadigm–ConceptsofObject–OrientedProgramming–BenefitsofOOP–Evolution: JavaHistory-JavaFeatures-DiffersfromCandC++-OverviewofJavaLanguage:JavaProgram-Structure–Tokens–JavaStatements–JavaVirtualMachine–CommandLineArguments

UNIT –II BRANCHING, LOOPING& CLASSES (15 HRS.)

Constants,VariablesandDataTypes–OperatorsandExpressions–Decisionmaking andBranching–Looping– Arrays - Strings – Collection Interfaces and classes

UNIT –III CLASSES OBJECTS AND METHODS(15 HRS.)

Introduction – Defining a class – Method Declaration –Constructors - Method Overloading – Static Members – Nesting of methods – Inheritance –Overriding– Final variables andmethods– Abstract methodsand classes

UNIT –IV INTERFACE& PACKAGES (13 HRS.)

MultipleInheritance:DefiningInterfaces–ExtendingInterfaces–ImplementingInterfaces – Packages: Creating Packages – Accessing Packages – Using a Package – ManagingErrorsandExceptions- MultithreadedProgramming

UNIT –V JAVA DATABASE CONNECTIVITY& SERVLET (15 HRS.)

Layout Managers -JDBC – Java Servlet: - Servlet Environment Role – Servlet API –ServletLifeCycle –ServletContext–HTTPSupport–HTMLtoServlet Communication

UNIT –VI DYNAMISM (Evaluation Pattern-CIA only) (2 HRS.)

Advanced Concepts in JAVA.

TEXT BOOK:

1. E Balagurusamy(2010), “Programming with Java”, Tata McGraw Hill Edition India Private Ltd, 4th Edition
2. C Xavier,”Java Programming – A Practical Approach”, Tata McGraw Hill Edition Private Ltd

REFERENCES:

1. P.Naughton and H.Schildt (1999), “Java 2 The Complete Reference”, TMH, 3rd Edition
2. JaisonHunder& William Crawford (2002),”Java Servlet Programming”, O'Reilly
3. Jim Keogh (2002), “J2EE: The Complete Reference”, Tata McGraw Hill Edition.

OPEN EDUCATIONAL RESOURCES:

1. http://javabeginnerstutorial.com/core-java/
2. http://www.tutorialspoint.com/java/
3. http://beginnersbook.com/java-tutorial-for-beginners-with-examples/

4. http://www.homeandlearn.co.uk/java/java.html
5. http://www.journaldev.com/1877/servlet-tutorial-java (Unit V : Servlet API)

COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
UNIT -1 INTRODUCTION				
1.1	FundamentalsofObject-OrientedProgramming:Introduction	4	Discussion	Black Board
1.2	–ObjectOrientedParadigm–ConceptsofObject–OrientedProgramming–BenefitsofOOP	3	Chalk & Talk	Black Board
1.3	Evolution:JavaHistory-JavaFeatures-DiffersfromCandC++-OverviewofJavaLanguage	4	Lecture	LCD
1.4	JavaProgram-Structure–Tokens–JavaStatements–JavaVirtualMachine–CommandLineArguments	4	Discussion	Google classroom
UNIT -2BRANCHING, LOOPING& CLASSES				
2.1	Constants,VariablesandDataTypes	5	Lecture	PPT & White board
2.2	OperatorsandExpressions–Decision making andBranching–Looping	5	Chalk & Talk	Green Board
2.3	Arrays - Strings – Collection Interfaces and classes	5	Chalk & Talk	Black Board
UNIT – 3 CLASSES OBJECTS AND METHODS				
3.1	Introduction – Defining a class – Method Declaration	4	Discussion	PPT & White board
3.2	Constructors - Method Overloading – Static Members	4	Chalk &Talk	Green Board
3.3	Nesting of methods – Inheritance –Overriding– Final variables andmethods	4	Chalk & Talk	Black Board

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
3.4	Abstract methodsand classes	3	Chalk & Talk	Black Board
UNIT – 4 INTERFACE & PACKAGES				
4.1	MultipleInheritance:DefiningInterfaces	3	Discussion	PPT &White board
4.2	ExtendingInterfaces–ImplementingInterfaces	3	Chalk & Talk	Green Board
4.3	Packages: Creating Packages – Accessing Packages	3	Chalk & Talk	Black Board
4.4	Using a Package – ManagingErrorsandExceptions	3	Chalk & Talk	Black Board
4.5	MultithreadedProgramming	3	Discussion	Black Board
UNIT – 5 JAVA DATABASE CONNECTIVITY& SERVLET				
5.1	Layout Managers -JDBC – Java Servlet: - Servlet Environment Role	3	Lecture	PPT & White board
5.2	Servlet API –ServletLifeCycle	3	Chalk & Talk	Black Board
5.3	ServletContext–	3	Lecture	Black Board
5.4	HTTPSupport	3	Chalk & Talk	Black Board
5.5	HTMLtoServlet Communication	3	Chalk & Talk	Black Board
UNIT –6 DYNAMISM				
6.1	Advanced Concepts	2	Discussion	Black Board

INTERNAL -UG

Levels	C1	C2	C3	C4	Total Scholastic Marks	Non Scholastic Marks C5	CIA Total	% of Assessment
	Session-wise Average	Better of W1, W2	M1+M2	MID-SEM TEST				

	5 Mks.	5 Mks	5+5=10 Mks.	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 %**

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

EVALUATION PATTERN

SCHOLASTIC				NON - SCHOLASTIC	MARKS		
C1	**C2**	**C3**	**C4**	**C5**	**CIA**	**ESE**	**Total**
5	**10**	**15**	**5**	**5**	**40**	**60**	**100**

C1 – Average of Two Session Wise Tests

C2 – Average of Two Monthly Tests

C3 - Mid Sem Test

C4 – Best of Two Weekly Tests

C5 – Non – Scholastic

COURSE OUTCOMES

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

NO.	COURSE OUTCOMES
CO 1	Outline the basic terminologies of OOP, programming language techniques,JDBCandInternetprogrammingconcepts
CO 2	Solve problems using basic constructs, mechanisms, techniquesandtechnologies ofJava
CO 3	AnalyseandexplainthebehaviorofsimpleprogramsinvolvingdifferenttechniquessuchasInheritance,Packages,Interfaces,ExceptionHandlingandThreadandtechnologiessuchasJDBCandServlets
CO 4	Assessvariousproblem-solvingstrategiesinvolvedinJavatodevelopa high-level application.
CO 5	DesignGUIbasedJDBCapplicationsandabletodevelopServletsusingsuitableOOP concepts and techniques

Mapping of C0s with PSOs

CO/PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	3	2	2	2	2	2
CO2	2	3	2	2	2	2
CO3	2	3	3	3	2	2
CO4	2	3	2	2	2	2
CO5	3	3	2	2	2	2
Weightage ofcoursecontributed toeachPSO	12	14	11	11	10	10

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

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& Name

Employability 100%

I B.Sc. Information Technology

SEMESTER –II

For those who joined in 2023 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
USIT	23I2CC4	JAVA PROGRAMMING & DATA STRUCTURES PRACTICAL	PRACTICAL	5	4

COURSE DESCRIPTION

This course gives hands on experience, practices the concepts of java programming language, and develops solutions for real world problems.

COURSE OBJECTIVES

- To design and develop applications using different Java programming language techniques, JDBC & Servlets
- To organize and manipulate the data with the help of fundamental data structures

PROGRAM LIST

1. Basic Programs
2. Arrays
3. Strings
4. ArrayList, HashSet and Vector collection classes
5. ClassesandObjects
6. Interfaces
7. Inheritance
8. Packages
9. ExceptionHandling
10. Threads
11. LinkedList
12. Stacks
13. Queue
14. Sorting

15. Binary Tree Representation
16. Working with Database using JDBC
17. Web application using Servlet

COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
1	Basic Programs	6	Demonstration	Desktop PC
2	Arrays	6	Demonstration	Desktop PC
3	Strings	6	Demonstration	Desktop PC
4	ArrayList, HashSet and Vector collection classes	6	Demonstration	Desktop PC
5	ClassesandObjects	6	Demonstration	Desktop PC
6	Interfaces	6	Demonstration	Desktop PC
7	Inheritance	6	Demonstration	Desktop PC
8	Packages	6	Demonstration	Desktop PC
9	ExceptionHandling	6	Demonstration	Desktop PC
10	Threads	6	Demonstration	Desktop PC
11	LinkedList	6	Demonstration	Desktop PC
12	Stacks	6	Demonstration	Desktop PC
13	Queue	6	Demonstration	Desktop PC
14	Sorting	6	Demonstration	Desktop PC
15	Binary Tree Representation	6	Demonstration	Desktop PC
16	Working with Database using JDBC	6	Demonstration	Desktop PC
17	Web application using Servlet	6	Demonstration	Desktop PC

COURSE OUTCOMES

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

NO.	COURSE OUTCOMES
CO1	Identifyandexplain the wayofsolvingthe simple problems
CO2	Use appropriate software development environment to write, compile and execute object-oriented Javaprograms
CO3	Analyze and identify necessary mechanisms ofJavaneeded tosolve real-world problem
CO4	Test fordefectsand validateaJavaprogramwith differentinputs
CO5	Design, develop and compile Core Java , GUI , JDBC and servlet applicationsthat utilizeOOP and data structure concepts

Mapping of C0s with PSOs

CO/PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	3	2	3	3	2	2
CO2	3	3	3	3	2	2
CO3	3	3	3	2	2	3
CO4	3	3	3	3	3	2
CO5	3	3	2	3	2	2
Weightage ofcoursecontributed toeachPSO	15	14	14	14	11	11

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& Name

Skill Development 100%

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SEMESTER –II

For those who joined in 2021 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
USIT	23G2GEI2	OPERATIONS RESEARCH	Lecture	5	5

COURSE DESCRIPTION

This course content helps in solving problems in different environments using Linear Programming methodologies.

COURSE OBJECTIVES

To impart the mathematical skill to develop logical thinking.

UNITS

UNIT –I LINEAR PROGRAMMING PROBLEM - MATHEMATICAL FORMULATION (14HRS.)

Introduction - Linear Programming Problem - Mathematical Formulation of the Problem - Illustration on Mathematical Formulation of LPPs, Linear Programming Problem- Graphical Solution: Introduction - Graphical Solution Method - General Linear Programming problem.

UNIT –II LINEAR PROGRAMMING - SIMPLEX METHOD (14 HRS.)

Introduction - Fundamental Properties of Solutions - The Computational Procedure - Use of Artificial Variables - Degeneracy in Linear Programming - Solution of Simultaneous Linear Equations - Inverting a Matrix Using Simplex Method - Application of Simplex Method.

UNIT –III DUAL PROBLEM (14 HRS.)

Primal-Dual Pair in Matrix Form - Duality Theorems - Complementary Slackness Theorem - Duality and Simplex Method - Economic Interpretation of Duality - Dual Simplex Method.

UNIT –IV TRANSPORTATION PROBLEM (14 HRS.)

Introduction - LP Formulation of the Transportation Problem - Existence of Solution in T.P. - Duality in Transportation Problem - The Transportation Table - Loops in Transportation Tables - Triangular Basis in a T.P. - Solution of a Transportation Problem - Finding an Initial Basic Feasible Solution - Test for Optimality

UNIT –V ASSIGNMENT PROBLEM (14 HRS.)

Introduction - Mathematical Formulation of the Problem - Solution Methods of Assignment Problem - Special Cases in Assignment Problem - Dual of the Assignment Method – The Travelling Salesman Problem.

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

Recent advancement in OR.

TEXT BOOK:

1. Gupta, S. C., and V. K. Kapoor. "Fundamentals of Mathematical Statistics, Ninth Extensively Revised Edition, Sultan Chand & Sons." (1997).Chapter: 2, 3, 4, 5, 10, 11

REFERENCES:

1. V.Sundaresan, K.S. Ganapathy Subramanian, K. Ganesan."Operations Research", ARS Publications, 2003.
2. Hamdy A Taha," Introduction to Operations Research", Prentice Hall India,Seventh Edition, Third Indian Reprint 2004.

OPEN EDUCATIONAL RESOURCES :

1. Operations Research - Suny Binghamton University

   https://www.youtube.com/playlist?list=PLgA4wLGrqI-ll9OSJmR5nU4lV4_aNTgKx

COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
UNIT -1 LINEAR PROGRAMMING				
1.1	Introduction - Linear Programming Problem - Mathematical Formulation of the Problem	4	Discussion	Black Board
1.2	Illustration on Mathematical Formulation of LPPs, Linear Programming Problem-	4	Chalk & Talk	Black Board
1.3	Graphical Solution: Introduction - Graphical Solution Method	4	Lecture	LCD
1.4	General Linear Programming problem.	2	Discussion	Google classroom
UNIT -2 LINEAR PROGRAMMING				
2.1	Introduction - Fundamental Properties of Solutions - The Computational Procedure	4	Lecture	PPT & White board
2.2	Use of Artificial Variables - Degeneracy in Linear Programming	4	Chalk & Talk	Green Board
2.3	Solution of Simultaneous Linear Equations - Inverting a Matrix	4	Chalk & Talk	Black Board
2.4	Using Simplex Method - Application of Simplex Method.	2	Chalk & Talk	Black Board
UNIT – 3 DUAL PROGRAM				
3.1	Primal-Dual Pair in Matrix Form - Duality Theorems	4	Discussion	PPT & White board
3.2	Complementary Slackness Theorem - Duality and Simplex Method	4	Chalk & Talk	Green Board
3.3	Economic Interpretation of	4	Chalk &	Black

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
	Duality		Talk	Board
3.4	Dual Simplex Method.	2	Chalk & Talk	Black Board
UNIT – 4 TRANSPORTATION PROBLEM				
4.1	Introduction - LP Formulation of the Transportation Problem - Existence of Solution in T.P. - Duality in Transportation Problem	4	Discussion	PPT & White board
4.2	- The Transportation Table - Loops in Transportation Tables - Triangular Basis in a T.P.	4	Chalk & Talk	Green Board
4.3	Solution of a Transportation Problem - Finding an Initial Basic Feasible Solution	4	Chalk & Talk	Black Board
4.4	Test for Optimality	2	Chalk & Talk	Black Board
UNIT – 5 ASSIGNMENT PROBLEM				
5.1	Introduction - Mathematical Formulation of the Problem	4	Lecture	PPT & White board
5.2	Solution Methods of Assignment Problem - Special Cases in Assignment Problem	4	Chalk & Talk	Black Board
5.3	Dual of the Assignment Method	4	Lecture	Black Board
5.4	The Travelling Salesman Problem.	2	Chalk & Talk	Black Board
UNIT –6 DYNAMISM				
6.1	Recent advancement in OR	2	Discussion	Black Board
6.2	Recent advancement in OR	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) 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 -	MARKS

					SCHOLASTIC			
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	Identify and develop operational research models from the verbal description of the real system.	K1, K2	PSO1& PSO2
CO 2	Understand simplex, dual problem.	K2 & K3	PSO2
CO 3	Understand the mathematical tools that are needed to solve the optimization problems.	K2 & K3	PSO1& PSO2
CO 4	Write diversified solutions for various	K2 & K3	PSO3

	Transportation problems.		
CO 5	Analyze assignment problems.	K3& K4	PSO7

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** ♦ Moderately Correlated – **2**
♦ Weakly Correlated -**1**

COURSE DESIGNER:

1. **Staff Name: Mrs. R.Rajeswari**

Forwarded By

V. Mageshwari

HOD'S Signature

& Name

Entrepreneurship 100%

I B.Sc. Information Technology

SEMESTER –I

For those who joined in 2023 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
USIT	23I2SE2	MULTIMEDIA LAB	Practical	2	2

COURSE DESCRIPTION

This course content is enables other disciplined students to strengthen and increase the understanding of basis Multimedia application software like Photoshop.

COURSE OBJECTIVES

To impart, practical knowledge on various editing techniques in Photoshop.

UNITS

UNIT –I BASICS OF PHOTOSHOP (6HRS.)

Introduction to the Work Area: A look at the various tools in Photoshop - Toolbars - Palettes – Menus – Image Resolution – Mode of the Image.

UNIT –II EDITING IMAGES (6 HRS.)

Color – Color Pickers – Eye Dropper Tool – Magic Eraser Tool – Background Eraser Tool – Rotate Canvas Menu – Adjustments – Image editing menu items – Snap.

UNIT –III SELECTION AND PAINTING TOOLS (6 HRS.)

Marquee Tool-Crop Tool-Lasso Tool-Move Tool, Rubber/clone Stamp tool-

Eraser Tool-Paint Brush Tool-Art History/History Brush Tool-Text Tool.

UNIT –IV TRANSFORMATIONS (6 HRS.)

Resizing: Resizing an image- Resizing a canvas- Resizing a selection

Rotating: Rotate 180 degrees and 90 degrees clockwise or counter clockwise- Rotate by degrees- Rotate a selection.

UNIT –V FILTERS (6 HRS.)

Sharpen Filters: Sharpen, Sharpen more, Blur Filters: Blur, Blur-more,Distort Filters: Pinch(Squeezing, bulging), Pixellate Filters: crystallize, Extracting an part of image from background image.

LAB EXERCISE

1. Drawing Basic Shapes
2. Text Effect
3. Effects
4. Image Editing
5. Layout and Page Size Change
6. Tools
7. Resizing Image
8. Rotating Image
9. Filters

REFERENCES:

1. Kumar Bittu, “Adobe Photoshop”, ISBN: 978-9350570166, V&S Publishers.
2. Photoshop 7 Complete reference , ISBN 978-0072223118 - Greenberg – McGraw Hill Publications.

OPEN EDUCATIONAL RESOURCES:

1. Photoshop Online Training

   https://www.tutorialspoint.com/photoshop_online_training/index.asp
2. https://www.entheosweb.com/tutorials/coreldraw/liquid_lext/default

.asp

COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
UNIT -1 BASICS OF PHOTOSHOP				
1.1	Introduction to the Work Area: A look at the various tools in Photoshop	2	Demonstration	Desktop PC
1.2	Toolbars – Palettes	1	Demonstration	Desktop PC
1.3	Menus – Image Resolution	2	Demonstration	Desktop PC
1.4	Mode of the Image	1	Demonstration	Desktop PC
UNIT -2 EDITING IMAGES				
2.1	Color – Color Pickers – Eye Dropper Tool —–	2	Demonstration	Desktop PC
2.2	Magic Eraser Tool – Background Eraser Tool	1	Demonstration	Desktop PC
2.3	Rotate Canvas Menu , Adjustments	2	Demonstration	Desktop PC
2.4	Image editing menu items, Snap	1	Demonstration	Desktop PC
UNIT -3 SELECTION AND PAINTING TOOLS				
3.1	Marquee Tool, Crop Tool, LassoTool, Move Tool	2	Demonstration	Desktop PC
3.2	Rubber/clone Stamp tool, Eraser Tool, Paint Brush Tool	2	Demonstration	Desktop PC
3.3	Art History Tool, History Brush Tool, Text Tool.	2	Demonstration	Desktop PC
UNIT -4 TRANSFORMATIONS				
4.1	Resizing an image, Resizing a Canvas	2	Demonstration	Desktop PC
4.2	Resizing a selection Rotating, Rotate 180 degrees and 90 Degrees	2	Demonstration	Desktop PC
4.3	Clockwise or counter clockwise, Rotate by degrees-Rotate a selection.	2	Demonstration	Desktop PC
UNIT -5 FILTERS				

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
5.1	Sharpen Filters, Blur Filters Distort Filters	2	Demonstration	Desktop PC
5.2	Pinch(Squeezing, bulging), Pixelate Filters	2	Demonstration	Desktop PC
5.3	Extracting a part of image from background image.	2	Demonstration	Desktop PC

COURSE OUTCOMES

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

NO.	COURSE OUTCOMES
CO 1	Utilize the various options in Photoshop working area.
CO 2	Apply basic tools to format the images and its background.
CO 3	Make use of selection andpainting tools for editing images.
CO 4	Develop effective graphics for both web and print media.
CO 5	Apply layer features and layer management techniques for creating Web pages and Invitations.

Mapping of C0s with PSOs

CO/PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	**3**	**2**	**2**	**2**	**2**	**3**
CO2	**3**	**2**	**2**	**2**	**3**	**2**
CO3	**3**	**3**	**3**	**3**	**2**	**2**
CO4	**3**	**2**	**2**	**2**	**2**	**3**
CO5	**3**	**3**	**2**	**2**	**3**	**2**
Weightage ofcoursecontributed toeachPSO	**15**	**12**	**11**	**11**	**12**	**12**

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

HOD'S Signature

Entrepreneurship 100%

I B.Sc. Information Technology

SEMESTER –I

For those who joined in 2023 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
USIT	23I2SE3	AUTOMATION SKILLS	Practical	2	2

COURSE DESCRIPTION

This course trains students how to use MS Office applications use in office work such as creating professional-quality documents, store, organize and analyze information, arithmetic operations, functions and create dynamic slide presentations with animation, narration, images, and much more, digitally and effectively.

COURSE OBJECTIVES

To impart knowledge on various concepts in MS Word, Excel, PowerPoint & Publisher.

UNITS

UNIT –I WORD (6 HRS.)

Windows Basics – Introduction to word – Editing a document - Move and Copy text - Formatting text & Paragraph – Enhancing document – Columns, Tables and Other features.

UNIT –II EXCEL (6 HRS.)

Introduction to worksheet – getting started with Excel – Editing cell & using Commands and functions – Moving & Copying , Inserting & Deleting Rows & Columns - Printing work sheet.

UNIT –III ADVANCED FEATURES IN EXCEL (6 HRS.)

Creating charts – Naming ranges and using statistical, math and financial functions, in a worksheet – Additional formatting commands and toolbar – other commands & functions.

UNIT –IV POWERPOINT (6 HRS.)

Overview of Power point – presenting shows for corporate and commercial using Power point

UNIT –V ADVANCED FEATURES OF POWER POINT (6 HRS.)

Formatting text and objects to customize the look of publication- Add, Resize, Rotate, and Group objects- Creation of Product Catalogue- Create bookmarks and hyperlinks.

PROGRAM LIST

MS-WORD

6. **Text Manipulation:**Writinga paragraph about the institution and Change the font size and type, Spell check, Aligning and justification of Text
7. **Bio data:** Preparing Bio-data.
8. **Find and Replace:**Writinga paragraph about individual and do the following. Find and Replace, Use Numbering Bullets, Footer and Headers.
9. **Tables and manipulation:** Creation, Insertion, Deletion (Columns and Rows). Create a mark sheet.
10. **Mail Merge:** Prepare an invitation to invite friends for birthday party. Prepare at leastfive letters.

MS-EXCEL

1. Data sorting-Ascending and Descending (both numbers and alphabets)
6. Mark list preparation for a student
7. Individual Pay Bill preparation.
8. Invoice Report preparation.
9. Drawing Graphs. Take your own table.

MS-POWERPOINT

6. Create a slide show presentation for a seminar.
7. Preparation of Organization Charts
8. Create a slide show presentation to display percentage of marks in each semester for all students
9. Use bar chart(X-axis: Semester, Y-axis: % marks).
10. Use different presentation template different transition effect for each slide.

REFERENCES:

2. Holden, Greg. Microsoft Office 2007 in Simple Steps. Prentice Hall Press, 2009.

Digital Open Educational Resources (DOER):

2. Free Microsoft Office Tutorials At Gcfglobal
https://edu.gcfglobal.org/en/subjects/office/

COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
UNIT -1 WORD				
1.1	Text Manipulation	2	Demonstration	Desktop PC
1.2	Preparing Bio-data.	1	Demonstration	Desktop PC
1.3	Find and Replace	2	Demonstration	Desktop PC
1.4	Tables and manipulation	1	Demonstration	Desktop PC
UNIT -2 EXCEL				
2.1	Data sorting-Ascending and Descending (both numbers and alphabets)	2	Demonstration	Desktop PC
2.2	Mark list preparation for a student	2	Demonstration	Desktop PC
2.3	Individual Pay Bill preparation.	2	Demonstration	Desktop PC
UNIT -3 ADVANCED FEATURES IN EXCEL				
3.1	Invoice Report preparation.	2	Demonstration	Desktop PC
3.2	Drawing Graphs.	2	Demonstration	Desktop PC
3.3	Creating Table	2	Demonstration	Desktop PC
UNIT -4 POWER POINT				

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
4.1	Create a slide show presentation for a seminar.	2	Demonstration	Desktop PC
4.2	Preparation of Organization Charts	2	Demonstration	Desktop PC
4.3	Create a slide show presentation to display percentage of marks in each semester for all students	2	Demonstration	Desktop PC
UNIT -5 ADVANCED FEATURES OF POWER POINT				
5.1	Use bar chart(X-axis: Semester, Y-axis: % marks).	2	Demonstration	Desktop PC
5.2	Use different presentation template different transition effect for each slide.	2	Demonstration	Desktop PC
5.3	Create a slide show presentation and converting into video	2	Demonstration	Desktop PC

COURSE OUTCOMES

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

NO.	COURSE OUTCOMES
CO 1	Use Word to prepare organizational documents.
CO 2	Design financial & other business applications requiring mathematical calculations using spread sheet software.
CO 3	Develop various charts--pie, bar, line, column, & area using spread sheet software.
CO 4	Create Dynamic presentations with animation.
CO 5	Demonstrate presentations with narration and images.

Mapping of C0s with PSOs

CO/PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	3	2	2	2	2	3
CO2	3	2	2	2	3	2
CO3	3	3	3	3	2	2
CO4	3	2	2	2	2	3
CO5	3	3	2	2	3	2
Weightage ofcoursecontributed toeachPSO	15	12	11	11	12	12

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

Forwarded By

HOD'S Signature

& Name

Employability 100%

III B.Sc. Information Technology

SEMESTER – V

For those who joined in 2021 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
USIT	23I5SB3	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 BG color 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 Geolocation, 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.

OPEN EDUCATIONAL RESOURCES:

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,	1	Demonstration	Desktop PC

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
	controlling font size & color			
2.3	Lists: Using unordered, ordered, definition lists	2	Demonstration	Desktop PC
2.4	Adding Graphics To HTML Documents: Using Image tag,attributes of Image tag, changing width & height of image.	1	Demonstration	Desktop PC
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				

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
4.1	Introducing CSS, font attributes, color and background attributes.	2	Demonstration	Desktop PC
4.2	Text attributes, border attributes, margin related attributes, list attributes	1	Demonstration	Desktop PC
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 Geolocation, 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,			

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
	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 COs Consistency 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 COs 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** ♦ModeratelyCorrelated – **2**
♦WeaklyCorrelated -**1**

COURSE DESIGNER:

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

Forwarded By

HOD'S Signature

& Name

Employability 100%

III B.Sc. Information Technology

SEMESTER – V

For those who joined in 2021onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
USIT	23I5SB4	SKILL BASED – WEB PROGRAMMING USING PHP	Practical	2	2

COURSE DESCRIPTION

This is a Web scripting language PHP able tobuild 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

OPEN EDUCATIONAL RESOURCES:

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,	1	Demonstration	Desktop PC

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
	working remotely			
UNIT -2INTRODUCTION TO PHP				
2.1	Exploring PHP-PHP and HTML text - coding building blocks. PHP decision making-Expressions Operator Concepts, Conditionals Looping.	2	Demonstration	Desktop PC
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 DatabaseManaging 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

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
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
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 webin 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 COs Consistency 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 COs 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** ♦ModeratelyCorrelated – **2**
♦WeaklyCorrelated -**1**

COURSE DESIGNER:

Staff Name: MRS.T.CHARANYA NAGAMMAL

Forwarded By

V. Mageshwari

HOD'S Signature

& Name

Employability 100%

III B.Sc.

SEMESTER – VI

For those who joined in 2019 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
USIT	23I6SB5	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.

OPEN EDUCATIONAL RESOURCES :

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

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
				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
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	2	Demonstration	Desktop PC

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
	HTML5 Attributes			
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 COs Consistency 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 COs 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** ♦ModeratelyCorrelated – **2**
♦WeaklyCorrelated -**1**

COURSE DESIGNER:

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

Forwarded By

HOD'S Signature

& Name

Employability 100%

III B.Sc.

SEMESTER – VI

For those who joined in 2021 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
USIT	23I6SB6	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.

OPEN EDUCATIONAL RESOURCES :

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 -1INTRODUCING 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

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
3.2	Using Code Generation	1	Demonstration	Desktop PC
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 COs Consistency 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** ♦ModeratelyCorrelated – **2**
♦WeaklyCorrelated -**1**

COURSE DESIGNER:

Staff Name: Mrs.T.Charanya Nagammal

Forwarded By

HOD'S Signature

& Name