FATIMA COLLEGE (AUTONOMOUS)

Re-Accredited with "A++" Grade by NAAC (4th Cycle)

Maryland, Madurai- 625 018, Tamil Nadu, India

NAME OF THE DEPARTMENT: COMPUTER SCIENCE

NAME OF THE PROGRAMME : B.Sc. COMPUTER SCIENCE

PROGRAMME CODE : UACS

ACADEMIC YEAR : 2022 - 2023

Fatima College (Autonomous), Madurai
The Minutes of the Board of Studies meeting

Name of the Department : Computer Science
Programme : B.Sc

To be implemented from the Academic year 2022 – 2023 onwards.
Convened on 16.3.2022 at 2 p.m in the Dept. of Computer Science, Fatima College.

Members present:

1. Dr. G. Germine Mary — Chairperson
Head, Dept. of Computer Science
Fatima college.

2. Dr. C. Suresh Kumar — University Nominee
Associate Prof. & Head
Dept. of Computer Science
MKU College. Madurai

3. Dr. M. Thangaraj — Subject Expert
Professor & Head
Dept. of Computer Science
MKU, Madurai

4. Dr. Sr. Shantha Mary Joshitta — Subject Expert
Asst. Prof and Head
Dept. of Computer Science
JAC, Periyakulam
Theni Dt. – 625601

ABSENT

5. Dr. S. Vimala — Subject Expert
Associate Professor
Dept. of Computer Science
MTHV, Kodaikanal-624102 — ABSENT

6. Mr. Graceson Tony — Industrialist
Founder & CEO
SEVEN ATARA Marketers
11-3/2, III St, Periyar Nagar
Koodal Ngr, Madurai-18

7. Mrs. K. Sudharani — Alumna
Associate Prof. & Head
Dept. of Computer Science
MSN College, Poovandhi
Sivagangai - 630611

8. Dr. N. Malathi — Dean of Academic Affairs
Asst. Prof in Zoology
Fatima college
16/3/2022

Members of the Department

9. Dr. S. Vidya, Associate Prof.

10. Dr. K. Rosemary Euphrasia
Associate Prof.

11. Dr. A. Vimala, Associate Prof.

12. Dr. P. Meenakshi Sundari
Asst. Professor

13. Dr. S. Arul Jothi
Asst. Professor

S. Arul

14. Dr. T. Vasantha
Asst. Professor

ABSENT

15. Mrs. G. Rajathilagam
Asst. Professor

Rajathilagam

AGENDA:

* Presentation of the Action Taken Report of the previous BoS
* To pass the changes in course titles
* To pass the changes in the syllabus of the courses offered
* To pass the syllabus for the new courses to be introduced.

1. Action taken on the report of the previous BoS

Suggestion	Action Taken
University Nominee suggested to follow LOCF (Learning outcomes based curriculum framework)	Already OBE is followed. LOCF will be introduced during institutional restructuring.

2. Change in course Title

The following changes in titles were carried out.

S.No	Old Course code	New Course code	old Title	New Title
1.	19B4SB2	22B3SB1	Web Designing using HTML and Wordpress	Web Designing using HTML and CSS

Need for change : "Introduction to internet" is removed to accomodate more advanced papers, so skill based paper - III is shifted in the place of Paper - I after replacing Wordpress with CSS.

S.No	Old Course code	New Course code	old Title	New Title
2	19B5SB3	22B4SB2	Client side programing using JAVA Script and CSS	Client side programing using Java Script

Need for change : Since Paper III is shifted to Paper II after removing the CSS component, the content removing CSS contains only Java Script.

S.NO	old Course Code	New Course code	old Title	New Title
3.	19B6MC8	19B6MC8	Mobile computing using Android	Mobile computing and Application Development

Need for change : Unit on Android installation is removed.

3. Revision of Courses

All the 8 papers mentioned below have Global Relevance and has scope for Employability, Entrepreneurs and Skill development.

S.No	Course code	Course Title	No.. & Title of units revised	% revised	Need for revision
1.	19B4SB2	Web Designing using HTML & wordpress	UNIT V introduction to CSS	20	Content on Wordpress is replaced with CSS for better layout of web pages.
2.	19B5SB3	Clicnt side programming using Java Script & CSS	UNIT V Advanced Scripting concepts	20	Content on CSS is moved to Paper I and replaced with advanced scripting concepts.
3.	19B5ME3	Data Mining and data warehousing	Topics from UNIT II & IV are removed.	15	Few topics which were advanced and dealt in PG are removed

4	19B5MC5	Software Testing	UNIT IV is replaced	20	UNIT-IV – Software Test automation is replaced with Software Test metrics.
5.	19B6MC6	Cloud computing	UNIT I & IV Modified	10	Few topics were removed from UNIT I & IV.
6.	19B6MC7	Introduction to Artificial Intelligence	UNIT I, III & V modified	10	Few topics were removed from UNIT I, III & V
7.	19B6MC8	Mobile computing using Android	UNIT III is replaced with UNIT IV and UNIT IV is replaced with some section from UNIT V	20	UNIT I had more weightage so for deeper learning is split it into UNIT IV & UNIT V.
8.	19B6MC9	Big Data Fundamentals	UNIT II is replaced	20	UNIT II has been replaced with big data drivers, ICT and business analytical methods have been included.

4. Pass the syllabus for the new courses to be introduced.

All the 4 new papers introduced have Global relevance and has scope for Employability, Entrepreneurship and skill development.

S.No	Course Code	Course Title	Need for introduction
1.	[redacted]	[redacted]	Python is the future of programming so introduced in the II semester in the place of Programming in C++
2.	[redacted]	[redacted]	The lab is introduced in tune with the major core 22B2CC3 to learn in parallel with Theory.
3.	[redacted]	[redacted]	Introduced in tune with the theory. Also facilitates placement
4.	[redacted]	[redacted]	Since Skill Based paper I is removed this paper is

		introduced to fill that space created.

Suggestions & Recommendations.

* To organise more sessions with Alumnae to keep the students aware of the current trends in the industry
* To create awareness about the work from home opportunities.

G. GERMINE MARY

S. ARUL JOTHI

G. RAJATHILAGAM

P. MEENAKSHI SUNDARI

(DY. M. THANGARAJ)

(N. MALATHI)

(S. VIDYA)

C. SURESH KUMAR

10/3/2022

Mrs. K. Sudha Rani

Mrs. K. Rosemary Euphrasia

A. VIMALA

GRACESON TONY P

Fatima College (Autonomous), Madurai
The minutes of the Board of Studies meeting

Name of the Department : Computer Science
Programme : M.Sc.

To be implemented from the academic year 2021–2022 onwards.
Convened on 16.~~4~~.3.2022 at 2 p.m.

Members present:

1. Dr. G. Germine Mary — Chairperson
   Associate Prof. & Head
   Dept. of Computer Science
   Fatima College

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   Dept. of Computer Science — ABSENT
   JA College, Periyakulam.

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13. Dr. S. Arul Jothi
Asst. Professor.

14. Dr. T Vasantha
Asst. Professor — ABSENT

15. Mrs. G. Rajathilagam — Rajathilagam.
Asst. Professor

AGENDA:

* To pass the change in course title
* To pass the changes in the syllabus of courses offered.
* To pass the syllabus for the new courses to be introduced.
* Action taken on the report of previous BoS

1. Change in course title:

S.No	Old course code	New course code	Old Title	New Title
1.	19PG3B12	22PG2B8	Digital Image Processing	Digital Image Processing

Need for change: The paper is shifted from III semester to II Semester.

S.No	Old course code	New course code	Old Title	New Title
2.	19PG3B14	22PG2B11	Lab V Digital Image Processing	Lab IV Digital Image Processing

2. Revision of Courses

All the 3 courses mentioned below have global relevance and has employability, entrepreneurship and skill development scope.

SNO	Course Code	Course Title	NO,, of UNITs and the title revised and need for revision	% Revised
1.	19PG13BE7	Distributed Database Management Systems	UNITS I, II, III & IV Modified Few topics in the mentioned units were removed.	10
2.	19PG13BE8	Compiler Design	UNIT II, IV & V modified Few topics in the mentioned units were removed.	10
3.	19PG13BE10	Advanced computer graphics and animation	UNITS IV & V Modified. New concepts added in both the units.	15

3. Pass the syllabus for the new courses introduced.

All the 4 papers introduced have global relevance and scope for employability, entrepreneurship and skill.....

S.No.	Course Code	Course Title	Need for introduc
1.	22PG3B12	Machine Learning	The ability to process large numbers of features make machine learn powerful. Essentia for research.
2.	22PG3B14	Lab V - Machine Learning with Python	Provides practica skill for 22PG3B1
3.	22PG3BE5	Mobile communication	Latest technolog which is very essential.
4.	22PG3BE12	Cyber Forensics	Needed for the investigation of crimes and law enforcement in cyber crime.

4. Action taken on the report of previous BOS

Suggestion	Action Taken
University nominee suggested to follow LOCF (Learning outcome based curriculum framework)	Already OBE is followed. LOCF will be introduced during institutional restructuring.

Suggestions & Recommendations.

* To organise more sessions with Alumnae to keep the students aware of the current trends in the industry
* To create awareness about the work from home oppurtunities.

Germine Mary (signature) — G. GERMINE MARY
S. Arul Jothi (signature) — S. ARUL JOTHI
(signature) — (Dr. M. THANGARAJ)
C. SURESH KUMAR
Rajathilagam (signature) — RAJATHILAGAM. G.
Malathi (signature) 16/3/2022 — (N. MALATHI)
Sandya (signature) — S. VIDYA
P. Meenakshi (signature) — P. MEENAKSHI SUNDARI
Sudharani (signature) — K. SUDHARANI
K. Rosemary (signature) — K. Rosemary Euphrasia
A. Vimala (signature) — A. VIMALA
P. Graceson Tony (signature) — GRACESON TONY P

VISION OF THE DEPARTMENT

To be in the Zenith of Scholastic Excellence in Computer Science by imparting Value Based, Skill Based and Career Oriented Education for Holistic Development.

MISSION OF THE DEPARTMENT

As a Department, we are committed to

- Empower Women and First generation learners
- Inculcate lateral thinking and make them professionally competent to meet the global challenge in the field of Computer Science
- Develop the programming skills of the young learners to meet the current trends of Computer Science
- Motivate the students to be socially responsible and acquire entrepreneurial skills to become global leaders
- Promote quality and ethics among the students through Value Based Education

PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

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 their strengths and improving on 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 entrepreneurs and 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 discipline 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 learner 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 Environment Building Initiatives

PROGRAMME SPECIFIC OUTCOMES (PSO)

On completion of three years of B.Sc. Computer Science programme, the graduates would be able to

PSO 1	Develop professionally competent citizens by applying the scientific knowledge of Computer Science with the ability to think clearly, rationally and creatively to support in evolving solutions to the social/public/scientific issues with responsible democratic participation
PSO 2	Enterprising resourcefulness to identify, plan, formulate, design and evaluate solutions for complex computing problems that address the specific needs with appropriate consideration for Societal, Cultural, Environmental and Industrial domains.
PSO 3	Holistic development to ignite the lateral thinking ability in problem solving, acquisition of new skills, open-minded and organized way of facing problems with self awareness and evolving analytical solutions
PSO 4	Create and initiate innovations effectively and communicate efficiently with the computing community and society at large to bridge the gap between computing industry and academia
PSO 5	Through Digital Literacy, understand, assess and commit to professional and ethical principles, norms and responsibilities of the cyber world and the ability for work efficacy as a part of a team and engage effectively with diverse stakeholders
PSO 6	Ability and willingness to embark on new ventures and initiatives with critical thinking and desire for more continuous learning focusing on life skills.

FATIMA COLLEGE (AUTONOMOUS), MADURAI-18

DEPARTMENT OF COMPUTER SCIENCE

For those who joined in June 2019 onwards

PROGRAMME CODE : UACS

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

PART – I – TAMIL

Offered by The Research Centre of Tamil

S. NO	SEM.	COURSE CODE	COURSE TITLE	HRS	CREDITS	CIA Mks	ESE Mks	TOT. MKs
1.	I	19TL1C1	Language-Modern Literature - பொதுத்தமிழ் - இக்கால இலக்கியம்	5	3	40	60	100
2.	II	19TL2C2	Language - Bakthi Literature - பொதுத்தமிழ் - பக்தி இலக்கியம்	5	3	40	60	100
3.	III	19TL3C3	Language- Epic Literature பொதுத்தமிழ் - காப்பிய இலக்கியம்	5	3	40	60	100
4.	IV	19TL4C4	Language-Sangam Literature பொதுத்தமிழ் - சங்க இலக்கியம்	5	3	40	60	100
			Total	20	12			

PART – I – FRENCH

Offered by The Department of French

S. NO	SEM.	COURSE CODE	COURSE TITLE	HRS	CREDITS	CIA Mks	ESE Mks	TOT. MKs
1.	**I**	19RL1C1	PART 1 LANGUAGE FRENCH - LE NIVEAU INTRODUCTIF	**5**	**3**	**40**	**60**	**100**
2.	**II**	19RL2C2	PART 1 LANGUAGE FRENCH - LE NIVEAU DÉCOUVERTE	**5**	**3**	**40**	**60**	**100**
3.	**III**	19RL3C3	PART 1 LANGUAGE FRENCH - LE NIVEAU INTERMEDIAIRE – LA CIVILISATION, LA LITTERATURE ET LA GRAMMAIRE	**5**	**3**	**40**	**60**	**100**
4.	**IV**	19RL4C4	PART 1 LANGUAGE FRENCH - LE NIVEAU DE SUIVRE – LA CIVILISATION, LA LITTERATURE ET LA GRAMMAIRE	**5**	**3**	**40**	**60**	**100**
			Total	**20**	**12**			

PART – I – HINDI

Offered by The Department of Hindi

S. NO	SEM.	COURSE CODE	COURSE TITLE	HRS	CREDITS	CIA Mks	ESE Mks	TOT. MKs
1.	I	19DL1C1	PART 1 LANGUAGE HINDI - बोलचालकीहिंदी	5	3	40	60	100
2.	II	19DL2C2	PART 1 LANGUAGE HINDI - कार्यालयीनहिंदी	5	3	40	60	100
3.	III	19DL3C3	PART 1 LANGUAGE HINDI - हिंदीसाहित्यकाआदिकालऔरभक्ति काल	5	3	40	60	100
4.	IV	19DL4C4	PART 1 LANGUAGE HINDI - हिंदीसाहित्यकाआधुनिककाल	5	3	40	60	100
			Total	20	12			

PART – II -ENGLISH – 12 CREDITS

Offered by The Research Centre of English

S. NO	SEM.	COURSE CODE	COURSE TITLE	HRS	CREDITS	CIA Mks	ESE Mks	TOT. MKs
1.	I	19EL1LB	BASIC COMMUNICATIVE ENGLISH	5	3	40	60	100
2.		19EL1LI	INTERMEDIATE COMMUNICATIVE ENGLISH					
3.		19EL1LA	ADVANCED COMMUNICATIVE ENGLISH					
4.	II	19EL2LB	ENGLISH COMMUNICATION SKILLS	5	3	40	60	100
5.		19EL2LI	ENGLISH FOR EMPOWERMENT					
6.		19EL2LA	ENGLISH FOR CREATIVE WRITING					
7.	III	19EL3LN	ENGLISH FOR DIGITAL ERA	5	3	40	60	100
8.	IV	19EL4LN	ENGLISH FOR INTEGRATED DEVELOPMENT	5	3	40	60	100
			Total	**20**	**12**			

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

MAJOR CORE COURSES INCLUDING PRACTICALS : 60 CREDITS

S. NO	SEM.	COURSE CODE	COURSE TITLE	HRS	CREDITS	CIA Mks	ESE Mks	TOT. Mks
1.	I	19B1CC1	PROGRAMMING IN C	6	4	40	60	100
2.		19B1CC2	LAB I - PROGRAMMING IN C	6	3	40	60	100
3.	II	22B2CC3	PYTHON PROGRAMMING	6	4	40	60	100
4.		22B2CC4	LAB II - PYTHON PROGRAMMING	6	3	40	60	100
5.	III	19B3CC5	DATA STRUCTURES AND ALGORITHMS	6	4	40	60	100
6.		19B3CC6	LAB III - DATA STRUCTURES IN C++	6	3	40	60	100
7.	IV	19B4CC7	RELATIONAL DATABASE SYSTEM CONCEPTS	6	4	40	60	100
8.		22B4CC8	LAB IV – RDBMS & Data Analytics using Spreadsheets	6	3	40	60	100
9.	V	19B5CC9	PROGRAMMING IN JAVA	5	5	40	60	100
10.		19B5CC10	OPERATING SYSTEM CONCEPTS	5	5	40	60	100

S. NO	SEM.	COURSE CODE	COURSE TITLE	HRS	CREDITS	CIA Mks	ESE Mks	TOT. Mks
11.		19B5CC11	LAB V - PROGRAMMING IN JAVA	6	3	40	60	100
12.		19B5PR1	PROJECT - I	4	3	40	60	100
13.	VI	19B6CC12	J2EE PROGRAMMING	5	5	40	60	100
14.		19B6CC13	DATA COMMUNICATIONS AND NETWORKING	5	5	40	60	100
15.		19B6CC14	LAB VI - J2EE PROGRAMMING	6	3	40	60	100
16.		19B6PR2	PROJECT - II	-	3	40	60	100
			Total	**84**	**60**			

ALLIED COURSES- 20 CREDITS

S.NO	SEM.	COURSE CODE	COURSE TITLE	HRS	CREDIT	CIA Mks	ESE Mks	TOT. MKs
1.	I	19P1ACB1	DIGITAL PRINCIPLES & APPLICATIONS (ALLIED - I - OFFERED BY PHYSICS)	5	5	40	60	100
2.	II	19B2AC2	COMPUTER SYSTEM ARCHITECTURE	5	5	40	60	100
3.	III	19B3ACM1	LINEAR PROGRAMMING (ALLIED – III - OFFERED BY MATHS)	5	5	40	60	100
4.	IV	19B4ACM2	ALGEBRA AND GRAPH THEORY (ALLIED- IV – OFFERED BY	5	5	40	60	100

			MATHS)					

ELECTIVES-15 CREDITS

S.No	SEM.	COURSECODE	COURSE TITLE	HRS	CREDIT	CIA Mks	ESE Mks	TOT. Mks
1.	V	19B5ME1	Software Engineering	5	5	40	60	100
2.	V	19B5ME2	Python Programming	5	5	40	60	100
3.	V	19B5ME3	Data Mining And Data Warehousing	5	5	40	60	100
4.	V	19B5MEP1	Programming With C (ELECTIVE-OFFERED TO PHYSICS)	5	5	40	60	100
5.	V	19B5MEP2	Web Development (ELECTIVE-OFFERED TO PHYSICS	5	5	40	60	100
6.	VI	19B6ME4	Computer Graphics	5	5	40	60	100
7.	VI	19B6ME5	Software Testing	5	5	40	60	100
8.	VI	19B6ME6	Cloud Computing	5	5	40	60	100
9.	VI	19B6ME7	Introduction To Artificial Intelligence	5	5	40	60	100
10.	VI	19B6ME8	Mobile Computing and Application Development	5	5	40	60	100
11.	VI	19B6ME9	Big Data Fundamentals	5	5	40	60	100

PART – IV – 20 CREDITS

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

S.No	SEM.	COURSECODE	COURSE TITLE	HRS	CREDIT	CIA Mks	ESE Mks	TOT. Mks
1.	I	21G1VE1	PERSONAL VALUES	1	1	40	60	100
2.		19B1NME	ANIMATION TECHNIQUES (NME)	2	2	40	60	100
3.	II	21G2VE2	VALUES FOR LIFE	1	1	40	60	100
4.		19B2NME	ANIMATION TECHNIQUES (NME)	2	2	40	60	100
5.	III	19G3EE1	ENVIRONMENTAL EDUCATION	1	1	40	60	100
6.		22B3SB1	**SKILL BASED ELECTIVE-** INTERNET PROGRAMMING PAPER:I - WEB DESIGNING USING HTML AND CSS	2	2	40	60	100
7.	IV	19G4EE2	GENDER STUDIES	1	1	40	60	100
8.		22B4SB2	**SKILL BASED ELECTIVE-** INTERNET PROGRAMMING PAPER:II - CLIENT SIDE PROGRAMMING USING JAVA SCRIPT	2	2	40	60	100
9.	V	19B5SB3 22B5SB3	**SKILL BASED ELECTIVE-** INTERNET PROGRAMMING PAPER:III – CLIENT SIDE PROGRAMMING USING JAVA SCRIPT& CSS WEB APPLICATION USING ANGULAR(To be offered from 2023 – 2024)	2	2	40	60	100

10.		19B5SB4	**SKILL BASED ELECTIVE**-INTERNET PROGRAMMING PAPER:IV – SERVER SIDE PROGRAMMING USING ASP.NET	2	2	40	60	100
11.	VI	19B6SB5	**SKILL BASED ELECTIVE**-INTERNET PROGRAMMING PAPER:V - SERVER SIDE PROGRAMMING USING PHP	2	2	40	60	100
12.		19B6SB6	**SKILL BASED ELECTIVE-** INTERNET PROGRAMMING PAPER:VI -WEB SERVICES DEVELOPMENT USING XML	2	2	40	60	100

PART – V – 1 CREDIT

OFF-CLASS PROGRAMMES - ALL PART-V

SHIFT - I

S.No	SEM.	COURSE CODE	COURSE TITLE	HRS	CREDIT	TOT. Mks
1.	I - IV	21A4PED	Physical Education	30/ SEM	1	100
2.		21A4NSS	NSS			
3.		21A4NCC	NCC			
4.		21A4WEC	Women Empowerment Cell			
5.		21A4ACUF	AICUF			

OFF-CLASS PROGRAMMES
ADD-ON COURSES

COURSE CODE	COURSE TITLE	HRS.	CREDITS	SEMESTER IN WHICH THE COURSE IS OFFERED	CIA Mks	ESE Mks	TOTAL Mks
19UADCA	**COMPUTER APPLICATIONS** (offered by the department of PGDCA for Shift I)	40	2	I & II	40	60	100
19UADFC1	**ONLINE SELF LEARNING COURSES**- Basic Multidisciplinary Course - Arts	-	2	I	-	-	50
19UADFC2	**ONLINE SELF LEARNING COURSE-** Basic Multidisciplinary Course - Science	-	2	II	-	-	50
21UAD3ES	Professional Ethics	15	1	III	40	60	100
21UAD4ES	Personality Development	15	1	IV	40	60	100
21UAD5ES	Family Life Education	15	1	V	40	60	100
21UAD6ES	Life Skills	15	1	VI	40	60	100
19UAD5HR	**HUMAN RIGHTS**	15	2	V	100	-	100
19UADRS	**OUTREACH**	100	3	V & VI	100	-	100

COURSE CODE	COURSE TITLE	HRS.	CREDITS	SEMESTER IN WHICH THE COURSE IS OFFERED	CIA Mks	ESE Mks	TOTAL Mks
	PROGRAMME- Reach Out to Society through Action **ROSA**						
19UADPR	**PROJECT**	30	4	VI	40	60	100
19UADRC	**READING CULTURE**	10/ Semester	1	II-VI	-	-	-
	TOTAL		**20**				

SELF LEARNING EXTRA CREDIT COURSES

COURSE CODE	COURSE	HRS.	CREDITS	SEMESTER IN WHICH THE COURSE IS OFFERED	CIA MKS	ESE MKS	TOTAL MARKS
20UGSLB1	**SELF LEARNING COURSE for ADVANCED LEARNERS** **DIGITAL IMAGE PROCESSING**	-	2	ANY SEMESTER	40	60	100
21UGSLB2	**SELF LEARNING COURSE for ADVANCED LEARNERS** **PRINCIPLES OF** **CRYPTOGRAPHY**	-	2	ANY SEMESTER	40	60	100

21UGSLB3	**SELF LEARNING COURSE for ADVANCED LEARNERS** **WEB APP WITH SPRING BOOT**	-	2	ANY SEMESTER	40	60	100
21UGSLB4	**SELF LEARNING COURSE for ADVANCED LEARNERS** **CONTENT MANAGEMENT SYSTEMS**	-	2	ANY SEMESTER	40	60	100
	MOOC COURSES / International Certified online Courses (Department Specific Courses/any other courses) * Students can opt other than the listed course from UGC-SWAYAM UGC / CEC	-	Minimum 2 Credits	I – VI	-	-	

IV-B INTERDISCIPLINARY SELF-LEARNING EXTRA CREDIT COURSES

COURSE CODE	COURSE	HRS.	CREDITS	SEMESTER IN WHICH THE COURSE IS OFFERED	CIA MKS	ESE MKS	TOTAL MARKS
21UGIDBP1	**FUNDAMENTALS & PROGRAMMING OF MICROPROCESSOR 8085**	-	2	ANY SEMESTER	40	60	100
21UGIDBT1	**TAMILUM INAIYAMUM**	-	2	ANY SEMESTER	40	60	100
21UGIDBC1	**Chemistry Problem Solving using C Programming**		2	ANY SEMESTER	40	60	100

OFF CLASS PROGRAMMES

COURSE CODE	COURSE	HRS.	CREDITS	SEMESTER IN WHICH THE COURSE IS OFFERED	CIA MKS	ESE MKS	TOTAL MARKS
21UGVAONB1	**ONLINE COURSES for ADVANCED LEARNERS** **PHOTO EDITING TECHNIQUES**	-	2	ANY SEMESTER	40	60	100
21UGVAONB2	**ONLINE COURSE for ADVANCED LEARNERS** **WEB DESIGNING USING HTML**	-	2	ANY SEMESTER	40	60	100
21UGSEB1	**SKILL EMBEDDED COURSE IN CYBER SECURITY FOR BEGINNERS**	-	2	ANY SEMESTER	40	60	100

I B.Sc. Computer Science
SEMESTER –II
For those who joined in 2022 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/ WEEK	CREDITS
UACS	22B2CC3	Python Programming	Major Core	6	4

COURSE DESCRIPTION

Python is an interpreted, high-level, general-purpose programming language. it provides constructs that enable clear programming on both small and large scales.

COURSE OBJECTIVES

- To understand why python is a useful scripting language for developers.
- To learn how to design and program python applications.
- To learn how to use lists, tuples, and dictionaries in python programs
- To build real-world applications using OOPs,

UNITS

UNIT I: BASIC OF PYTHON PROGRAMMING (18 HRS)

Features of Python-History of Python-The Future of Python-Writing and Executing First Python Program-Literal Constants-Variables and Identifiers-Data Types- Input Operation-Comments-Reserved Words-Indentation- Operation and Expressions-Expression in Python –Operations on Strings-Other Data Types-Type Conversion.

UNIT II: DECISION CONTROL STATEMENTS (18 HRS)

Introduction to Decision Control Statements-Selection /Conditional Branching Statements-Basic Loop Structure /Iterative Statements-Nested Loops-The Break Statement-The Continue Statement-The Pass Statement-The Else Statement used with Loops. Functions and Modules: Introduction –Function Declaration and Definition-Function Call-Variables Scope and Lifetime-The Return Statement-More On Defining Function-Lambda Functions or Anonymous Functions-Documentation Strings.

UNIT III: PYTHON STRINGS REVISITED (18 HRS)

Concatenating ,Appending ,and Multiplying Strings-String Formatting Operator-Build in String Methods and Functions-Slice Operation-Ord()and Chr() Function-Comparing String-Iteration String –The String Module-Regular Expressions-Metacharacters in Regular Expression. File Handling: File Path-Types of Files-Opening and Closing Files-Reading and Writing Files-File Positions-Renaming and Deleting Files-Directory Methods.

UNIT IV: DATA STRUCTURES (18 HRS)

Sequence-Lists-Functional Programming-Tuple-Sets-Dictionaries Classes and Objects:Classes and Objects-Class Methods and Self Arguments,Constructer-Class Variables and Object Variables-Other Special Methods-Public and Private Data Members-Private Methods-Built in Function-Built in Class Attributes-Garbage Collection-Class Methods-Static Methods

UNIT V: INHERITANCE (18 HRS)

Inheriting Classes in Python-Types of Inheritance-Composition-Abstract Classes and Interfaces-Metaclass. Operator overloading: Introduction-Implementing Operator Overloading-Reverse Adding-Overriding –Getitem-(),Setitem-(),Methods-Overriding the in Operator-Overloading Miscellaneous Function-Overriding the –Call-() Method. Error and Exception Handling: Introduction to Errors and Exceptions-Handling Exceptions-Multiple Except Blocks-Multiple Exceptions in A Single Block-Except Block without Exception –The else Clause- Raising Exception-Instantiating Exceptions-Handling Exception in Invoked Functions.

DYNAMISM :(For CIA Only)

SELF STUDY :

UNIT I: Arithmetic Operators

UNIT II: DECISION CONTROL STATEMENTS

Introduction to Decision Control Statements-Selection /Conditional Branching Statements-Basic Loop Structure /Iterative Statements-Nested Loops-The Break Statement-The Continue Statement-The Pass Statement-The Else Statement used with Loops.

UNIT III: Standard Mathematical Functions

TEXT BOOK:

1. ***Python Programming using Problem Solving Approach,*** ReemaThareja,Published By Oxford Higher Education, 2017.

REFERENCES:

1. ***Problem Solving and Python Programming,*** S.A. Kulkarni, Published By Yesdee,2017
2. ***Python for Software Design How to Think Like a computer scientist,*** Allen B.Downey Cambridge University Press,2018
3. ***Introduction to Programming using Python ,***Y.DanielLiang,Published By Pearson,2018.

WEB REFERENCES:

1.http://spoken-tutorial.org/tutorial-search/python

2.https://docs.python.org

COURSE CONTENTS &LECTURE SCHEDULE

Module No.	Topic	No. of Lectures	Content Delivery Method	Teaching Aids
UNIT I : [15 HRS]				
1.1	Features of Python-History of Python-The Future of Python-Writing and Executing First Python Program-Literal Constants-Variables and Identifiers-	6	Lecture	PPT &Smart Board
1.2	Data Types- Input Operation-Comments-Reserved Words-Indentation-	6	Chalk & Talk Lecture	Black Board
1.3	Operation and Expressions-Expression in Python –Operations on Strings-Other Data Types-Type Conversion.	6	Chalk & Talk Lecture	Black Board
UNIT II : [15 HRS]				
2.1	Introduction to Decision Control Statements-Selection /Conditional Branching Statements-Basic Loop Structure /Iterative Statements-Nested Loops-	6	Lecture	PPT &Smart Board
2.2	The Break Statement-The Continue Statement-The Pass Statement-The Else Statement used with Loops. Functions and Modules:.	6	Chalk & Talk Lecture	Black Board
2.3	Introduction –Function Declaration and Definition-Function Call-Variables Scope and Lifetime-The Return Statement-More On Defining Function-Lambda Functions or Anonymous Functions-Documentation Strings	6	Chalk & Talk Lecture	Black Board
UNIT III : [15 HRS]				
3.1	Concatenating ,Appending ,and Multiplying Strings-String Formatting Operator-Build in String Methods and Functions-Slice Operation-Ord()and Chr() Function-Comparing String-Iteration String –	6	Lecture	PPT &Smart Board
3.2	The String Module-Regular	6	Lecture	PPT

	Expressions-Metacharacters in Regular Expression.			&Smart Board
3.3	File Handling: File Path-Types of Files-Opening and Closing Files-Reading and Writing Files-File Positions-Renaming and Deleting Files-Directory Methods	6	Chalk & Talk Lecture	Black Board
UNIT IV : [15 HRS]				
4.1	Sequence-Lists-Functional Programming-Tuple-Sets-Dictionaries Classes and Objects:Classes and Objects-Class Methods and Self Arguments,	6	Lecture	PPT &Smart Board
4.2	Constructer-Class Variables and Object Variables-Other Special Methods-Public and Private Data Members-Private Methods-	6	Chalk & Talk Lecture	Black Board
4.3	Built in Function-Built in Class Attributes-Garbage Collection-Class Methods-Static Methods	6	Chalk & Talk Lecture	Black Board
UNIT V : [15 HRS]				
5.1	Inheriting Classes in Python-Types of Inheritance-Composition-Abstract Classes and Interfaces-Metaclass.	6	Lecture	PPT &Smart Board
5.2	Operator overloading: Introduction-Implementing Operator Overloading-Reverse Adding-Overriding –Getitem-(),Setitem-(),Methods-Overriding the in Operator-Overloading	6	Lecture	PPT &Smart Board
5.3	Miscellaneous Function-Overriding the –Call-() Method. Error and Exception Handling: Introduction to Errors and Exceptions-Handling Exceptions-Multiple Except Blocks-Multiple Exceptions in A Single Block-Except Block without Exception –The else Clause- Raising Exception-Instantiating Exceptions-Handling Exception in Invoked Functions	6	Chalk & Talk Lecture	Black Board

EVALUATION PATTERN

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

CIA	
Scholastic	35
Non Scholastic	5
	40

✔ **The levels of CIA Assessment based on Revised Bloom's Taxonomy are :**

K1- Remember, **K2-**Understand, **K3-**Apply, **K4-**Analyse

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

COURSE OUTCOMES (CO)

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

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING	PSOs ADDRESSED

		TO REVISED BLOOM'S TAXONOMY)	
CO 1	Understand python as a useful scripting language for developers.	K1	PSO1& PSO2
CO 2	Solve problems requiring the writing of well-documented programs in the Python language, including use of the logical constructs of that language.	K2, K3, K4	PSO2& PSO3
CO 3	Apply lists, tuples, and dictionaries to develop robust programs in python	K2 & K3	PSO3,PSO5
CO 4	Identify the structure and components of a python program.	K1 & K3	PSO4
CO 5	Apply object-oriented programming concepts to develop dynamic interactive Python applications.	K2 & K4	PSO6

Mapping COs Consistency with PSOs

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

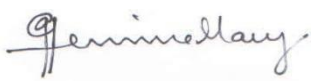
Mapping COs Consistency with Pos

CO/ PO	PO1	PO2	PO3	PO4
CO 1	3	2	2	1
CO 2	3	2	1	2
CO 3	2	3	2	1
CO 4	2	3	3	1
CO 5	2	1	1	3

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

COURSE DESIGNER:
Dr.G.Germine Mary

Forwarded By



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HOD'S Signature& Name

I B.Sc. Computer Science
II SEMESTER

(For those who join in 2022 onwards)

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/ WEEK	CREDITS
UACS	22B2CC4	LAB II – PYTHON PROGRAMMING	MAJOR LAB	6	3

COURSE DESCRIPTION

This course focus on imparting the practical knowledge of using Python Language for problem solving with basic constructs and functions. Also it aims to provide a clear understanding of the compound data using lists, tuples and dictionaries.

COURSE OBJECTIVES

- To write, test and debug simple Python programs.
- To use functions and various string operations to write efficient Python programs.
- To read and write data from/to files in Python.

SYLLABUS

Programs to be written using the following concepts.

1. Simple Programs
2. Data types/data type conversion
3. Decision control and conditional branching
4. Functions and Modules
5. Various string operations
6. Files
7. Sequence & lists
8. Classes and object
9. Inheritance
10. Exception handling

EVALUATION PATTERN

SCHOLASTIC		NON - SCHOLASTIC	MARKS		
C1	C2	C3	CIA	ESE	Total
20	15	5	40	60	100

C1 – Average of Two Model Tests

C2 – Average of class Performance and Record work

C3 – Non – Scholastic

COURSE OUTCOMES (CO)

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
CO1	Write programs using basic programming constructs	K1,K3,K5	PSO1, PSO2 & PSO4
CO 2	Express different Decision Making statements and Functions.	K2	PSO1, PSO2 & PSO3
CO 3	Implement Math functions, Strings, List and Tuple in Python programs.	K2, K3, K4	PSO3 & PSO4
CO 4	Interpret Object oriented programming in Python & File handling operations.	K2, K3 & K5	PSO5 & PSO6
CO5	Write programs that enhances reusability – Inheritance	K2,K3,K4	PSO3, PSO4 & PSO6

Mapping COs Consistency with PSOs

CO / PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO 1	**3**	3	**2**	3	1	2
CO 2	3	**3**	3	2	1	1
CO 3	2	1	3	**3**	1	2
CO 4	2	2	1	**1**	3	3
CO 5	2	2	3	**3**	1	3

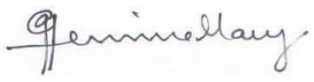
Mapping COs Consistency with POs

CO / PO	PO1	PO2	PO3	PO4
CO 1	**3**	**1**	**2**	**2**
CO 2	**2**	**3**	**1**	**1**
CO 3	**2**	**2**	**1**	**3**
CO 4	**2**	**3**	**2**	**1**
CO 5	**2**	**2**	**3**	**1**

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

COURSE DESIGNER:
Dr.A.Vimala

Forwarded By



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HOD'S Signature& Name

SEMESTER – IV

(For those who join in 2021 onwards)

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UACS	22B4CC8	LAB IV – RDBMS & Data Analytics using Spreadsheets	MAJOR LAB	6	3

COURSE DESCRIPTION

This course provides practical knowledge in PL/SQL programming, utilizing the services provided by Oracle database in a stored procedure perspective. This course also provides knowledge to perform data analysis using Excel's most popular features.

COURSE OBJECTIVE

- To give a good formal foundation on the relational model of data
- To present the techniques relating to query processing by SQL engines.
- Learn about the pivot tables in Spreadsheet
- Provide knowledge on Data Checking and Evaluation.
- Perform Data Analysis and Evaluation

LAB LIST

SQL QUERIES

1. SQL queries to implement DDL statements to Create, Alter, Drop, Truncate and rename tables.
2. SQL queries to implement DML statements to perform Select, Insert, Delete, Update on tables.
3. SQL queries to implement DCL statements to access database using Grant and Revoke.
4. SQL queries to implement TCL statements to work on Commit, Rollback and Savepoint.

5. SQL queries to implement Where, Like, Order By, Group By, Having clauses.

6. SQL queries to implement arithmetic, Logical, Concatenation and Quote operators.

7. SQL queries to implement mathematical functions. (count, minimum value, maximum value, sum, average, First and Last)

8. SQL queries to implement scalar functions. (UCASE, LCASE, MID, ROUND)

9. SQL queries to implement Set Operations. (Intersect, Union, Union All, Minus)

10. SQL queries to implement column and table level constraints.(NOT NULL, UNIQUE, PRIMARY KEY, FOREIGN KEY, CHECK and DEFAULT)

11. Implement simple PL/SQL Programs

12. Cleaning Data & Working With Pivottables

13. Pivottable & Pivotcharts

14. Database Functions & Statistics Functions:

EVALUATION PATTERN

SCHOLASTIC		NON - SCHOLASTIC	MARKS		
C1	C2	C3	CIA	ESE	Total
20	15	5	40	60	100

C1 – Average of Two Model Tests

C2 – Average of class Performance and Record work

C3 – Non – Scholastic

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	Enhance Programming skills and techniques.	K2	PSO1, PSO2 & PSO3
CO 2	Formulate complex queries using SQL	K2, K3, K4	PSO1 & PSO2
CO 3	Ability to analyze data is a powerful skill that helps you make better decisions	K2	PSO1 & PSO5
CO4	Identify the basic principles of a Pivot Table and Recognize how to use Pivot Table and Pivot chart	K2, K3	PSO4 & PSO6
CO 5	Use Excel's powerful functions to efficiently transform mountains of raw data into clear insights	K2,K3,K4	PSO4 & PSO5

Mapping COs Consistency with PSOs

CO / PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO 1	**3**	3	**3**	1	1	2
CO 2	3	**3**	2	2	1	1
CO 3	3	1	2	**2**	3	2
CO 4	1	2	2	3	1	**3**
CO 5	2	3	1	3	3	1

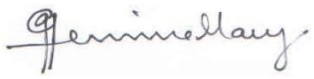
Mapping COs Consistency with POs

CO / PO	PO1	PO2	PO3	PO4
CO 1	3	1	2	2
CO 2	2	3	1	1
CO 3	2	2	1	3
CO 4	2	1	3	2
CO 5	2	1	3	2

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

COURSE DESIGNER:
Dr.G.Germine Mary

Forwarded By



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HOD'S Signature& Name

III B.Sc. Computer Science
SEMESTER –V
For those who joined in 2022 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UACS	22B5SB3	Skill Based Elective Internet Programming – Paper III Web App design using Angular	Skill Based Elective	2	2

COURSE DESCRIPTION

This course aims to impart knowledge on Angular Framework and to develop single page apps across all platforms.

COURSE OBJECTIVES

- To prepare the students to learn Angular Framework.
- To Enable the students to develop dynamic web apps.
- To enable the students to develop single page applications for Desktop and Mobile.

Unit 1: Introduction

What is Angular? – Prerequisites of Angular – Type Script – JavaScript Vs TypeScript - CLI Deep Drive - Project Setup – building & execution of angular app

Unit 2: Components and Data binding

Introduction to component – Creating a new component - working with component template and component Style – Component Selector

Introduction to Data Binding – Binding Types - String Interpolation – Property binding – Event Binding – Two way binding

Unit 3: Directives

Understanding Directives – Component directive – Attribute Directive – Structural directive – Project Creation

Unit 4: Services and Dependency injection

Need for angular service – features of angular service – what is dependency injection – Types of dependency – Advantages of dependency - working with service and dependency injection

Unit 5: Angular forms and Pipes

Introduction to angular forms – template driven approach – reactive approach - form control - form group - Angular pipes – Built-in Pipes – creating custom pipes

Text book:

1. Angular Essentials: The Essential Guide to learn Angular – Dhananjay Kumar – BPB publications 2019.
Chapters: 1,2,4,6,7,11

Reference Books:

1. ng-book: The Complete Guide to Angular Paperback –- Felipe Coury , Ari Lerner, Carlos Taborda - February 2018
2. Beginning Angular with Typescript (updated to Angular 9) – Greg Lim - April 2020
3. A Journey to Angular Development Paperback – by Sukesh Marla – July 2021

Digital Open Educational Resources (DOER)

1. https://angular.io/start
2. https://www.javatpoint.com/angular-7-tutorial

COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Content Delivery Method	Teaching Aids
Unit -1 INTRODUCTION				
1.1	Prerequisites of Angular – Type Script	2	Chalk & Talk	Black Board
1.2	CLI Deep Drive - Project Setup	2	Chalk & TalkDemonstration	LCD
1.3	CLI Deep Drive - Project Setup	2	Demonstration	LCD
UNIT II: COMPONENTS AND DATA BINDING				
2.1	Introduction to component – Creating a new component - working with component template and component Style – Component Selector	3	Demonstration	LCD
2.2	Introduction to Data Binding – Binding Types - String Interpolation – Property binding – Event Binding – Two way binding	3	Demonstration	LCD
UNIT III: DIRECTIVES				
3.1	Understanding Directives – Component directive – Attribute Directive – Structural directive –	3	Demonstration	LCD

	Project Creation			
3.2	Understanding Directives – Component directive – Attribute Directive – Structural directive – Project Creation	3	Demonstration	LCD
UNIT IV: SERVICES DEPENDANCY INJECTION				
4.1	Need for angular service – features of angular service	2	Demonstration	LCD
4.2	what is dependency injection – Types of dependency	2	PPT	LCD
4.3	Advantages of dependency - working with service and dependency injection	2	Demonstration	LCD
UNIT V: Angular Forms & Pipes				
5.1	Introduction to angular forms – template driven approach – reactive approach - form control - form group	3	Demonstration	LCD
5.2	Angular pipes – Built-in Pipes – creating custom pipes	3	Demonstration	LCD

EVALUATION PATTERN

Levels	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total	% of Assessment
	Quiz (Best one out of 2)	PPT / Open Book Test (Best one out of 2)	Assignment	Test1	Test 2				

	5 Mks.	5 Mks	5 Mks.	10 Mks	10 Marks	35 Mks.	5 Mks.	40Mks.	
K1	**5**	**-**	**-**	**1½**	**1**	**7.5**	-	**7.5**	18.75 %
K2	**-**	**5**	**2**	**2**	**2½**	**11.5**	-	**11.5**	28.75 %
K3	**-**	**-**	**1½**	**3**	**3½**	**8**	-	**8**	20 %
K4	**-**	**-**	**1½**	**3½**	**3**	**8**	-	**8**	20 %
Non Scholastic	**-**	**-**	**-**	-			**5**	**5**	12.5 %
Total	**5**	**5**	**5**	**10**	**10**	**35**	**5**	**40**	**100 %**

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

✔ **The levels of CIA Assessment based on Revised Bloom's Taxonomy are :**

K1- Remember, **K2-**Understand, **K3-**Apply, **K4-**Analyse

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

COURSE OUTCOMES (CO)

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

No.	**Course Outcome**	**Knowledge Level (According to Bloom's Taxonomy)**	**PSOs ADDRESSED**	**POs ADDRESSED**
CO 1	Knowledge about Angular Framework	K1&K2	PSO1	PO1
CO 2	Design the layout of Single Page Application	K2	PSO3 & PSO4	PO3
CO 3	Binding the different components as single page	K2&K3	PSO2	PO2

CO 4	Develop a dynamic web page as SPA	K1& K3	PSO5	PO4
CO 5	Validating the Angular Forms.	K2&K3	PSO6	PO3

Mapping COs Consistency with PSOs

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

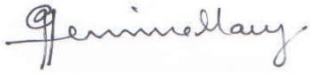
Note: ◆ Strongly Correlated – **3** ◆ Moderately Correlated – **2** ◆ Weakly Correlated - **1**

Mapping of COs with POs

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

COURSE DESIGNER:
Dr. K.RosemaryEuphrasia

Forwarded By



(Dr.G.Germine Mary)

HOD'S Signature & Name