SREE NARAYANA GURUKULAM
COLLEGE OF ENGINEERING

(Affiliated to A P J Abdul Kalam Technological University & Approved by A.I.C.T.E)
KADAYIRUPPU, KOLENCHERY

"Like the fire that emerges out of churning sticks
That boundless wisdom comes from
within for those who seek"

- Sree Narayana Guru

COURSE DIARY

Code & Subject : Csh 331 System Software and Microprocessers Lab

Semester : 3 Month/Year September 2022

Name of Teacher : Shini P.S Department CSE

SNGCE
Beyond Engineering...

COURSE DIARY

NAME	:	Shimi P.S
DESIGNATION	:	Asst. Professor
MOBILE No.	:	9495597154
DEPARTMENT	:	Computer Science and Engineering
YEAR/SEMESTER	:	2022 / V

NOTE

Kindly mark the attendance register with the following codes:

a = Absent

X = Present

Indicate L for Lecture, T for Tutorial, R for Remedial classes.

The date and period be entered chronologically after each lecture.

General Instructions

- Student performance should be evaluated solely on an academic basis.
- Student's evaluation should be fair, consistent, transparent and accountable.
- Evaluation of students' performance should be disclosed to the students.

1. Keep the Course Diary up to date by clearly indicating the subject coverage and students attendance on the relevant pages.

2. Paste the syllabus in the relevant page.

3. Write/Paste the Course plan in the relevant page.

4. Events in a semester such as Series Test days, Cultural/Celebration days, days for extra/co-curricular activities etc. may be indicated in the Year Calendar.

5. Assignment details may be written in the Course Diary or may be filled in the Course File.

    (i)   Minimum 3 no. of assignments should be given

    (ii) Different set of questions may be given in an assignment (at least three) to a class

    (iii) Assignments may be in the form of written - closed/open book, individual/group, home assignment, or in the form of oral presentation, quiz, seminar etc.

6. Show complete split up of sessional marks in the column " Internal Marks".

7. All the entries in the course diary must be, legibly written without overwriting and free of errors.

8. Do not count marks of class tests along with the series test for computing sessional mark.

9. The staff member will be responsible for the safe custody of the Course Diary and (s)he should return it to the HOD at the end of semester or earlier if (s)he leaves the department or discontinue the subject.

10.   Follow KTU regulations for computing sessional marks.

11.   Teaching notes must be a part of course file

PRINCIPAL

DISTRIBUTION OF SESSIONAL MARKS

Theory Subject		Practical / Drawing	
		Regular Class Viva	15
Assignments		Regular Class work/ Drawing/ Workshop Record/Lab Record/Class performance	30
Tests		Tests	15

Attendance   15

$\overline{75}$

TIME SCHEDULE OF CLASSES

Period / Day	1	2	3	4/N	N/4	5	6	7
Mon								
Tue		— BS&mp Lab —						
Wed								
Thu								
Fri	— SS&mp Lab —							

gm/

SREE NARAYANA GURUKULAM
COLLEGE OF ENGINEERING
KADAYIRUPPU, KOLENCHERY

CODE OF PROFESSIONAL ETHICS FOR TEACHERS

TEACHERS AND THEIR RESPONSIBILITIES:-

Who ever adopts teaching as a profession assumes the obligation to conduct himself/herself in accordance with the ideals of the profession. A teacher is constantly under the scrutiny of his students and the society at large. Therefore, every teacher should see that there is no incompatibility between his precepts and practice. The national ideas of education which have already been set forth and which he/she should seek to inculcate among students must be his / her own ideals. The profession further requires that the teachers should be calm, patient, communicative by temperament and amiable in disposition.

Teachers should:

1. adhere to a responsible pattern of conduct and demeanour expected of them by the community;

2. manage their private affairs in a manner consistent with the dignity of the profession.

3. seek to make professional growth continuous through study and research;

4. express free and frank opinion by participation at professional meetings, seminars, conferences etc., towards the contribution of knowledge;

5. maintain active membership of professional organisation and strive to improve education and profession through them.

6. perform their duties in the form of teaching, tutorials, practical and seminar work consistently and with dedication;

7. co-operate and assist in carrying out house functions relating to the educational responsibilities of the college and the University such as; assisting in appraising application for admission, advising and counselling students as well as assisting in the conduct of university and College Examinations, including supervision, invigilation and evaluation; and

8. participate in the extension, co-curricular and extra – curricular activities including community service.

II TEACHERS AND THE STUDENTS

Teachers should :

1. respect the right and dignity of the students in expressing his/her opinions;

2. deal justly and impartially with the students regardless of their religion, caste, political, economic, social and physical characteristics;

3. recognize the difference in attitude and capabilities among students and strive to meet their individual needs.

4. encourage students to improve their attainment, develop their personalities and at the same time contribute to community welfare;

5. inculcate among students scientific outlook and respect for physical labour and ideals of democracy, patriotism and peace;

6. be affectionate to the students and not behave in a vindictive manner towards any of them for any reason;

7. pay attention to only the attainment of the student in the assessment of merit;

8. make themselves available to the students even beyond their class hours and help and guide students without any remuneration or reward;

9. aid students to develop an understanding of our national heritage and national goals, and

10. refrain from inciting students against other students, colleagues or administration.

III TEACHERS AND COLLEAGUES

Teachers should :

1. Treat other members of the profession in the same manner as they themsleves

wish to be treated

2. speak respectfully of other teachers and render assistance for professional betterment;

3. refrain from lodging unsubstantiated allegations against colleagues to higher authorities;

4. refrain from allowing consideration of caste, creed, religion, race or sex in their professional endeavour.

IV   TEACHERS AND AUTHORITIES

Teachers should :

1. discharge their professional responsibilities according to the existing rules and adhere to procedures and methods consistent with their profession in initiating steps through their own institutional bodies and/or professional organisations for change of any such rule detrimental to the professional interest;

2. refrain from undertaking any other employment and commitment including private tuition and coaching classes which are likely to interfere with their professional responsibilities;

3. co-operate in the formulation of policies of the institution by accepting various offices and discharge responsibilities which such offices will demand.

4. co-operate through their organisations in the formulation of policies of their institution and accept offices;

5. co-operate with the authorities for the betterment of the institution keeping in view the interest and in conformity with dignity of the profession;

6. should adhere to the conditions of contract;

7. give and expect due notice before a change of position is made; and

8. refrain from availing themselves of leave except on unavoidable grounds and as far as practicable with prior intimation, keeping in view their particular responsibility for completion of academic schedule.

V   TEACHERS AND NON - TEACHING STAFF

1.   teachers should treat the non-teaching staff as colleagues and equal partners in a co-operative undertaking, within every educational institution.

2.   teachers should help in the function of joint staff-councils covering both teachers and the non-teaching staff.

VI   TEACHERS AND GUARDIANS

1.   Teachers should :- Try to see through teachers bodies and organisations that institutions maintain contact with the guardians of their students, send reports of their performance to the guardians whenever necessary and meet the guardians in meetings convened for the purpose for mutual exchange of ideas and for the benefit of the institution.

VII   TEACHERS AND SOCIETY

Teachers should:-

1   recognize that education is a public service and strive to keep the public informed of the educational programmes which are being provided.

2.   work to improve education in the community and strengthen the community's moral and intellectual life;

3.   be aware of social problems and take part in such activities as would be conducive to the progress of society and hence the country as a whole.

4.   perform the duties of citizenship, participate in community activities and should accept responsibilities of public offices :

5.   refrain from taking part in or subscribing to or assisting in any way activities which tend to promote feeling of hatred or enmity among different communities, religions or linguistic groups but actively work for National Integration.

Class: R5 **Subject with Code No:** CSL381 SSB MP Lab. **No. of period per week:** 6 (3+3)

Class No	Name		Sept						Oct												Nov													
1	Aayani S. Kumar	5	✗	∗	✗	✗	∗				✗	✗	✗									✗	✗			∗	<	<	∗	∗			✗	<	<
2	Abhijith K.B.	3	∧	∧	✗	∧	∧				✗	✗	✗	a		a	a				∗	<	<	∗	∗			✗	<	<
3	Abhimanu V.M.	8	✗	∧	∧	✗	∧				✗	∧	✗	a	a	a				✗	✗	✗	✗	∗			✗	✗	<
4	Abhinav P.S.	6	✗	✗	∧	✗	✗				✗	✗	✗	9	a	a				✗	✗	✗	✗	∗			a	a	a
5	Abhiram K. Rajan		✗	✗	∗	+	∧				✗	✗	✗	9	a	∧				a	<	∗	a	9			✗	✗	<
6	Abhishek Sunil	3	∧	∗	∗	+	∧				a	a	a	✗	✗	✗				✗	✗	∗	✗	∗			✗	<	✗
7	Adams Jacob	5	✗	∧	∗	∧	∗				✗	<	α	✗	✗	✗				✗	∧	∗	✗	∗			✗	✗	✗
8	Adarsh Anil	6	∧	✗	∗	∧	∧				✗	∗	✗	a	a a			a	✗	∗	a	∧			✗	∗	✗
9	Adheena Dev	3	∧	∧	∧	∧	∧				✗	∧	✗	a	a a			✗	✗	∗	a	9			<	✗	✗
10	Adithyan Shiju		a	a	a	a	a				a	a	a	9	∧ ∧			✗	✗	∗	✗	∗			✗	<	✗
11	Aiswariya Binu	3	a	a	✗	∗	∧				✗	∧	α	a a			a	a	a a	a			a	a	a
12	Ajay Joy	2	✗	✗	✗	∗	∧				a	✗	✗	< <			a	a	∗	✗	∗			✗	✗	✗
13	Ajin Johnson	3	✗	✗	∗	+	✗				a	✗	✗	✗ ✗			∧	✗	9	✗	∗			✗	✗	✗
14	Akshay Shaji	2+6	✗	✗	✗	∗	∧				✗	∧	∧	✗ <			✗	∧	∗ a	a			✗	∗	✗
15	Alan Teroy	9	✗	∗	✗	∗	∧				a	a	a	a a			a	<	∗ a	9			✗	∗	✗
16	Ammu Vijayan		✗	✗	✗	∧	∗				∧	∧	α	< <			∧	✗	< <	∗			✗	∗	✗
17	Anagha P.		✗	∧	✗	+	∧				✗	∧	∧	< ✗			✗	✗	∗ ∗	∗			<	∗	∨
18	Anandha Krishnan CG.	6	✗	∧	✗	+	✗				✗	✗	✗	✗ ✗			✗	a	∗ <	∗			✗	✗	✗
19	Anandhu Saji	5	a	a	∗	∧	∗				✗	∧	✗	a a			a	✗	< a	a			✗	✗	✗
20	Anandhu Ajithkumar		∧	∗	✗	∗	∗				✗	✗	<	a a			✗	✗	✗ ✗	✗			✗	✗	✗
21	Anania Santhosh		∧	∧			✗	∧	∧		✗	✗	∗	✗ ✗			∗	<	a a			✗	∗	✗
22	Anuila Ansari		✗	∧			∗	∧	∧		✗	✗	∗	∗ ∗ ✗			✗	✗	✗ ✗ ∗			
23	Anjima Madhu		✗	✗			✗	∧	∧		∧	✗	∗	✗ ∗ ✗			✗	✗	✗ ✗ ∗			
24	Anjitha P.S.	2	✗	✗			✗	✗	∧		∗	∧	∗	✗ ✗ ✗			✗	∗	✗ ✗ ✗			
25	Ankit Sudev		✗	✗			∗	✗	∧		∗	∧	∗	∧ ✗ ✗			a a	✗	✗ ∗			
26	Ann Mary George		∧	✗			∧	✗	∧		∗	∧	∗	✗ ✗ ✗			∧	∗	✗ ✗ ∗			
27	Antony C Robert	6	✗	✗			a	a	9		✗	∞	∗	∗ ✗ ∧			✗	∗	✗ ✗ ✗			
28	Aravind Venugopal	2	✗	∧			✗	∧	∧		∗	∧	∗	✗ ∧ ∧			a a u	∗	a a ✗ ✗ ✗			

Total No. of Class

1	2	3	4	5	3	4	5	6	7	8	6	7	8	9

Initial of faculty

Nov totals: 10 11 9 10 11 12 13 14 15 4 14 15 16 17 15 19

Class : R5 Subject with Code No : CSL331

Class No	Name			
1	Aayani S. Kumar	5		
2	Abhijith K.B.	3		
3	Abhimanu v.m.	8		
4	Abhinav P.S.			
5	Abhiram K. Rajan			
6	Abhishek Sunil	3		
7	Adams Jacob	5		
8	Adarsh Anil	b		
9	Adheena Dev	3		
10	Adithyan Shiju			
11	Aiswariya Binu	3		
12	Ajay Joy	2		
13	Ajin Johnson	3		
14	Akshay Shaji	2+6		
15	Alan Roy	9		
16	Ammu Vijayan			
17	Anagha P.			
18	Anandha Krishnan CG.	6		
19	Anandhu Saji	5		
20	Anandhu Ajithkumar			
21	Anania Santhosh			
22	Anula Ansari			
23	Anjima Madhu			
24	Anjitha P.S.	2		
25	Ankil Sudev			
26	Ann Mary George			
27	Antony C Robert			
28	Aravind Venugopal	2		

Total No. of Class

Initial of faculty

Class No	Name		Performance / Practical Record/Outputs (30)										Total
1	Aayani S. Kumat	1	28 30	28		30							
2	Abhijith K.B.	2	30 30	30									
3	Abhimanu v.M.	3	30 30	25			a						
4	Abhinav P.S.	4	30 30	25			a						
5	Abhiram K.Rajan	5	30 30	30									
6	Abhishek Sunil	6	30 30			30							
7	Adams Jacob	7	30 30	30			a						
8	Adarsh Anil	8	30 30	30									
9	Adheena Dev	9	30 30	25									
10	Adithyan Shiju	10	- -	-			a						
11	Aiswariya Binu	11	30 30	30		30	a						
12	Ajay Joy	12	30 30	30									
13	Ajin Johnson	13	30 30						H				
14	Akshay Shaji	14	30 30	30			a						
15	Alan Terry	15	30 30										
16	Amou vijayan	16	30 30	30									
17	Anagha P.	17	30 30	30						15			
18	Anandha Krishnan C.G.	18	30 30	30			a						
19	Anandhu Saji	19	30 30	25									
20	Anandhu Ajithkumar	20	30 30	30									
21	Anania Santhosh	21	30	30		30							
22	Anila Ansari	22	30	30		30							
23	Anjima madhu	23	30	30	30	30							
24	Anjitha P.S.	24	30	30	30	30							
25	Ankil Sudev	25	30	30	30	30							
26	Ann mary George	26	30	30	30	30							
27	Antony c Robert	27	30	a	30	a							
28	Aravind venugopal	28	30	30		30		80					

Total No. of Class

Initial of faculty

Class : R5 Subject with Code No : C

Class No	Name	2nd	2d	3d			2/10	2/10	x	1/4		15/4									Regular Class Viva (5)				Total
1	Aayani S. Kumar	15	15		15		15	15																	
2	Abhijith K.B.	15	15		15		a	15																	
3	Abhimanu V.M.	15	15		15		a	14																	
4	Abhinav P.S.	15	15		15		a	a																	
5	Abhiram K. Rajan	15	15		15		15																		
6	Abhishek Sunil	15	15		-		15																		
7	Adams Jacob	15	15		15		a	a																	
8	Adarsh Anil	15	15		15		a																		
9	Adheena Dev	15	15		15		a					15													
10	Adithyan Shiju	-	-		-		-	a																	
11	Aiswarya Binu	15	15		15		15	a																	
12	Ajay Joy	15	15				15 1					15													
13	Ajin Johnson	15	15		10		15																		
14	Akshay Shaji	15	15		15		a	a																	
15	Alan Peroy	15	15		·		15																		
16	Ammu Vijayan	15	15		15		15																		
17	Anagha P.	15	15		15		15																		
18	Anandha Krishnan C.G.	15	15		15		4	a																	
19	Anandhu Saji	15	15		15		a																		
20	Anandhu Ajithkumar	15	15		15		15																		
21	Anania Santhosh		15		15		15		14	14	14														
22	Anila Ansari		15		15		15		14	14															
23	Anjima Madhu		15		15		15	15	15	15															
24	Anjitha P.S.		15		15		15		14	14															
25	Ankit Sudev		15		10		14	15	14	14															
26	Ann Mary George		15		15		15	15	15	15															
27	Antony C Robert		15		15		a	15																	
28	Aravind Venugopal		a		14		15																		
			15																						

Total No. of Class

Initial of faculty

Class : R5   Subject with Code No : C

Class No	Name	
1	Aayani S. Kumar	5
2	Abhijith K.B.	3
3	Abhimanu V.M.	8
4	Abhinav P.S.	6
5	Abhiram K. Rajan	
6	Abhishek Sunil	3
7	Adams Jacob	5
8	Adarsh Anil	6
9	Adheena Dev	3
10	Adithyan Shiju	will
11	Aiswariya Binu	3
12	Ajay Joy	2
13	Ajin Johnson	3
14	Akshay Shaji	2
15	Alan Tomy	2
16	Amou Vijayan	
17	Anagha P.	
18	Anandha Krishnan C.G.	
19	Anandhu Saji	
20	Anandhu Ajithkumar	
21	Anania Santhosh	
22	Anvila Ansari	
23	Anjima Madhu	
24	Anjitha P.S.	
25	Ankit Sudev	
26	Ann Mary George	
27	Antony C Robert	
28	Aravind Venugopal	

Total No. of Class
Initial of faculty

Dec 1 — Practical Record/Outputs — Jan

23	23	23	3	3	3	6	6	6			Total
1	2	3	2	3	4	1	2	3	1	2	
			×	×	×				a		
			×	×	×				a		
			×	×	×						
			×	×	×				a		
			×	×	×						
			×	×	×				a		
			×	×	×				a		
			×	×	×				×		
			×	×	×						
			a	a	a						
			×	×	×						
			×	×	×				×		
			×	×	×				×		
			×	×	×				×		
			a	a	×						
			×	×	×						
			×	×	×						
			×	×	×						
			×	×	×				×		
			×	×	×						
×	×	×							×		
×	×	×							×		
×	×	×							·		
×	×	×							×		
a	a	a							×		
×	×	×							×		
a	a	a									
a	a	a									

35 36 37 36 37 38

Marks for Assignments

1	2	3	Total

Syllro software and Microprocessor Lab.

Class No	Name		Month		September								October							
			L/T/R	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
			Date	20	20	26	26	44	30	30	30	18	18	16	25	25	25	24
			Period	3	4	2	3	4	2	3	4	2	3	4	2	3	4	1
29	Ardra Suresh			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
30	Arenal Biju			x	x	x	x	x	x	x	x	a	a	a	x	x	x	x
31	Ashin Girish			x	x	x	x	x	a	a	a	x	x	x	a	a	a	x
32	Ashly Shaji			x	x	x	x	x	a	a	a	x	x	x	a	a	a	a
33	Ashna Suresh			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
34	Aswal K. Sunil			x	x	x	x	x	a	a	a	x	x	x	a	a	x	x
35	Aswan K.S.			x	x	x	x	x	x	x	x	x	x	x	a	a	x	x
36	Av. Guruprasad			x	x	x	x	x	x	x	x	x	x	x	a	a	a	x
37	Basil Baby			a	a	a	x	x	x	a	a	a	x	x	x	a	g	5	x
38	Basakious Paul			x	x	x	x	x	a	a	a	x	x	x	a	a	a	x
39	Basil kunjumon			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
40	Bhagyalakshmi Biju			x	x	x	x	x	a	a	a	x	x	x	x	x	x	a

	November															Dec			
29	1	1	1	15	15	15	22	22	22	24	29	29	6	6	6
2	2	3	4	2	3	4	2	3	4	2	3	4	2	3	4

Total No. of Class
Initial of faculty

| 1 | 2 | 3 | 4 | 5 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |

Class: R5A **Subject with Code No:**

Class No	Name
29.	Ardra Suresh
30.	Aromal Biju
31.	Ashin Girish
32.	Ashly Shaji
33.	Ashna Suresh
34.	Aswal K. Sunil
35.	Aswan K.S.
36.	Av. Guruprasad
37.	Basil Baby
38.	Basalious paul
39.	Basil kunjuson
40.	Bhagyalakshmi Biju

Total No. of Class

Initial of faculty

Dec   Jun

6	7	5	10	10	16	28	23	23	6	6	0
7	5	2	1	2	3	10	2	3	1	2	3

(Attendance marks for class numbers 29–40)

29 30 31 32 33 34 35 36 37

Class : R5A   Subject with Code No :

Performance / Recent (30)

1 oct -

Class No.	Name			24	c	3d	18	25	1	15
			29	30		30	80	30		
29.	Ardra Suresh		30	30		30	a			
30.	Arenal Biju	-3	31	30		a				
31.	Ashin Girish	246	32	30		a	20			
32.	Ashly Shaji	3+4	33	30		30	30			
33.	Ashna Suresh		34	30		a	30			
34.	Aswal h. Sunil	3+6	35	50		30	30			
35.	Aswan is.s.	3+3	36	30		30				
36.	Av. Guruprasad	3+3	37	30		a	25			
37.	Basil Baby	3+8	38	30		a	30			
38.	Basalious Paul	3+4	39	30		30	30			
39.	Basil kunjuson	3	40	30		a				
40.	Bhagyalaashroi Biju									

Total No. of Class

Initial of faculty

Class: R5A   Syslim   Subject with Code No:

Regular Class Viva (15)

Class No	Name		24	2.1	30	18	25	1	15
29.	Ardra Suresh	29	15		15	15	15		15
30.	Aramal Biju	30	15		15	a	15		
31.	Ashin Girish	31	15		a	14	a		
32.	Ashly Shaji	32	15		a	15	a		
33.	Ashna Suresh	33	15		15	14	14		
34.	Aswal K. Sunil	34	15		a	14	a		
35.	Aswan K.S.	35	15		15	15	a	15	
36.	Av. Guruprasad	36	15		15	14	a	15	15
37.	Basil Baby	37	15		a	.	10/a		
38.	Basalious Paul	38	15		a	14	a		
39.	Basil Kunjumon	39	15		15	14	15	15	
40.	Bhagyalakshmi Biju	40	15		14/a	.	15	15	15

Total No. of Class
Initial of faculty

Module	Sl. No of Periods	Dates Planned	Topics Covered	Dates Engaged	Period	Mode of Instruction/ Remarks
V			CPU Scheduling Algorithms			
CO4		20/9/22	1. FCFS	20/9/22	3,4	Batch 1 & 2
		26/9/22	2. SJF, Priority scheduling	26/9/22	2,3,4	Batch 1
		30/9/22	3	30/9/22	2,3,4	Batch 2
		14/10/22	4. Round Robin Algorithms, Banker's Algorithm (Deadlock Avoidance).	14/10/22	1,2,3	Batch 1
		18/10/22		18/10/22	2,3,4	Batch 2
		21/10/22	Disk Scheduling Algorithms FCFS, SCAN, C-SCAN.	21/10/22	1,2,3	Batch 1
		25/10/22		25/10/22	2,3,4	Batch 2
		28/10/22	Page Replacement Algorithms	28/10/22	1,2,3	Batch 1
		1/11/22	LRU, LFU, FIFO	1/11/22	2,3,4	Batch 2
VI			Pass 1 of two pass Assembler	4/11/22	1,2,3	Batch 1
CO5		4/11/22				
		11/11/22	pass 2 of two pass Assembler	11/11/22	2,3,4	Batch 2

SUBJECT COVERAGE

No. of periods per week	3+3				Total Expected		

Module	Sl. No of Periods	Dates Planned	Topics Covered	Dates Engaged	Period	Mode of Instruction/ Remarks	
VI		14/11/22	Single pass Assembler	4/11/22	1,2,3	Batch1	
CO5		18/11/22	Two pass macro processor	15/11/22	2,3,4	Batch2	
		21/11/22	Single pass macro processor	22/11/22	2,3,4	Batch1	verified
		25/11/22	Absolute Loader				
			Relocating Loader	29/11/22	2,3,4	Batch2	
I			Microprocessor Lab. Trainer kit Experiments				
CO1		29/11/22	Decimal Arithmetic and bitmanipulation operations.	6/12/22	2,3,4	Batch1	
				7/12/22	1,2,3	Batch2	
		2/12/22	code conversion between BCD, Binary, Hexadecimal and ASCII.				

No. of periods per week	3+3	SUBJECT COVERAGE		Total Expected		
Module	Sl. No of Periods	Dates Planned	Topics Covered	Dates Engaged	Period	Mode of Instruction/ Remarks
II CO2		6/12/22 9/12/22	Masm Experiments 16 and 32 bit Decimal Arithmetic operations String Manipulation programs	6/12/22 6/12/22	7 7	Batch 1 Batch 2
		18/12/22 20/12/22	searching and sorting of 16 bit numbers	7/12/22	5	Batch 1 Batch 2
III CO3		23/12/22 27/12/22	Interfacing with stepper motor — Rotate through any sequence. Interfacing with 8279	16/12/22 20/12/22	1,2,3 2,3,4.	Batch 1 Batch 2 Batch 2.
		30/12/22 3/1/23	8051 Trainer kit Decimal Arithmetic and Bit manipulation operations Timer Programming (mode 1)	28/12/22	1,2,3.	Batch 1 Batch 2

MICROPROCESSOR LAB

I. Assembly Language Programming Exercises/Experiments using 8086 Trainer kit
II. Exercises/Experiments using MASM (PC required)
III. Interfacing Exercises/Experiments with 8086 trainer kit through Assembly Language programming
IV. Exercises/Experiments using 8051 trainer kit

SYSTEM SOFTWARE LAB:

I. Experiments related to the operating system.
II. Exercises/Experiments related to the assemblers, loaders and macroprocessors

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Text Books

1. Bhurchandi and Ray, Advanced Microprocessors and Peripherals, Third Edition McGraw Hill.
2. Andrew S Tanenbaum, "Modern Operating Systems", 4th Edition, Prentice Hall, 2015.
3. Leland L. Beck, System Software: An Introduction to Systems Programming, 3/E, Pearson Education Asia, 1997.

Reference Books

1. A. NagoorKani, Microprocessors and Microcontrollers, Second Edition, Tata McGraw Hill
2. Douglas V. Hall, SSSP Rao, Microprocessors and Interfacing, Third Edition, McGrawHill Education.
3. William Stallings, "Operating systems", 6th Edition, Pearson, Global Edition, 2015.
4. Garry Nutt, Nabendu Chaki, Sarmistha Neogy, "Operating Systems", 3rd Edition, Pearson Education.
5. D.M. Dhamdhere, Systems Programming and Operating Systems, Second Revised Edition, Tata McGraw Hill.

Practice Questions

MICROPROCESSORS LAB :   List of Exercises/ Experiments
(Minimum 10 Exercises (at least 2 questions from each part I, II, III & IV)) : 2 Hrs/week

I. Assembly Language Programming Exercises/Experiments using 8086 Trainer kit

1. Implementation of simple decimal arithmetic and bit manipulation operations.
2. Implementation of code conversion between BCD, Binary, Hexadecimal and ASCII.
3. Implementation of searching and sorting of 16-bit numbers.

II. Exercises/Experiments using MASM (PC Required)

4. Study of Assembler and Debugging commands.
5. Implementation of decimal arithmetic (16 and 32 bit) operations.
6. Implementation of String manipulations.
7. Implementation of searching and sorting of 16-bit numbers.

III. Interfacing Exercises/Experiments with 8086 trainer kit through Assembly Language Programming

8. Interfacing with stepper motor - Rotate through any given sequence.
9. Interfacing with 8255 (mode0 and mode1 only).
10. Interfacing with 8279 (Rolling message, 2 key lockout and N-key rollover implementation).

11. Interfacing with Digital-to-Analog Converter.

IV. Exercises/Experiments using 8051 trainer kit

12. Familiarization of 8051 trainer kit by executing simple Assembly Language programs such as decimal arithmetic and bit manipulation.
13. Implementation of Timer programming (in model).

SYSTEM SOFTWARE LAB: List of Exercises/ Experiments
(Minimum 8 Exercises (at least 3 and 5 questions from each part V and VI)) : 2 Hrs/week

V. Exercises/Experiments from operating system

1. Simulate the following non-preemptive CPU scheduling algorithms to find turnaround time and waiting time.
   a) FCFS   b) SJF   c) Round Robin (pre-emptive)   d) Priority
2. Simulate the following file allocation strategies.
   a) Sequential   b) Indexed   c) Linked
3. Implement the different paging techniques of memory management.
4. Simulate the following file organization techniques
   a) Single level directory   b) Two level directory   c) Hierarchical
5. Implement the banker's algorithm for deadlock avoidance.
6. Simulate the following disk scheduling algorithms.
   a) FCFS   b) SCAN   c) C-SCAN
7. Simulate the following page replacement algorithms:
   a)FIFO b)LRU   c) LFU

VI. Exercises/Experiments from assemblers, loaders and macroprocessor

1. Implement pass one of a two pass assembler.
2. Implement pass two of a two pass assembler.
3. Implement a single pass assembler.
4. Implement a two pass macro processor
5. Implement a single pass macro processor.
6. Implement an absolute loader.
7. Implement a relocating loader.