



**PERIYAR
MANIAMMAI**
INSTITUTE OF SCIENCE & TECHNOLOGY
(Deemed to be University)
Established Under Sec. 3 of UGC Act, 1956 • NAAC Accredited
think • innovate • transform

Criterion 1 – Curricular Aspects

Key Indicator	1.2	Academic Flexibility
Metric	1.2.2	Percentage of Programmes in which Choice Based Credit System (CBCS)/elective course system has been implemented (Data for the latest completed academic year)

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
STRUCTURE OF THE PROGRAM CLEARLY
INDICATING COURSES, CREDITS/ELECTIVES**

Programmes

1. B.Tech Computer Science and Engineering Full Time

1 Curriculum and Syllabus for the B.Tech (Computer Science and Engineering) Programme after Revision

SEMESTER - I

S.No.	Description	AICTE Abbr.	Course Code	Courses	Credits				Hours			
					L	T	P	Total	L	T	P	Total
1	MA-I	BSC	XMA101	Calculus and Linear Algebra	3	1	0	4	3	1	0	4
2	BE	ESC	XBE102	Electrical and Electronics Engineering Systems	3	1	0	4	3	1	0	4
3	C	BSC	XAC103	Applied Chemistry for Engineers	3	1	0	4	3	1	0	4
4	PPS-T	ESC	XCS104	Basics of Electronic Devices and Circuits.	3	0	0	3	3	0	0	3
5	SC	HSMC	XGS105	Speech Communication	0	1	2	3	0	1	4	5
6	UMAN-II	MC	XUM106	Constitution of India	0	0	0	0	3	0	0	3
7	BEL	ESC	XBE107	Electrical and Electronics Engineering Systems Laboratory	0	0	1	1	0	0	2	2
8	CL	BSC	XAC108	Applied Chemistry for Engineers Laboratory	0	0	1	1	0	0	2	2
				Total				20				27

Total Credits – 20 Total Hours- 27

SEMESTER II

S.No.	Description	AICTE Abbr.	Course Code	Courses	Credits				Hours			
					L	T	P	Total	L	T	P	Total
1.	MA-II	BSC	XMA201	Calculus, Ordinary Differential Equations and Complex Variable	3	1	0	4	3	1	0	4
2.	PPS-T	ESC	XCP202	Programming for Problem Solving	3	0	0	3	3	0	0	3
3	P	BSC	XAP203	Applied Physics for Engineers	3	1	0	4	3	1	0	4
4	TC	HSMC	XGS204	Technical Communication	2	0	0	2	2	0	0	2
5	Works	ESC	XWP205	Workshop Practices	1	0	2	3	1	0	4	5
6	EM/BT	ESC	XEM206	Engineering Mechanics	3	0	0	3	3	0	0	3
7	PPS-L	ESC	XCP207	Programming for Problem Solving Laboratory	0	0	1	1	0	0	2	2
8	PL	BSC	XAP208	Applied Physics for Engineers Laboratory	0	0	1	1	0	0	2	2
				Total				21				25

Total Credits – 21 Total Hours- 25

S.No.	Description	AICTE Abbr.	Course Code	Courses	Credits				Hours			
					L	T	P	Total	L	T	P	Total
1.	MA-III	BSC	XPS301	Probability and Statistics	3	0	0	3	3	0	0	3
2.	PCC T	PCC	XCS302	Digital Electronics	3	1	0	4	3	1	0	4
3.	PCC-T	PCC	XCS303	Data Structure & Algorithms	3	0	0	3	3	0	0	3
4.	PCC-T	PCC	XCS304	Object Oriented Programming	3	0	0	3	3	0	0	3
5.	PCC-T	PCC	XCS305	Signals & Systems	3	1	0	4	3	1	0	4
6.	MNGT-I	HSMC	XUM306	Entrepreneurship Development	2	0	0	2	2	0	0	2
7.	UMAN-I	MC (HSM C)	XUM307	Universal Human Values 2: Understanding Harmony and Gender	2	1	0	3	3	0	0	3
8	PCC TL	PCC	XCSHA1	Introduction to Artificial Intelligence	1	0	2	3	1	0	4	5
			XCSHD1	Introduction to data science								
9	PCC-L	PCC	XCS308	Data Structure & Algorithms Laboratory	0	0	1	1	0	0	2	2
10	PCC-L	PCC	XCS309	Object Oriented Programming Laboratory	0	0	1	1	0	0	2	2
11	IPT-I	PROJ	XCS310	In-plant Training - I	-	-	-	1				
Total								28				31

Total Credits – 28 Total Hours- 31

SEMESTER IV

S.no.	Description	AICTE Abbr,	Course Code	Courses	Credits				Hours			
					L	T	P	Total	L	T	P	Total
1.	MA-IV	BSC	XCS401	Discrete Mathematics	3	0	0	3	3	0	0	3
2.	PCC T	PCC	XCS402	Computer Organization & Architecture	3	1	0	4	3	1	0	4
3.	PCC-T	PCC	XCS403	Operating Systems	3	0	0	3	3	0	0	3
4.	PCC-T	PCC	XCS404	Design & Analysis of Algorithms	3	0	0	3	3	0	0	3
5.	MNGT-II	HSMC	XUM009	Economics for Engineers	3	0	0	3	3	0	0	3
6.	UMAN-III	MC	XUM003	Disaster Management	0	0	0	0	3	0	0	3
7	PCC TL	PCC	XCSHA2	Image Processing and Vision Techniques	1	0	2	3	1	0	4	5
			XCSHD2	Data visualization and text analysis								
8	PCC-L	PCC	XCS407	IT Workshop Laboratory	0	0	1	1	0	0	2	2
9	PCC-L	PCC	XCS408	Operating Systems Laboratory	0	0	1	1	0	0	2	2
10	PCC-L	PCC	XCS409	Design & Analysis of Algorithms Laboratory	0	0	1	1	0	0	2	2
Total								22				30

Total Credits – 22 Total Hours- 30

SEMESTER V

S.No	Description	AICTE Abbr.	Course Code	Courses	Credits				Hours			
					L	T	P	Total	L	T	P	Total
1	PCC T	PCC	XCS501	Signals & Systems	3	0	0	3	3	0	0	3
2	PCC-T	PCC	XCS502	Formal Language & Automata Theory	3	0	0	3	3	0	0	3
3	PCC-T	PCC	XCS503	Database Management Systems	3	0	2	5	3	0	4	7
4	PCC-T	PCC	XCS504	Software Engineering	3	0	2	5	3	0	4	7
5	PCC-T	PCC	XCS505	IT Workshop	1	0	1	2	1	0	2	3
6	PEC 1	PEC	XCSE**	Elective-I	3	0	0	3	3	0	0	3
7	OE 1	OE	X**OE*	Open Elective – I	3	0	0	3	3	0	0	3
8	IPT-II	PROJ	XCS508	In-Plant Training – II	-	-	-	0	0	0	2	2
9	Minor Course	Minor Course	XCS509	Programming with Python (Minor Course)	1	0	0	0	-	-	-	-
Total								24				31

Total Credits – 24 Total Hours- 31

SEMESTER VI

S.No	Description	AICTE Abbr.	Course Code	Courses	Credits				Hours			
					L	T	P	Total	L	T	P	Total
1	PCC T	PCC	XCS601	Compiler Design	3	0	2	5	3	0	4	7
2	PCC-T	PCC	XCS602	Computer Networks	3	0	2	5	3	0	4	7
3	PEC	PEC	XCSE**	Elective- II	3	0	0	3	3	0	0	3
4	PEC	PEC	XCSE**	Elective- III	3	0	0	3	3	0	0	3
5	OE	OE	X**OE*	Open Elective –II	3	0	0	3	3	0	0	5
6	UMAN	UMAN	XUM606	Economics for Engineers	3	0	0	3	3	0	0	3
7	PCC-L	Minor Course	XCSM02	Web designing	1	0	0	0	1	0	0	1
Total								22				29

Total Credits – 22 Total Hours- 29

SEMESTER VII

S.No	Description	AICTE Abbr.	Course Code	Courses	Credits				Hours			
					L	T	P	Total	L	T	P	Total
1	PCC T	OE	XCSOE3	Open Elective –III	3	0	0	3	3	0	0	3
2	PCC-T	PEC	XCSE**	Elective-IV	3	0	0	3	3	0	0	3
3	PEC-III	PEC	XCSE**	Elective-V	3	0	0	3	3	0	0	3
4	OE III	BSC	XUM704	Biology	3	0	0	0	3	0	0	3
5	UMAN-V	MC	XUM705	Disaster Management	3	0	0	0	3	0	0	3
6	PCC-L	PROJ	XCS706	Project Phase– I	0	0	6	6	0	0	12	12
7	PCC-L	PROJ	XCS707	In plant Training – III	0	0	0	0	0	0	2	2
8	Proj I	Minor Course	XCSM03	R Programming	1	0	0	0	1	0	0	0
Total								15				29

SEMESTER VIII

Total Credits – 15 Total Hours- 29

S.No	Description	AICTE Abbr.	Course Code	Courses	Credits				Hours			
					L	T	P	Total	L	T	P	Total
1	MC	MC	XUM801	Cyber Security	3	0	0	3	3	0	0	3
2	OE IV	OE	XCSOE4	Open Elective -IV	3	0	0	3	3	0	0	3
3	OE V	OE	XCSOE5	Open Elective -V	3	0	0	3	3	0	0	3
4	Proj II	PROJ	XCS804	Project Work Phase – II	0	0	6	6	0	0	12	18
Total								15				27

Total Credits – 18 Total Hours- 27

LIST OF ELECTIVES

Semester VII PROFESSIONAL ELECTIVES GROUP – IV

S.No.	Description	AICTE Abbr.	Course Code	Courses	Credits				Hours			
					L	T	P	Total	L	T	P	Total
1	PEC-III	PEC	XCSE71	Information Retrieval	3	0	0	3	3	0	0	3
2	PEC-III	PEC	XCSE72	Cloud Computing	3	0	0	3	3	0	0	3
3	PEC-III	PEC	XCSE73	Fault Tolerant Computing	3	0	0	3	3	0	0	3
4	PEC-III	PEC	XCSE74	Computer Graphics	3	0	0	3	3	0	0	3
5	PEC-III	PEC	XCSE75	Advanced Operating System	3	0	0	3	3	0	0	3

Semester VII PROFESSIONAL ELECTIVES GROUP – V

S.No.	Description	AICTE Abbr.	Course Code	Courses	Credits				Hours			
					L	T	P	Total	L	T	P	Total
1	PEC-III	PEC	XCSE76	Virtualization	3	0	0	3	3	0	0	3
2	PEC-III	PEC	XCSE77	Machine Learning	3	0	0	3	3	0	0	3
3	PEC-III	PEC	XCSE78	Adhoc and Sensor Networks	3	0	0	3	3	0	0	3
4	PEC-III	PEC	XCSE79	Embedded Systems	3	0	0	3	3	0	0	3
5	PEC-III	PEC	XCSE7A	Parallel and Distributed algorithms	3	0	0	3	3	0	0	3