

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Periyar Nagar, Vallam Thanjavur - 613 403, Tamil Nadu, India
Phone: +91 - 4362 - 264600 Fax: +91- 4362 - 264660
Email: headcse@pmu.edu Web: www.pmu.edu



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

B. TECH-CSE(Hons)-Data Science

Regulation 2021

CURRICULUM STRUCTURE

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-I	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

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

SEMESTER III

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 (HSMC)	XUM307	Universal Human Values 2: Understanding Harmony and Gender	2	1	0	3	2	1	0	3
8	PCC-L	PCC	XCS308	Data Structure & Algorithms Laboratory	0	0	1	1	0	0	2	2
9	PCC-L	PCC	XCS309	Object Oriented Programming Laboratory	0	0	1	1	0	0	2	2
10	IPT-I	PROJ	XCS310	In-plant Training - I	-	-	-	1	-	-	-	-
				Total				25				26
SPECIALIZATION												
	PCC TL	PCC	XCSHD1	Introduction to Data Science	1	0	2	3	1	0	4	5

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-L	PCC	XCS407	IT Workshop Laboratory	0	0	1	1	0	0	2	2
8	PCC-L	PCC	XCS408	Operating Systems Laboratory	0	0	1	1	0	0	2	2
9	PCC-L	PCC	XCS409	Design and Analysis of Algorithms Laboratory	0	0	1	1	0	0	2	2
				Total				19				25
SPECIALIZATION												
	PCC TL	PCC	XCSHD2	Data Visualization and Text Analytics	1	0	2	3	1	0	4	5

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	Formal Language and Automata Theory	3	0	0	3	3	0	0	3
2	PCC-T	PCC	XCS502	Database Management Systems	3	0	0	3	3	0	0	3
3	PCC-T	PCC	XCS503	Software Engineering	3	0	0	3	3	0	0	3
4	PCC-T	PCC	XCS504	Computer Networks	3	1	0	4	3	1	0	4
5	PEC-I	PEC	XCSE*	Professional Elective Course	3	0	0	3	3	0	0	3
6	OE I	OE	XOE**	Open Elective Course	3	0	0	3	3	0	0	3
7	PCC-L	PCC	XCS507	Database Management Systems Laboratory	0	0	1	1	0	0	2	2
8	PCC-L	PCC	XCS508	Software Engineering Laboratory	0	0	1	1	0	0	2	2
9	IPT-II	PROJ	XCS509	In-Plant Training – II	-	-	-	1	-	-	-	-
				Total				22				23
	SPECIALIZATION											
	PCC TL	PCC	XCSHD3	Applied Artificial Intelligence	1	0	2	3	1	0	4	5

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	0	3	3	0	0	3
2	PCC-T	PCC	XCS602	Big Data Analytics	3	0	0	3	3	0	0	3
3	PEC-II	PEC	XCSE*	Professional Elective Course	3	0	0	3	3	0	0	3
4	OE II	OE	XOE**	Open Elective Course	3	0	0	3	3	0	0	3
5	ELS	HSMC	XGS605	Professional Skills	1	0	2	3	1	0	4	5
6	PCC-T	PCC	XCS606	Cyber Security	3	0	0	3	3	0	0	3
7	PCC-L	PCC	XCS607	Compiler Design Lab	0	0	1	1	0	0	2	2
8	PCC-L	PCC	XCS608	Big Data Analytics Lab	0	0	1	1	0	0	2	2
				Total				20				24
	SPECIALIZATION											
	PCC TL	PCC	XCSHD4	Deep Learning	1	0	2	3	1	0	4	5
	PCC TL	PCC	XCSHD5	Internet of Things	1	0	2	3	1	0	4	5

SEMESTER VII

S.No.	Description	AICTE Abbr.	Course Code	Courses	Credits				Hours			
					L	T	P	Total	L	T	P	Total
1	PCC T	PCC	XCS701	Web Technology	3	0	0	3	3	0	0	3
2	PCC-T	PCC	XCS702	Machine Learning	3	0	0	3	3	0	0	3
3	PEC-III	PEC	XCSE*	Professional Elective Course	3	0	0	3	3	0	0	3
4	OE III	OE	XOE**	Open Elective Course	3	0	0	3	3	0	0	3
5	UMAN-V	MC	XUM008	Environmental science	0	0	0	0	3	0	0	3
6	PCC-L	PCC	XCS706	Web Technology Lab	0	0	1	1	0	0	2	2
7	PCC-L	PCC	XCS707	Machine Learning Lab	0	0	1	1	0	0	2	2
8	PROJ I	PROJ	XCS708	Project Work (Phase-I)	0	0	2	2	0	0	4	4
9	IPT III	PROJ	XCS709	In-plant Training - III	-	-	-	2	-	-	-	-
				Total				18				23
	SPECIALIZATION											
	PROJ	PROJ	XCSHD6	Mini Project	0	0	5	5	0	0	10	10

SEMESTER VIII

S.No.	Description	AICTE Abbr.	Course Code	Courses	Credits				Hours			
					L	T	P	Total	L	T	P	Total
1	PEC-IV	PEC	XCSE*	Professional Elective Course	3	0	0	3	3	0	0	3
2	OE IV	OE	XOE**	Open Elective Course	3	0	0	3	3	0	0	3
3	OE V	OE	XOE**	Open Elective Course	3	0	0	3	3	0	0	3
4	PROJ II	PROJ	XCS804	Project Work (Phase-II)	0	0	9	9	0	0	18	18
				Total				18				27

* Professional Elective

** Open Elective

Grant Total Credits : 183
