

# DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

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**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 (AI and ML)

Regulation 2023

### 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	PPS-T	ESC	XCS102	Programming for Problem Solving using Python	3	0	0	3	3	0	0	3
3	C	BSC	XAC103	Applied Chemistry for Engineers	3	1	0	4	3	1	0	4
4	EDC	ESC	XWP104	Workshop Practices	1	0	2	3	1	0	4	5
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	PPS-L	ESC	XCP107	Programming for Problem Solving using Python 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
				<b>Total</b>				<b>19</b>				<b>28</b>

#### 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	XBE202	Electrical and Electronics Engineering Systems	3	1	0	4	3	1	0	4
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	PPS-T	ESC	XCS205	Basics of Electronic Devices and Circuits.	3	0	0	3	3	0	0	3
6	PCC T	PCC	XEG206	Engineering Graphics and Design	1	0	2	3	1	0	4	5
7	HS	HSMC	XBE207	Electrical and Electronics Engineering Systems Laboratory	0	0	1	1	0	0	2	2
8	PPS-L	ESC	XAP208	Applied Physics Laboratory	0	0	1	1	0	0	2	2
				<b>Total</b>				<b>22</b>				<b>26</b>

### 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	Data Structures	3	0	0	3	3	0	0	3
3.	PCC-T	PCC	XCS303	Object Oriented Programming	3	0	0	3	3	0	0	3
4.	PCC-T	PCC	XCS304	Foundation of AI	3	0	0	3	3	0	0	3
5.	PCC-T	PCC	XCS305	Computer Organization and Architecture	3	0	0	3	3	0	0	3
6.	MNGT-I	HSMC	XUM306	Entrepreneurship Development	2	0	0	2	2	0	0	2
7.	UMAN-II	MC (HSMC)	XUM307	Universal Human Values 2: Understanding Harmony	0	0	0	0	3	0	0	3
8	PCC-L	PCC	XCS308	Data Structures 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	-	-	-	-
				<b>Total</b>				<b>20</b>				<b>24</b>

### 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	Design and Analysis of Algorithms	3	0	0	3	3	0	0	3
3.	PCC T	PCC	XCS403	Operating System	3	0	0	3	3	0	0	3
4.	PCC T	PCC	XCS404	Database Management Systems	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-T	PCC	XCS407	Artificial Intelligence	3	0	0	3	3	0	0	3
7	PCC-L	PCC	XCS408	Design and Analysis of Algorithms Laboratory	0	0	1	1	0	0	2	2
8	PCC-L	PCC	XCS409	Database Management Systems Laboratory	0	0	1	1	0	0	2	2
				<b>Total</b>				<b>20</b>				<b>25</b>

### SEMESTER V

S.No.	Description	AICTE Abbr.	Course Code	Courses	Credits				Hours			
					L	T	P	Tot	L	T	P	Tot
1	PCC T	PCC	XCS501	Web Technologies	3	1	0	4	3	1	0	4
2	PCC T	PCC	XCS502	Machine Learning	3	0	0	3	3	0	0	3
3	PCC T	PCC	XCS503	Data Visualization and Representation	3	0	0	3	3	0	0	3
4	PCC T	PCC	XCS504	Natural Language Processing	3	0	0	3	3	0	0	3
5	PEC-I	PEC	XCSE**	Professional Elective - I	3	0	0	3	3	0	0	3
6	OE I	OE	XOE*	Open Elective -I	3	0	0	3	3	0	0	3
7	PC-L	PC	XCS507	Machine Learning Laboratory	0	0	1	1	0	0	2	2
8	PC-L	PC	XCS508	Data Visualization and Natural Language Processing Laboratory	0	0	1	1	0	0	2	2
9	IPT-II	PROJ	XCS509	In-plant Training – II	-	-	-	1	-	-	-	-
				<b>Total</b>				<b>22</b>				<b>23</b>

### SEMESTER VI

S.No.	Description	AICTE Abbr.	Course Code	Courses	Credits				Hours			
					L	T	P	Tot	L	T	P	Tot
1	PCC T	PCC	XCS601	Deep Learning	3	1	0	4	3	1	0	4
2	PCC T	PCC	XCS602	Introduction to Robotics	3	0	0	3	3	0	0	3
3	PEC-II	PEC	XCSE**	Professional Elective - II	3	0	0	3	3	0	0	3
4	OE II	OE	XOE*	Open Elective -II	3	0	0	3	3	0	0	3
5	ELS	HSMC	XCS605	English Language Skills	1	0	2	3	1	0	4	5
6	PCC	PCC	XCS606	Cyber Security	3	0	0	3	3	0	0	3
7	PC-L	PC	XCS607	Deep Learning Laboratory	0	0	1	1	0	0	2	2
8	PC-L	PC	XCS608	Robotics Laboratory	0	0	1	1	0	0	2	2
				<b>Total</b>				<b>21</b>				<b>25</b>

### SEMESTER VII

S.No.	Description	AICTE Abbr.	Course Code	Courses	Credits				Hours			
					L	T	P	Tot	L	T	P	Tot
1	PCC T	PCC	XCS701	Computer Vision	3	1	0	4	3	1	0	4
2	PCC T	PCC	XCS702	Internet of Things	3	1	0	4	3	1	0	4
3	PEC-III	PEC	XCSE**	Professional Elective - III	3	1	0	4	3	1	0	4
4	OE III	OE	XCSOE*	Open Elective - III	3	0	0	3	3	0	0	3
5	UMAN-V	MC	XCS705	Environmental studies	0	0	0	0	3	0	0	3
6	PCC-L	PCC	XCS706	Computer Vision Laboratory	0	0	1	1	0	0	2	2
7	PCC-L	PCC	XCS707	Internet of Things Laboratory	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	-	-	-	-
				<b>Total</b>				<b>21</b>				<b>26</b>

### 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
				<b>Total</b>				<b>18</b>				<b>27</b>

\* Professional Elective

\*\* Open Elective

<b>Grant Total Credits: 163</b>
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