

## List of specialization offered by CSE department

<b>Specialization-1 : Data Analytics (<a href="#">Course Description</a>)</b>								
S. No.	Course Code	Sem	Title of Course	Contact Hours				Credits
				L	T	P	Total	
1.	18B11CI916	III	Statistical Methods and Data Analysis	3	0	0	3	3
2.	18B17CI976	III	Statistical Methods and Data Analysis Lab	0	0	2	2	1
3.	18B11CI918	IV	Machine Learning	3	0	0	3	3
4.	18B17CI996	IV	Machine Learning Lab	0	0	2	2	1
5.	18B11CI917	V	Data Analytics Systems and Algorithms	3	0	0	3	3
6.	18B17CI977	V	Data Analytics Lab	0	0	2	2	1
7.	18B11CI919	VI	Information Retrieval	3	0	0	3	3
8.	18B17CI979	VI	Information Retrieval Lab	0	0	2	2	1
9.	18B17CI980	VII	Big Data Processing Lab	0	0	2	2	1
10.	SE	VII	Elective	3	0	0	3	3
<b>Total</b>							<b>25</b>	<b>20</b>

<b>Specialization-2 : Artificial Intelligence and Machine Learning (<a href="#">Course Description</a>)</b>								
S. No.	Course Code	Sem	Title of Course	Contact Hours				Credits
				L	T	P	Total	
1.	18B11CI916	III	Statistical Methods and Data Analysis	3	0	0	3	3
2.	18B17CI976	III	Statistical Methods and Data Analysis Lab	0	0	2	2	1
3.	18B11CI918	IV	Machine Learning	3	0	0	3	3
4.	18B17CI996	IV	Machine Learning Lab	0	0	2	2	1
5.	18B11CI932	V	Artificial Neural Networks	3	0	0	3	3
6.	18B11CI933	VI	Deep Learning	3	0	0	3	3
7.	18B11CI934	VI	Soft Intelligence	3	0	0	3	3
8.	SE	VII	Elective	3	0	0	3	3
<b>Total</b>							<b>22</b>	<b>20</b>

<b>Specialization-3 : Internet of RoboticThings (<a href="#">Course Description</a>)</b>								
<b>Offered by ECE dept. with CSE dept. (For ECE and CSE students)</b>								
S. No.	Course Code	Sem	Title of Course	Contact Hours				Credits
				L	T	P	Total	
1	18B11CI916	III	Statistical Methods and Data Analysis	3	0	0	3	3
2	18B17CI976	III	Statistical Methods and Data Analysis Lab	0	0	2	2	1
3	18B11EC911	IV	Sensors, Actuators & Signal Processing	3	0	0	3	3
4	/18B11EC919	IV	Measurement & Instrumentation (for CSE) Digital Control System (for ECE)	3	0	0	3	3
5	18B11CI918	VI	Machine Learning	3	0	0	3	3
6	18B17CI996	VI	Machine Learning Lab	0	0	2	2	Audit
7	18B11EC913	VII / VIII	Robotics & Machine Vision	3	0	0	3	3
8	18B17EC973	VII / VIII	Robotics Programming Lab	0	0	2	2	1
9	18B17CI997	VII / VIII	Internet of Things Lab	0	0	2	2	1
10	18B11CI937	VII / VIII	Internet of Things Technology and Applications	2	0	0	2	2
<b>Total</b>							<b>22</b>	<b>20</b>

**Specialization-4: Digital Marketing (Offered by HSS) (Course Description)**

S. No.	Course Code	Sem	Course	Contact Hours				Credits
				L	T	P	Total	
1.	18B11HS925	III	Consumer behaviour	3	0	0	3	3
2.	18B11HS926	IV	Ethics, IPR and Cyber laws	3	0	0	3	3
3.	18B11HS927	V	Digital Marketing research	3	0	0	3	3
4.	18B11HS928	VI	Introduction to Social Media Marketing	3	0	0	3	3
5.	21B11HS975	VII	Introduction to E-commerce	3	0	0	3	3
6.	18B11HS930	VIII	Digital Marketing Analytics	3	0	0	3	3
7.	18B17HS973	VIII	Minor Project	0	0	4	4	2
<b>Total</b>							<b>22</b>	<b>20</b>

**Specialization-5: Human Resource Management (Offered by HSS)**

S. No.	Sem	Course	Contact Hours				Credits	
			L	T	P	Total		
1.	III	Human Resource Management	3	0	0	3	3	
2.	IV	Team Building and Leadership	3	0	0	3	3	
3.	V	Performance Management	3	0	0	3	3	
4.	VI	Training & Development	3	0	0	3	3	
5.	VII	Organizational Change	3	0	0	3	3	
6.	VIII	Negotiation & Counselling	3	0	0	3	3	
7.	VIII	Minor Project	0	0	4	4	2	
<b>Total</b>							<b>22</b>	<b>20</b>

**Specialization-6 : Cloud Computing**

S. No.	Course Code	Title of Course	Contact Hours				Credits	
			L	T	P	Total		
1	18B11CI911	Grid Computing	3	0	0	3	3	
2	18B17CI971	Grid Computing Lab	0	0	2	2	1	
3	18B11CI912	Distributed Systems and Cloud Computing	3	0	0	3	3	
4	18B17CI972	Distributed Systems and Cloud Computing Lab	0	0	2	2	1	
5	18B11CI913	Cloud Computing Applications	3	0	0	3	3	
6	18B17CI973	VMware vSphere Lab	0	0	2	2	1	
7	18B11CI914	Cloud Networking	3	0	0	3	3	
8	18B17CI974	Virtualization Lab	0	0	2	2	1	
9	18B11CI915	Cloud Security	3	0	0	3	3	
10	18B17CI975	Cloud Security Lab	0	0	2	2	1	
<b>Total</b>							<b>25</b>	<b>20</b>

**Specialization-7 : System and Network Administration**

S. No.	Course Code	Title of Course	Contact Hours				Credits	
			L	T	P	Total		
1	18B11CI921	Networks Architecture	3	0	0	3	3	
2	18B17CI981	Network Architecture Lab	0	0	2	2	1	
3	18B17CI982	Network Hardware Lab	0	0	2	2	1	
4	18B11CI923	System & Network Communication	3	0	0	3	3	
5	18B17CI983	SNC Lab	0	0	2	2	1	
6	18B11CI924	OS Administration	3	0	0	3	3	
7	18B17CI984	OS Administration Lab	0	0	2	2	1	
8	18B11CI925	Wireless Networks	3	0	0	3	3	
9	18B17CI985	Wireless Networks Lab	0	0	2	2	1	
10	18B11CI922	Mobile Networks	3	0	0	3	3	
<b>Total</b>							<b>25</b>	<b>20</b>

## Department of Computer Science & Engineering

### Micro-Specializations

For Batches admitted in 2023-24 onwards							
S. No.	Name of Micro Specialization	Head Course (S)			Elective Courses		
		Course Name	Semester	Credit	Course Name	Semester	Credit
1	Software Engineering	Software Engineering	IV	3	Agile and Secure Software Engineering	V	3
					Software Testing	VI	3
					Software Quality Management	VII	3
					Design Pattern	VIII	3
2	Artificial Intelligence and Machine Learning	Machine Learning	IV	3	Artificial Intelligence	V	3
					Natural Language Processing	VI	3
		Machine Learning Lab	IV	1	Deep Learning	VII	3
					Reinforcement Learning	VIII	3
3	Artificial Intelligence and Data Science	Machine Learning	IV	3	Artificial Intelligence	V	3
					Statistical Methods and Data Analysis	VI	3
		Machine Learning Lab	IV	1	Deep Learning	VII	3
					Exploratory Data Analytics	VIII	3

For Batches admitted in 2022-23							
S. No.	Name of Micro Specialization	Head Course(s)			Elective Courses		
		Course Name	Semester	Credit	Course Name	Semester	Credit
1	Artificial Intelligence and Machine Learning	Artificial Intelligence & Application	IV	3	Machine Learning	V	3
					Natural Language Processing	VI	3
		AI & Application Lab	IV	1	Deep Learning	VII	3
					Reinforcement Learning	VIII	3
2	Artificial Intelligence and Data Science	Artificial Intelligence & Application	IV	3	Machine Learning	V	3
					Statistical Methods and Data Analysis	VI	3
		AI & Application Lab	IV	1	Deep Learning	VII	3
					Data Analytics	VIII	3