

Department of Computer Science & Engineering

Micro-Specializations

S. No.	Micro specialization	Head Course(s)			Elective Courses		
		Course Name	Semester	Credits	Course Name	Semester	Credits
1	VLSI Design	Digital Circuit Design	IV	4	Digital Hardware Design	V	3
					FPGA Based System Design	VI	3
		Digital Circuit Design Lab	IV	1	IC Technology	VII	3
					VLSI Verification and Testing	VIII	3
2	Advance Communication Technologies [5G]	Analog and Digital Communication	IV	4	Emerging Technologies- Beyond 5 G	V	3
					Machine Learning for Communication Systems	VI	3
		Analog and Digital Communication Lab	IV	1	Green Communication Technologies	VII	3
					Data Analytics for 5 G	VIII	3
3	IOT with Machine Learning	Measurement & Instrumentation	III	3	Internet of Things	V	3
					Machine Learning	VI	3
		Measurement & Instrumentation Lab	III	1	Artificial Intelligence of Things	VII	3
					Industrial IoT	VIII	3

S. No.	Name of Micro Specialization	Head Course (s)			Elective Courses		
		Course Name	Semester	Credit	Course Name	Semester	Credits
1	Intelligent Manufacturing	Manufacturing Technology-2 and Manufacturing Technology Lab-2	IV	3+1 = 4	Advanced Manufacturing Processes	V	3
					Advanced Engineering Materials	VI	3
					Smart Manufacturing	VII	3
					Micro Manufacturing	VIII	3
2	3D Printing	Manufacturing Technology-1 and Manufacturing Technology Lab-1	III	3+1 = 4	Additive Manufacturing	V	3
					Advanced Engineering Materials	VI	3
					CAD for Additive Manufacturing	VII	3
					Industrial Applications of Additive Manufacturing	VIII	3

3	Renewable Energy	Basic Thermodynamics and Basic Thermodynamics Lab	III	3+1 = 4	Power Plant Engineering	V	3
					Unconventional Energy Resources	VI	3
					Energy Management and Audit	VII	3
					Hybrid Energy Applications	VIII	3

Dept. Of CSE

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

