About the Program

The Executive M.Tech. in Artificial Intelligence & Machine Learning is designed for working professionals seeking to upgrade their knowledge and skills in advanced AI technologies while continuing their professional careers. The program provides a strong foundation in core areas such as machine learning, deep learning, data structures, and modern database systems, along with exposure to emerging domains including Generative AI, Large Language Models (LLMs), Computer Vision, and Agentic AI.

The curriculum blends theoretical rigor with hands-on practice through lab components, electives, and industry-relevant project work. It is structured to enable participants to design, develop, and deploy intelligent systems for real-world applications across domains such as healthcare, finance, manufacturing, and smart systems.

Program Educational Objectives

PEO-1	Build a strong foundation in mathematical, computational, and algorithmic principles underlying AI and machine learning.
PEO-2	Develop advanced technical skills in machine learning, deep learning, generative AI, and data-driven system design.
PEO-3	Design and implement scalable AI solutions for complex real-world problems across diverse domains.
PEO-4	Apply modern tools, frameworks, and platforms for data processing, model development, and deployment.
PEO-5	Demonstrate research aptitude, innovation, and critical thinking through project work and dissertation.
PEO-6	Exhibit leadership and teamwork skills to manage AI-based projects in multidisciplinary environments.

Program Outcomes

PO-1	Apply knowledge of mathematics, computing, and AI techniques to solve complex engineering problems.
PO-2	Analyze and design efficient algorithms and models for data-driven decision-making.
PO-3	Develop, evaluate, and deploy AI/ML systems with consideration of scalability and performance.
PO 4	Utilize modern AI tools and technologies, including deep learning frameworks and large-scale data platforms.
PO-5	Communicate technical concepts effectively to both technical and non-technical stakeholders.
PO-6	Demonstrate project management and collaborative skills in professional environments.

CURRICULUM
Executive M.Tech. in Artificial Intelligence & Machine Learning

Semesters	Subject Code	Courses Name	Category	L	T	P	Credits
Semester-1	CS33111CS	Programming for AI & ML	DC	2	0	2	3
	CS33112CS	Mathematical Foundation for AI and Machine Learning	DC	3	0	0	3
	CS33113CS	Advanced Data Structures & Algorithms	DC	2	0	2	3
	CS3312XCS	Elective-1	DE	3	0	0	3
Semester-2	CS33211CS	Data Engineering and Analytics	DC	2	0	2	3
	CS33212CS	Deep Learning Techniques	DC	2	0	2	3
	CS33213CS	Generative AI and LLMs	DC	2	0	2	3
	CS3322XCS	Elective-2	DE	2	0	2	3
Semester-3	CS3332XCS	Elective-3	DE	3	0	0	3
	CS3332XCS	Elective-4	DE	3	0	0	3
	CS33351CS	Project work / Dissertation-I	PW	-	-	-	8
Semester-4	CS33451CS	Project Work / Dissertation-II	PW	-	-	-	18
			Total Credits				**56**

Tentative List of Elective Subjects may be updated as and when required	
Elective-1	**Elective-2**
Applied AI and Machine Learning (CS33121CS)	Advance Computer Vision (CS33221CS)
Explainable AI (CS33122CS)	Reinforcement Learning (CS33222CS)
Optimization Techniques (CS33123CS)	Ethical and Responsible AI (CS33223CS)

Tentative List of Elective Subjects may be updated as and when required	
Elective-3	**Elective-4**
Federated Learning (CS33321CS)	Agentic AI & Multi-Agent Systems (CS33323CS)
Graph-based learning (CS33322CS)	Prompt Engineering and Context Engineering (CS33324CS)