VIT®
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

School of Computer Science and Engineering

CURRICULUM AND SYLLABI

(2025-2026)

M. Tech. (ArtificialIntelligence and Machine Learning)

VIT®
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

VISION STATEMENT OF VELLORE INSTITUTE OF TECHNOLOGY

Transforming life through excellence in education and research.

MISSION STATEMENT OF VELLORE INSTITUTE OF TECHNOLOGY

- **World class Education**: Excellence in education, grounded in ethics and critical thinking, for improvement of life.
- **Cutting edge Research**: An innovation ecosystem to extend knowledge and solve critical problems.
- **Impactful People**: Happy, accountable, caring and effective workforce and students.
- **Rewarding Co-creations**: Active collaboration with national & international industries & universities for productivity and economic development.
- **Service to Society**: Service to the region and world through knowledge and compassion.

VISION STATEMENT OF THE SCHOOL OF COMPUTER SCIENCE AND ENGINEERING

- To be a world-renowned centre of education, research and service in computing and allied domains.

MISSION STATEMENT OF THE SCHOOL OF COMPUTER SCIENCE AND ENGINEERING

- To offer computing education programs with the goal that the students become technically competent and develop lifelong learning skill.
- To undertake path-breaking research that creates new computing technologies and solutions for industry and society at large.
- To foster vibrant outreach programs for industry, research organizations, academia and society.

VIT®
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

M. Tech. (ArtificialIntelligence and Machine Learning)

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

PEO 1: Graduates will acquire a core competency in Artificial Intelligence and Machine Learning theories, algorithms, and technologies, enabling them to design and deploy intelligent systems.

PEO 2: Graduates will pursue career as successful engineers, researchers or entrepreneurs by providing sustainable solutions across various industry domains.

PEO 3: Graduates will develop the ability to work in team adapting ethical behaviour and effective communication to succeed in their professional career.

PEO 4: Graduates will adopt a holistic approach to address the challenges in evolving technology trends.

VIT
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

M. Tech. (ArtificialIntelligence and Machine Learning)

PROGRAMME OUTCOMES (POs)

PO1: Independently carry out research/investigation and development work to solve practical problems

PO2: Write and present a substantial technical report/document

PO3: Demonstrate a degree of mastery in applying the concepts of Artificial Intelligence and Machine Learning.

PO4: Analyse the complex engineering problems and design sustainable solutions

PO5: Communicate effectively at the work place and use engineering tools with ethical considerations.

PO6: Recognize the need for independent and life-long learning in the broadest context of technological change.

VIT®
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

M. Tech. Artificial Intelligence and Machine Learning (Knowledge Partner -LTIMindtree) CURRICULUM – (2025)

CREDIT STRUCTURE

Category	Credits
University Core	**39**
Professional Core	**24**
Professional Elective	**14**
Open Elective	**03**
Non-Credit Courses	**04**
Total Credits	**80**

University Core Courses - 39

S. No.	Course Code	Course Title	L	T	P	C
1	MAENG501	Technical Report Writing	1	0	4	3
2	MASTS501	Competitive Coding I	3	0	0	3
3	MASTS502	Competitive Coding II	3	0	0	3
4	MASET697	Project Work	0	0	0	10
5	MACSE698	Internship I/ Dissertation I	0	0	0	10
6	MACSE699	Internship II/ Dissertation II	0	0	0	10

Non-Credit Courses - 04

S. No.	Course Code	Course Title	L	T	P	C
1	MAMAT500	Applied Statistics	3	1	0	4

Professional Core Courses - 24

S. No.	Course Code	Course Title	L	T	P	C
1	MACSE501	Data Structures and Algorithm Analysis	3	0	2	4
2	MACSE502	Programming for Data Science	3	0	2	4
3	MACSE503	Data Engineering	3	0	2	4
4	MACSE504	Machine Learning	3	0	2	4
5	MACSE505	Deep Learning and Gen AI	3	0	2	4
6	MACSE506	Distributed Data Processing	3	0	2	4

Professional Elective Courses - 14

S. No.	Course Code	Course Title	L	T	P	C
1	MACSE601	Application Architecture and Deployment	3	0	2	4
2	MACSE602	Security Essentials in Applied AI	3	0	2	4
3	MACSE603	Visual Analytics Lab	0	0	4	2
4	MACSE604	Edge Intelligence	3	0	2	4
5	MACSE605	Large Language Models	3	1	0	4
6	MACSE606	Computer Vision	3	1	0	4
7	MACSE607	Natural Language Processing	3	1	0	4

Open Elective Courses - 03

Engineering | Sciences | Humanities | Social Sciences | Liberal Arts | Economics | Finance | Management