

माधव प्रौद्योगिकी एवं विज्ञान संस्थान, ग्वालियर (म.प्र.), भारत MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR (M.P.), INDIA

Deemed University
(Declared under Distinct Category by Ministry of Education, Government of India)
NAAC ACCREDITED WITH A++ GRADE

Centre for Artificial Intelligence

B. Tech. in Artificial Intelligence and Machine Learning (AI&ML) Admitted Batch -2025

COURSE STRUCTURE

I SEMESTER	II SEMESTER	III SEMESTER	IV SEMESTER	V SEMESTER	VI SEMESTER	VII SEMESTER	VIII SEMESTER
Foundations of Machine Learning	Modern Computer Architectures	Probability & Random process	Calculus & Optimization techniques	Optimization Techniques in Machine Learning	Deep Learning	Departmental Elective (DE-3)	Departmental Elective (DE-5)
Internet & Web Technologies	Object Oriented Programming	Design and Analysis of Algorithms	Theory of Computation	Cloud Computing & Big Data	Image Processing & Computer Vision	Departmental Elective (DE-4)	Open Category Course (OC-3)
Digital Logic Design	Discrete Structures	Computer Networks	Network & Web Security	Soft Computing Techniques	Departmental Elective (DE-2)	Open Category Course (OC-2)	/Industry Internship /Research Internship
Problem Solving & Programming	Data Structures	Database Management System	Machine Learning	Departmental Elective (DE-1)	Open Category Course (OC-1)	Specialization Course (SPC-3)	Innovation & Start-up Professional Development
Linear Algebra	Basic Electrical & Electronics Engineering	Operating System	Software Engineering	Specialization Course (SPC-1)	Specialization Course (SPC-2)	Creative Problem Solving	Honours or Minor Degree (Optional)
Problem Solving & Programming Lab	Data Structures Lab	Design & Analysis and Algorithm Lab	Machine Learning Lab	Optimization Techniques in Machine Learning Lab	Deep Learning Lab	Honours or Minor Degree (Optional)	Summer Internship of Six months
Internet & Web Technologies Lab	Object Oriented Programming Lab	Problem Solving through Python Programming	Java programming Lab	Cloud Computing & Big Data Lab	Image Processing & Computer Vision Lab	Specialization Course (SPC-2)	
Novel Engaging Course	Basic Electrical & Electronics Engineering Lab	Novel Engaging Course	Competitive Programming lab	Semester Proficiency	Capstone Project		
Language Lab	Novel Engaging Course	Macro Project-I	Novel Engaging Course	Cornerstone Project	Disaster Management		
Micro Project-I	Micro Project-II	Cyber Security	Macro Project-II	Honours or Minor Degree (Optional)	Honours or Minor Degree (Optional)		
Universal Human Values & Professional Ethics (UHVPE)	Sustainability & Environmental Science	Skill Internship Program-II	Skill Internship Program-III	Supply Chain Management	Semester Proficiency		
Mandatory Workshop on ICTK	Mandatory Workshop on IKS & Career Planning	Mandatory Workshop on Internet of Things (IoT)	Mandatory Workshop on Computer Vision & Life Skill	Mandatory Workshop on Blockchain	Mandatory Workshop on IPR		
Skill Internship Program-I	Semester Proficiency	Semester Proficiency	Honours or Minor Degree (Optional)				

	Departmental Core Courses
	Basic Science Courses
	Engineering Science Courses
	Mandatory Audit Courses



MITS

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Centre for Artificial Intelligence
Departmental Elective Courses



B. Tech. in (Artificial Intelligence and Machine Learning)	
<i>High Performance Computing</i>	<i>Software Conceptual Design</i>
<i>Generative AI</i>	<i>Responsible and Safe AI System</i>
<i>Pattern Recognition</i>	<i>Deep Learning for Computer Vision</i>
<i>Ethics in Engineering Practice</i>	<i>Cyber Security and Privacy</i>
<i>Introduction to Quantum Computing</i>	<i>Applied Accelerated AI</i>
<i>Cryptography and Network Security</i>	<i>Big Data Computing</i>
<i>Augmented and Virtual Reality</i>	<i>Multi-Core Computer Architecture</i>
<i>Distributed Optimization and Machine Learning</i>	<i>Python for Data Science</i>
<i>Data Mining & Pattern Warehousing</i>	<i>Computational Complexity</i>
<i>Embedded Systems</i>	<i>Artificial Intelligence for Economics</i>
<i>Advanced Computer Architecture</i>	<i>Reinforcement Learning</i>
<i>Natural Language Processing</i>	<i>Ethics in Engineering Practice</i>
<i>Introduction to Internet of Things</i>	<i>Big Data Computing</i>
Open Category Courses	
<i>Ethics and Technology</i>	<i>Human-Computer Interaction (HCI)</i>
<i>Design Thinking and Innovation</i>	<i>Linguistics and Natural Language Processing</i>
<i>Software Testing</i>	<i>Entrepreneurship and Innovation</i>
<i>Complex Systems and Network Theory</i>	<i>Creative Writing and Communication</i>
<i>Intellectual Property Rights and Cyber Law</i>	<i>Game Theory and Strategic Decision Making</i>