

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

DEPARTMENT OF ENGINEERING MATHEMATICS & COMPUTING (MAC)

COURSE STRUCTURE

(Tentative)

I SEMESTER	II SEMESTER	III SEMESTER	IV SEMESTER	V SEMESTER	VI SEMESTER	VII SEMESTER	VIII SEMESTER
Introduction to Computing	Object Oriented Programming & Methodology	Simulation Modeling and Analysis	Data Science	Computer Networks and protocols	Marketing Research & Marketing Management	Departmental Elective (DE-3)	Departmental Elective* (DE-5)
Differential Equations	Data Structures	Operating Systems	Database Management System	Theory of Computation	Compiler Design	Departmental Elective* (DE-4)	Open Category Course* (OC-3)
Advanced Calculus	Numerical Techniques	Discrete Mathematical Structures	Software Engineering	Artificial Intelligence & Machine Learning	Departmental Elective* (DE-2)	Open Category Course (OC-2)	Industry Internship/ Research Internship/ Innovation & Start-up
Digital Logic Design	Computer Organization & Architecture	Design & Analysis of Algorithms	Transform and Vector Calculus	Departmental Elective* (DE-1)	Open Category Course (OC-1)	Specialization Course (SPC-3)	Professional Development
Computer Programming	Linear Algebra	Stochastic Process & Financing Mathematics	Number theory and Cryptography	Specialization Course (SPC-1)	Specialization Course (SPC-2)	Creative Problem Solving	Honours or Minor Degree (Optional)
Computer Programming Lab	Lab of Data Structures	Simulation Lab	Data Science Lab	Specialization Course Lab	Compiler Design Lab	Honours or Minor Degree (Optional)	
Computing Lab for Data Analysis	Object Oriented Programming & Methodology Lab	Design & Analysis of Algorithms Lab	Database Management System Lab	Artificial Intelligence and Machine Learning Lab	Specialization Course Lab		
Novel Engaging Course	Numerical Computation using MATLAB	Problem Solving through Python Programming	Competitive Programming	Cornerstone Project	Capstone Project		
Language Lab	Novel Engaging Course	Novel Engaging Course	Novel Engaging Course	Supply Chain Management	Disaster Management		
Micro Project-I	Micro Project-II	Macro Project-I	Macro Project-II	Honours or Minor Degree (Optional)	Honours or Minor Degree (Optional)		
Universal Human Values & Professional Ethics (UHVPE)	Sustainability & Environmental Science	Cyber Security	Project Management, Economics & Financing				
	Soft Skill Internship		Skill Internship Program				

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

Note:

1. Mandatory Workshops in each semester at Department Level (Duration: Two Days)

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<i>Departmental Elective Courses</i>	
Distributive Computing	Block chain and its application
Reliability	Cloud Computing
	GPU Architectures and Programming
	Introduction to internet of things
<i>Open Category Courses</i>	
Optimization Techniques	Number Theory and Cryptography
Transform Calculus	Discrete Structure
Computational Fluid Dynamics	
<i>Specialization Courses Tracks</i>	
Specialization in Data Science	Specialization in Optimization
Descriptive Statistics with R programming	Optimization Techniques
Data Mining & Warehouse	Soft Computing
Data Analytics	Nonlinear optimization Techniques
Machine Learning	Nonlinear optimization Algorithms