

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 CIVIL ENGINEERING (CED)

COURSE STRUCTURE

(Tentative)

I SEMESTER	II SEMESTER	III SEMESTER	IV SEMESTER	V SEMESTER	VI SEMESTER	VII SEMESTER	VIII SEMESTER
Civil Engineering Materials & Construction	Surveying	Transform & Vector Calculus	Transportation Engineering	Waste Water Engineering	Water Resources Engineering	Departmental Elective (DE-3)	Departmental Elective* (DE-5)
Computer Programming	Strength of Material	Data Structures	Water Supply Engineering	Structural Design & Drawing (Steel)	Artificial Intelligence & Machine Learning	Departmental Elective* (DE-4)	Open Category Course* (OC-3)
Engineering Mechanics	Concrete Technology	Fluid Mechanics – II	Estimating Costing & Contracting	Data Science	Departmental Elective* (DE-2)	Open Category Course (OC-2)	Industry Internship/ Research Internship/ Innovation & Start-up
Building Design & Drawing	Fluid Mechanics – I	Geotechnical Engineering	Advanced Structural Analysis	Departmental Elective* (DE-1)	Open Category Course (OC-1)	Specialization Course (SPC-3)	Professional Development
Basic Electrical & Electronics Engineering	Calculus & Matrices	Structural Analysis	Structural Design & Drawing (RCC)	Specialization Course (SPC-1)	Specialization Course (SPC-2)	Creative Problem Solving	Honours or Minor Degree (Optional)
Computer Programming Lab	Survey Practice	Fluid Mechanics Lab	Transportation Engineering Lab	Material Testing Lab - II	Software Lab	Honours or Minor Degree (Optional)	
Electrical & Electronics Engineering Lab	Problem Solving through Python Programming	Geotechnical Engineering Lab	Water Supply Engineering Lab	Data Science Lab	Artificial Intelligence & Machine Learning Lab		
Novel Engaging Course	Engineering Physics Lab	Novel Engaging Course	Material Testing Lab – I	Cornerstone Project	Capstone Project		
Engineering Chemistry Lab	Novel Engaging Course	Macro Project-I	Novel Engaging Course	Supply Chain Management	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: Evaluation in IV Semester	Project Management, Economics & Financing				
Skill Internship Program (Soft Skill): Evaluation in II Semester	Language Lab		Honours or Minor Degree (Optional)				

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

Note:

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

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<i>Departmental Elective Courses</i>		
<i>Hydraulic Structure</i>		
<i>Foundation Engineering</i>		
<i>Railway Engineering</i>		
<i>Airport Planning & Design</i>		
<i>Traffic Engineering</i>		
<i>Introduction to Finite Element Method</i>		
<i>Element of Structural Dynamics</i>		
<i>Introduction to Intelligent Transport System</i>		
<i>Bridge Engineering</i>		
<i>Geosynthetics & Reinforced Soil</i>		
<i>Engineering Geology</i>		
<i>Remote Sensing & GIS</i>		
<i>Advanced Structural Design</i>		
<i>Principles of Construction Management</i>		
<i>Solid & Hazardous Waste Management</i>		
<i>Availability & Management of Ground Water Resources</i>		
<i>Open Category Courses</i>		
<i>Building Services & Management</i>		
<i>Sustainable Materials & Green Buildings</i>		
<i>Integrated Waste Management System</i>		
<i>Project Planning & Control</i>		
<i>Safety & Quality Management</i>		
<i>Specialization Courses Tracks</i>		
Specialization in Structures	Specialization in Construction Management	Specialization in Environmental Engineering
<i>Advanced Reinforced Concrete Design</i>	<i>Project Management</i>	<i>Air & Noise Pollution Control</i>
<i>Advanced Structural Design (Steel)</i>	<i>Basic Scheduling Techniques</i>	<i>Solid Waste Management</i>
<i>Design of Tall Buildings</i>	<i>Advanced Scheduling Techniques</i>	<i>Environmental Impact Assessment</i>
<i>Prestressed Concrete Structure Design</i>	<i>Construction Equipment's & Machinery</i>	<i>Industrial Waste Management</i>