

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

Deemed University

Department of Mechanical Engineering

Admitted Batch: 2025

Tentative Course Structure of B.Tech. : Mechanical Engineering

S.No.	SEMESTER I	SEMESTER II	SEMESTER III	SEMESTER IV	SEMESTER V	SEMESTER VI	SEMESTER VII	SEMESTER VIII
	I Year		II Year		III Year		IV Year	
1.	Engineering Materials	Engineering Graphics	Numerical Techniques	Design of Machine Elements	Heat and Mass Transfer	Refrigeration and Air-Conditioning	Departmental Elective [#] (DE-3)	Departmental Elective* (DE-5)
2.	Computer Programming	Engineering Thermodynamics	Data Structures	Theory of Machines	Machine Design	Mechanical Vibrations	Departmental Elective* (DE-4)	Open Category Course* (OC-3)
3.	Manufacturing Science	Engineering Mechanics	Fluid Mechanics	Metrology and Measurements	Data Science	Artificial Intelligence & Machine Learning	Open Category Course *(OC-2)	Industry Internship/ Research Internship/ Innovation & Start-up
4.	Basic Mechanical Engineering	Metal Cutting & Machine Tools	Mechanics of Materials	Applied Thermodynamics	Quality Design and Control	Departmental Elective* (DE-2)	Skill Enhancement Program/Research Internship/ On Job Training	Professional Development
5.	Basic Electrical & Electronics Engineering	Mathematics Course	Industrial Engineering	Advanced Production Technology	Departmental Elective* (DE-1)	Open Category Course (OC-1)	Creative Problem Solving	
6.	Computer Programming Lab	Engineering Graphics Lab	Fluid Mechanics Lab	Design of Machine Elements Lab	DC-16 Lab	Artificial Intelligence & Machine Learning Lab		
7.	Electrical & Electronics Engineering Lab	Problem Solving through Python Programming	Mechanics of Materials Lab	Theory of Machines Lab	Data Science Lab	Refrigeration and Air-Conditioning Lab		
8.	Semester Proficiency ^{\$}	Semester Proficiency ^{\$}	Semester Proficiency ^{\$}	Metrology and Measurements Lab	Semester Proficiency ^{\$}	Semester Proficiency ^{\$}		
9.	Micro Project-I [#]	Micro Project-II [#]	Macro Project-I [#]	Semester Proficiency ^{\$}	Professional Skills & Competencies - I	Professional Certification		
10.	Engineering Physics/Engineering Chemistry Lab ^{ss}	Engineering Physics/Engineering Chemistry Lab ^{ss}	Self-learning/Presentation ^{sss} (SWAYAM/NPTEL/ MOOC)	Macro Project-II [#]	Cornerstone Project	Professional Skills & Competencies - II		
11.	Novel Engaging Course (Activity Based Learning)	Language Lab	Novel Engaging Course (Activity Based Learning)	Novel Engaging Course (Activity Based Learning)	MAC: Supply Chain Management	Capstone Project		
12.	MAC: Universal Human Values & Professional Ethics (UHVPE)	Novel Engaging Course (Activity Based Learning)	MAC: Cyber Security	Skill Internship Program	MWS: Mandatory Workshop on Internships: Explore, Apply and Excel at Department Level	MAC: Disaster Management		
13.	MWS: Mandatory Workshop on Report Writing at Department Level	Skill Internship Program	MWS: Mandatory Workshop on Mastering Competitive Success at Department Level	MAC: Project Management, Economics & Financing		MWS: Mandatory Workshop on Placement Readiness: Building Resume and Mastering Interview at Department Level		
14.	MWS: Mandatory Workshop on Indian Constitution and Cultural Values at Department Level	MAC: Sustainability & Environmental Science		MWS: Mandatory Workshop on Writing Research Articles: Idea to Publication at Department Level				

15.		MWS: Mandatory Workshop on Indian Knowledge System at Department Level		MWS: Mandatory Workshop on Intellectual Property Rights at Department Level				
16.		MWS: Mandatory Workshop on Career Planning & Goal Setting at Department Level						
Credits	19	24	21	23	22	23	14	18