

Curriculum Format

Programme Name: M. Tech. Mechanical Engineering
 Curriculum applicable to (for admitted year) AY 2025-26
 Curriculum Version: 1.0
 Approved by & Date 1st Academic Council

School Core Min. Credit Requirements ----->						36			
Course Code	Category	Course Title	L	T	P	C	Pre/Co-Requisite	Anti-requisite	Course Discipline
	Projects and Internships					28			
MTPJ649		Project	0	0	16	8	None	None	Engineering
RES703		Final Dissertation	0	0	40	20	None	None	Engineering
	Skill Enhancement Courses	All are Compulsory				6			
MTSE501		Technical Communication and Professional Development	3	0	0	3	None	None	Science
MTSE502		Quantitative Aptitude and Problem-Solving Strategies	3	0	0	3	MTSE501	None	Science
RES701	Compulsory Research Course	Research Methodology	2	0	0	2			Research
Programme Core Min. Credit Requirements ----->						22			
Course Code	Category	Course Title	L	T	P	C	Pre/Co-Requisite	Anti-requisite	Course Discipline
MTME501	Program Core	Computer Aided Manufacturing	3	0	2	4	None		Engineering
MTME502	Program Core	Advanced Engineering Materials and Characterization	3	0	0	3	None		Engineering
MTME503	Program Core	Non Conventional Machining Processes	3	0	0	3	None		Engineering
MTME504	Program Core	Theory of Casting and Welding	3	0	2	4	None		Engineering
MTME601	Program Core	Digital Fabrication with 3D Printing	3	0	2	4	None		Engineering
MTME602	Program Core	Predictive maintenance using AI and IoT	3	0	2	4	None		Engineering
Specialization Electives Min. Credit Requirements ----->						18			
Course Code	Category	Course Title	L	T	P	C	Pre/Co-Requisite	Anti-requisite	Course Discipline
		Any course to fulfill the basket requirements							
MTME505	Program Elective	Quality System and Reliability Engineering	3	0	0	3	None		
MTME603	Program Elective	AI Techniques for Renewable Energy System	3	0	2	4	None		
MTME604	Program Elective	Smart Automation with AI for Industry 4.0	3	0	2	4	None		
MTME506	Program Elective	Innovative Tool Design for Modern Manufacturing	3	0	2	4	None		
MTME507	Program Elective	Production Planning & Control	3	0	0	3	None		
MTME508	Program Elective	Operations Research for Mechanical Engineers	3	0	0	3	None		
MTME605	Program Elective	Robotics and Artificial Intelligence	3	0	2	4	None		
MTME606	Program Elective	Advanced Product Design and Development	3	0	2	4	None		
MTME509	Program Elective	Product Lifecycle Management	3	0	0	3	None		
MTME510	Program Elective	Metal Forming Processes and Analysis	3	0	2	4	None		
MTME511	Program Elective	Design and Analysis of Experiments	3	0	2	4	None		
MTME607	Program Elective	HVAC Design and Energy Management	3	0	2	4	None		
MTME512	Program Elective	Optimization Strategies for Mechanical Systems	3	0	0	3	None		
MTME608	Program Elective	AI Driven Material Development	3	0	0	4	None		
MTME513	Program Elective	Supply Chain Analytics and Optimization for Mechanical Engineers	3	0	2	3	None		
Open Electives Min. Credit Requirements ----->						4			
Course Code	Category	Course Title	L	T	P	C	Pre/Co-Requisite	Anti-requisite	Course Discipline
Any Course after fulfilling Programme Core & Unified Core requirements without duplicity can be taken as Open Elective									

Credit Distribution -1

Mechanical Engineering		Credits
School Core Courses		36
Skill Enhancement Courses		6
Research Methodology		2
Projects and Dissertations		28
Program Core Courses		22
Program/ Specialization Elective Courses		18
Open Elective Courses		4
Total Credits		80