

2026– 2027 ME Mechanical Engineering Syllabus

ME IN MECHANICAL ENGINEERING (one academic year, 60 ECTS)

Students must take:

- 15 ECTS Project/Thesis PLUS 20 ECTS core (mandatory) Advanced Modules PLUS 15 ECTS from Grouped modules, PLUS 10 ECTS Transferrable skills modules.
- Students must abide by the grouping quotas below for Grouped modules. Note the student registration system does not define the groupings, thus the students are required to ensure compliance with the quotas before teaching begins.
- Students cannot take a module where they have already completed coursework of a similar content and standard.

Module availability is not guaranteed. Please consult with Mech Eng discipline office before registration. Selection of modules may depend upon:

- Availability of the module in the academic year of study.
- Timetabling constraints with respect to other modules chosen.
- Completion of pre-requisite or co-requisite modules, or other required modules as identified by the Programme Director.

<i>Prereq /Coreq /Exreq</i>	<i>Module Code</i>	<i>Module Name</i>	<i>ECTS</i>	<i>Taught in Semester 1, 2, or Full Year</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Lectures Shared with:</i>	<i>Bonding</i>	<i>Notes</i>
Project Thesis (15 ECTS)									
	ME5110	Mechanical Engineering Masters Year Individual Project*	15	1 & 2	1 & 2	Thesis + c/a			
Core Advanced Mechanical Modules (20 ECTS)									
	ME516	Advanced Mechanics of Materials	5	2	2	1 + c/a	MEB, MEES,MBM		
	ME521	Research Methods for Engineers	5	1	1	c/a	APE MEB, MEES		
	ME5106	Advanced Manufacturing	5	2	2	2 + c/a			
ME4112	ME426	Turbomachines & Advanced Fluid Dynamics	5	2	2	2 + c/a	4BSE, MEES, 4BM		
Grouped Modules (choose 15 ECTS)									
Computational Mechanics & Simulation Cluster									
BME5104	BME501	Advanced Finite Element Methods	5	2	2	2 + c/a	MEB, MEES		
	MP410	Non-Linear Elasticity	5	1	1	2 + c/a			
	BME5100	Advanced Computational Biomechanics	5	1	1	c/a	MEB		
	EE4140	Machine Learning and Artificial Intelligence for Engineering Applications	5	1	2	2+ca	MEEE		

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Smart Systems & Automation Cluster									
	EE6102	Power Systems (Rotates with Digital Control Systems)	5	1	1	2 +c/a	MEEE	EE4100	(Rotates Annually)
	EE5127	Internet of Things Systems Design	5	1	1	c/a			
	EE4140	Machine Learning and Artificial Intelligence for Engineering Applications	5	1	2	2+ca	MEEE		
Materials, Structures & Design Performance Cluster									
	ME5115	Composite Materials	5	1	1	2+c/a			
	MP410	Non-Linear Elasticity	5	1	1	2 + c/a			
BME5104	BME501	Advanced Finite Element Methods	5	2	2	2 + c/a	MEB, MEES		
	ME5111	Engineering Acoustics: Noise and Sustainable Development	5	1	2	2 + c/a			
	ME5116	Structural Dynamics and Aeroelasticity	5	2	2	2 + c/a			
Energy & Thermofluids Cluster									
	EG5101	Advanced Energy Systems Engineering	5	1	1	c/a	MEES	EG400	
	ME5171	Combustion Science & Engineering	5	2	2	2 +c/a	MEES, 4BSE 4BM1	ME410 1	
	ME5111	Engineering Acoustics: Noise and Sustainable Development	5	1	1	2 + c/a			
	ME5113	Advanced Wind Energy Engineering and Design	5	1	1	2 + c/a			
	ME5116	Structural Dynamics and Aeroelasticity	5	2	2	2 + c/a			
Transferrable Skills Modules (choose 10 ECTS)									
	IE450	Lean Systems	5	1	1	2	MEB, MEES		
	IE446	Project Management	5	1	1	c/a	APE		
	AY5141	Accounting and Management Control for Sustainable Organizations	5	2	2	2 + c/a			
	AY872	Financial Management I	5	1	1	2			
	ME432	Technology, Innovation & Entrepreneurship	5	1	1	c/a	APE, MEES 4BM1		

Revision date: March 7th 2026

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TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS

c/a indicates continuous assessment

****This module is a course requirement: Students must achieve a minimum of 40% in this module. It cannot be passed by compensation***