

Mechanical Engineering — Technical Elective Courses

Course Catalog · METU Department of Mechanical Engineering

IMPORTANT NOTE

Please use this link to check whether the course is offered in that semester:

[OIBS64 – View Program Course Details](#)

Course Code	Course Name	METU Credit	Contact (h/w)	Lab (h/w)	ECTS
ME401	INTERNAL COMBUSTION ENGINES	3	3	0	5.0
ME402	FLUID MACHINERY	3	3	0	5.0
ME403	HEATING. VENT.. AIR COND. & REFRIGERATION	3	3	0	5.0
ME404	THIN WALLED STRUCTURES	3	3	0	5.0
ME405	ENERGY CONVERSION SYSTEMS	3	3	0	5.0
ME411	GAS DYNAMICS	3	3	0	5.0
ME413	INTRODUCTION TO FINITE ELEMENT ANALYSIS	3	3	0	5.0
ME414	SYSTEM DYNAMICS	3	3	0	5.0
ME415	UTILIZATION OF GEOTHERMAL ENERGY	3	3	0	5.0
ME418	DYNAMICS OF MACHINERY	3	3	0	5.0
ME420	REFRIGERATION ENGINEERING	3	3	0	5.0
ME421	STEAM GENERATOR & HEAT EXCHANGER DESIGN	3	3	0	5.0
ME422	HEAT.. VENT.. AIR COND.&REFRIG. SYS.DES.	3	3	0	5.0
ME423	GAS TURBINES AND JET PROPULSION	3	3	0	5.0
ME424	STEAM POWER PLANT ENGINEERING	3	3	0	5.0
ME426	INTERNAL COMBUSTION ENGINE DESIGN	3	3	0	5.0
ME429	MECHANICAL VIBRATIONS	3	3	0	5.0
ME431	KINEMATIC SYNTHESIS OF MECHANISMS	3	3	0	5.0
ME432	ACOUSTICS AND NOISE CONTROL ENGINEERING	3	3	0	5.0
ME433	ENGINEERING METROLOGY & QUALITY CONTROL	3	3	0	5.0
ME434	ADVANCED STRENGTH OF MATERIALS	3	3	0	5.0
ME438	THEORY OF COMBUSTION	3	3	0	5.0
ME440	NUMERICALLY CONTROLLED MACHINE TOOLS	3	3	0	5.0
ME442	DESIGN OF CONTROL SYSTEMS	3	3	0	5.0
ME443	ENG. ECONOMY & PRODUCTION MANAGEMENT	3	3	0	5.0
ME445	INTEGRATED MANUFACTURING SYSTEMS	3	3	0	5.0
ME448	FUNDAMENTALS OF MICROELECTROMECHAN.SYST.&MICROSYST.	3	3	0	5.0
ME450	NONDESTRUCTIVE TESTING METHODS	3	3	0	5.0
ME451	INTRODUCTION TO COMPOSITE STRUCTURES	3	3	0	5.0
ME455	MANUFACTURING OF POLYMERIC STRUCTURES	3	3	0	5.0
ME461	MECHATRONIC COMPON.AND INSTRUMENT	3	1	4	5.0
ME462	MECHATRONIC DESIGN	3	2	2	5.0
ME463	ADDITIVE MANUFACTURING	3	3	0	5.0
ME464	SPECIAL TOPICS IN MECHANICAL ENGINEERING: TRANSPORT PROCESSES IN BIOMEDICAL SYSTEMS	3	3	0	5.0
ME465	AUTOMOTIVE ENGINEERING	3	3	0	5.0
ME466	PERFORMANCE OF ROAD VEHICLES	3	3	0	5.0
ME474	DESIGN OF RENEWABLE ENERGY SYSTEMS	3	3	0	5.0

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ME475	SPECIAL TOPICS IN MECHANICAL ENGINEERING : MICROMANUFACTURING	3	3	0	5.0
ME476	SECOND LAW ANALYSIS OF ENG. SYSTEMS	3	3	0	5.0
ME478	INTRODUCTION TO SOLAR ENERGY UTILIZATION	3	3	0	5.0
ME481	INDUSTRIAL FLUID POWER	3	3	0	5.0
ME483	EXPERIMENTAL TECHNIQUES IN FLUID MECH.	3	3	0	5.0
ME484	TURBULENCE AND ITS MEASUREMENT	3	3	0	5.0
ME485	COMPUTATION.FLUID DYNAM.USING FINITE VOLUME METHOD	3	3	0	5.0
ME489	SPECIAL TOPICS IN MECHANICAL ENGINEERING: APPLIED SCIENTIFIC PROGRAMMING	3	3	0	5.0
ME492	FUEL CELL FUNDAMENTALS	3	3	0	5.0
ME493	INTRODUCTION TO SMART STRUCTURES AND MATERIALS	3	3	0	5.0
ME497	SPECIAL TOPICS IN ME: MACHINING DYNAMICS AND MACHINE TOOL VIBRATIONS	3	3	0	5.0

Contact / Lab: weekly lecture and laboratory hours. Course codes link to the official METU course catalog (catalog.metu.edu.tr).