

Mechanical Engineering — Graduate 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
ME502	ADVANCED DYNAMICS	3	3	0	8.0
ME503	ADVANCED GAS DYNAMICS	3	3	0	8.0
ME504	ADVANCED HEAT TRANSFER I	3	3	0	8.0
ME505	ADVANCED HEAT TRANSFER II	3	3	0	8.0
ME506	DYNAMICS OF NONLINEAR SYSTEMS	3	3	0	8.0
ME507	APPLIED OPTIMAL CONTROL	3	3	0	8.0
ME508	THERMAL RADIATION	3	3	0	8.0
ME510	NUMERICAL METHODS IN ME II	3	3	0	8.0
ME511	MODERN CONTROL	3	3	0	8.0
ME512	AEROTHERMOCHEMISTRY OF ROCKET PROPULSION SYSTEMS	3	3	0	8.0
ME513	VEHICLE DYNAMICS	3	3	0	8.0
ME514	ADVANCED SOLAR ENERGY UTILIZATION	3	3	0	8.0
ME516	FLUID POWER CONTROL	3	3	0	8.0
ME517	ADVANCED FLUID MECHANICS	3	3	0	8.0
ME518	BOUNDARY LAYER THEORY	3	3	0	8.0
ME519	KINEMATIC ANALYSIS OF MECHANISMS	3	3	0	8.0
ME520	ANALYS.&MEASUR.TECH. RANDOM VIBR.&NOISE	3	3	0	8.0
ME521	ANALYTICAL METHODS IN ENGINEERING I	3	3	0	8.0
ME522	PRINCIPLES OF ROBOTICS	3	3	0	8.0
ME523	IMPACT MECHANICS	3	3	0	8.0
ME525	ANALYTICAL METHODS IN SPATIAL MECHANIS	3	3	0	8.0
ME526	VIBRATION OF CONT.SYS.WITH COMPUT.METH	3	3	0	8.0
ME532	ADVANCED MACHINERY VIBRATIONS	3	3	0	8.0
ME533	COMPUTER-AIDED DESIGN (CAD)	3	3	0	8.0
ME534	COMPUTER CONTROL OF MACHINES	3	3	0	8.0
ME535	METAL CUTTING	3	3	0	8.0
ME536	DESIGN OF INTELLIGENT MACHINES	3	3	0	8.0
ME537	ADVANCED ENGINEERING THERMODYNAMICS I	3	3	0	8.0
ME538	ADVANCED ENGINEERING THERMODYNAMICS II	3	3	0	8.0
ME539	HYDRODYN. INSTAB. VORTEX DYNAM. & TURBU.	3	3	0	8.0
ME540	ANALYTICAL METHODS IN ENGINEERING II	3	3	0	8.0
ME541	PLASTICITY & COMP. AIDED METAL FORMING	3	3	0	8.0
ME543	THEORY OF ELASTICITY	3	3	0	8.0
ME544	BEAMS. PLATES AND SHELLS	3	3	0	8.0
ME546	DIFFUSION PROBLEMS IN THERMAL-FLUID SCIENCES	3	3	0	8.0
ME547	INTRODUCTION TO CONTINUUM MECHANICS	3	3	0	8.0
ME549	EXPERIMENTAL STRESS ANALYSIS I	3	2	2	8.0
ME551	DESIGN OF HIGH PRECISION CNC MACHINERY	3	3	0	8.0

Course Code	Course Name	METU Credit	Contact (h/w)	Lab (h/w)	ECTS
ME552	MICRO-AND NANOSCALE HEAT TRANSFER	3	3	0	5.0
ME575	NON-TRADITIONAL PRODUCTION PROCESSES	3	3	0	8.0
ME579	NONLINEAR VIBRATIONS	3	3	0	8.0
ME581	FINITE ELEMENT ANALY.IN SOLID MECHANIC	3	3	0	8.0
ME582	FINITE ELEMENT ANALY. IN THERMOFLUIDS	3	3	0	8.0
ME583	ENGINEERING FRACTURE MECHANICS	3	3	0	8.0
ME588	IMPULSIVE LOADING OF SOLIDS	3	3	0	8.0
ME708	TECHNIQUES FOR VIBRATION CONTROL AND ISOLATION	3	3	0	8.0
ME714	GENERATIVE DESIGN FOR DIGITAL MANUFACTURING	3	3	0	8.0

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