

COURSE CATALOGUE 2012-2016

Field: Mechanical Engineering
Programme: Mechanical Engineering
Length of studies: 4 years (8 semesters)
Number of ECTS Credits: 180+60
Languages of teaching: Turkish
Form of education: Full-time

Programme description:

The programme covers the following educational route:

1st year, 1st semester (14 weeks)

Code	Courses	Type of course, tuition hours/semester	ECTS Credits
FİZ1103	PHYSICS I	Compulsory,56	6
KİM1101	CHEMISTRY	Compulsory,56	6
MAT1161	MATHEMATICS I	Compulsory,56	6
MMÜ1121	ENGINEERING DRAWING	Compulsory,56	5
MMÜ1125	INTRODUCTION TO MECHANICAL ENGINEERING	Compulsory,28	3
TRD1101	TURKISH LANGUAGE	Compulsory,56	4

1st year, 2nd semester (14 weeks)

Code	Courses	Type of course, tuition hours/semester	ECTS Credits
ENF1104	BASIC INFORMATION TECHNOLOGY	Compulsory,42	4
FİZ1104	PHYSICS II	Compulsory,56	6
MAT1114	LINEAR ALGEBRA	Compulsory,28	4
MAT1162	MATHEMATICS II	Compulsory,56	6
MMÜ1112	STATICS	Compulsory,56	5
MMÜ1122	ENGINEERING DRAWING	Compulsory,56	5

2nd year, 1st semester (14 weeks)

Code	Courses	Type of course, tuition hours/semester	ECTS Credits
AİT2201	PRINC.OF ATATÜRK AND HISTORY OF TURKISH REVOLUTION	Compulsory,56	4
EMÜ2217	ELECTRICAL MACHINES	Compulsory,42	4
MAT2265	DIFFERENTIAL EQUATIONS	Compulsory,56	5
MMÜ2211	DYNAMICS	Compulsory,56	5
MMÜ2213	STRENGTH OF MATERIALS I	Compulsory,56	4
MMÜ2221	MATERIAL SCIENCE	Compulsory,42	4
YDİ2201	FOREIGN LANGUAGE	Compulsory,56	4

2nd year, 2nd semester (14 weeks)

Code	Courses	Type of course, tuition hours/semester	ECTS Credits	
MMÜ2202	NUMERICAL ANALYSIS	Compulsory,42	4	
MMÜ2214	STRENGTH OF MATERIALS II	Compulsory,56	4	
MMÜ2222	MANUFACTURING PROCESSES	Compulsory,56	5	
MMÜ2224	ENGINEERING MATERIALS	Compulsory,42	4	
MMÜ2242	THERMODYNAMICS I	Compulsory,56	5	
MMÜ2204	COMPUTER PROGRAMMING	Elective (1 out of 4),	5	
MMÜ2216	COMPUTER AIDED ENGINEERING ANALYSIS			42
MMÜ2226	ANALOGY AND SIMULATION			28
MMÜ2228	MACHINE DESIGN			28
OSD2202	UNIVERSITY ELECTIVE COURSE	Optional	42	
			3	

3rd year, 1st semester (14 weeks)

Code	Courses	Type of course, tuition hours/semester	ECTS Credits
MMÜ3311	MECHANISM TECHNIQUES	Compulsory,42	4
MMÜ3313	SYSTEM DYNAMICS AND CONTROL	Compulsory,42	4
MMÜ3321	MACHINE ELEMENTS I	Compulsory,56	4
MMÜ3341	THERMODYNAMICS II	Compulsory,56	5
MMÜ3343	FLUID MECHANICS	Compulsory,56	5
MMÜ3393	INTERNSHIP I	Compulsory	4
MMÜ3323	MANUFACTURING ENGINEERING	Elective (1 out of 4),42	4
MMÜ3345	INSTALLATIONS IN BUILDINGS		
MMÜ3347	BOILERS		
MMÜ3349	NATURAL GAS INSTALLATION		

3rd year, 2st semester (14 weeks)

Code	Courses	Type of course, tuition hours/semester	ECTS Credits
MMÜ3310	DYNAMICS OF MACHINE	Compulsory,56	5
MMÜ3322	MACHINE ELEMENTS II	Compulsory,56	5
MMÜ3332	INTERNAL COMBUSTION ENGINES	Compulsory,42	5
MMÜ3342	HYDRAULIC MACHINES	Compulsory,42	5
MMÜ3344	HEAT TRANSFER	Compulsory,56	5
MMÜ3334	EXHAUST EMISSIONS	Elective (1 out of 4),42	5
MMÜ3340	HEATING AIR CONDITIONING		
MMÜ3346	INDUSTRIAL APPLICATIONS OF HYDRAULIC		
MMÜ3348	SOLAR ENERGY		

4th year, 1st semester (14 weeks)

Code	Courses	Type of course, tuition hours/semester	ECTS Credits
MMÜ4401	MECHANICAL ENGINEERING LABORATORIES I	Compulsory,14	1
MMÜ4421	ENGINEERING DESIGN	Compulsory,28	2
MMÜ4483	GRADUATION STUDY I	Compulsory,14	2
MMÜ4493	INTERNSHIP II	Compulsory	2
MMÜ4403	METARIAL SELECTION	Elective (4 out of 28),42	5
MMÜ4405	MECHANICAL VIBRATION		
MMÜ4407	ENGINEERING ECONOMY		
MMÜ4409	OPTIMIZATION TECHNIQUES		
MMÜ4411	SIMULATION OF CONTROL SYSTEMS		
MMÜ4413	INTRODUCTION TO ROBOTICS		
MMÜ4415	APPLIED SOLID MECHANICS		
MMÜ4423	TRANSPORT TECHNIQUES		
MMÜ4425	MOULDING TECHNOLOGY		
MMÜ4427	SYSTEMATIC OF CONSTRUCTIONS		
MMÜ4429	MODERN WELDING		
MMÜ4431	BUSINESS MACHINES		
MMÜ4433	ENGINE DESIGN		
MMÜ4435	NEW TECHNOLOGIES IN VEHICLES		
MMÜ4437	PNEUMATIC CONTROL SYSTEMS		
MMÜ4439	DESIGN OF CHASIS&BODY		
MMÜ4441	ISIL SİSTEMLER		
MMÜ4443	ENERGY SAVING IN INDUSTRY		
MMÜ4445	COOLING TECHNIQUES		
MMÜ4447	INSULATION TECHNIQUES		
MMÜ4449	PRINCIPLES OF COMBUSTION		
MMÜ4461	METAL FORMING		
MMÜ4463	PROCESS TECHNIQUES		
MMÜ4465	NON-DESTRUCTIVE EXPERIMENT METHODS		
MMÜ4467	COMPUTER CONTROLLED (CNC) MACHINE TOOLS		
MMÜ4471	FUEL ECONOMY IN VEHICLES		
MMÜ4481	RENEWABLE ENERGY SOURCES		
MMÜ4491	COMPUTER APPLICATIONS IN MECHANICAL ENGINEERING		
OSD4401	UNIVERSITY ELECTIVE COURSE	Optional	3

4th year, 2st semester (14 weeks)

Code	Courses	Type of course, tuition hours/semester	ECTS Credits
MMÜ4404	MECHANICAL ENGINEERING LABORATORIES II	Compulsory,28	4
MMÜ4408	SENIOR DESIGN PROJECT	Compulsory,28	6
MMÜ4402	<i>SENSITIVE EQUIPMENTS TECHNIQUES</i>	Elective (4 out of 23),42	5
MMÜ4406	<i>DESIGN OF CONTROL SYSTEMS</i>		
MMÜ4410	<i>CONTROL OF INDUSTRIAL NOISE AND VIBRATIONS</i>		
MMÜ4412	<i>VIBRATIONS AND COMPUTER AIDED MAINTENANCE</i>		
MMÜ4420	<i>COMPUTER AIDED MANUFACTURING</i>		
MMÜ4422	<i>CASTING TECHNOLOGY</i>		
MMÜ4424	<i>COMPUTATIONAL FORMING TECHNOLOGY</i>		
MMÜ4426	<i>MANUFACTURING MANAGEMENT</i>		
MMÜ4428	<i>WELDING CAPABILITY</i>		
MMÜ4430	<i>MIXTURE FORMATION IN INTERNAL COMBUSTION ENGINES</i>		
MMÜ4432	<i>AUTOMOTIVE ENGINEERING</i>		
MMÜ4434	<i>VEHICLE TECHNOLOGY</i>		
MMÜ4436	<i>THERMAL TURBO MACHINES</i>		
MMÜ4440	<i>ENERGY PLANTS</i>		
MMÜ4442	<i>HEAT EXCHANGERS</i>		
MMÜ4444	<i>FUNDAMENTALS AND DESIGN OF AIR CONDITIONING</i>		
MMÜ4446	<i>DRYING TECHNIQUES</i>		
MMÜ4448	<i>APPLIED FLUID MECHANICS</i>		
MMÜ4462	<i>MECHANICS OF COMPOSITE MATERIALS</i>		
MMÜ4464	<i>DURABILITY AND RELIABILITY IN MECHANICAL DESIGN</i>		
MMÜ4466	<i>HEAT TREATMENTS OF METALS AND ALLOYS</i>		
MMÜ4468	<i>FRICTION AND WEAR</i>		
MMÜ4494	<i>CONTROL ELEMENTS AND APPLICATIONS</i>		