ANTALYA BİLİM UNIVERSITY
COLLEGE OF ENGINEERING
DEPARTMENT OF MECHANICAL ENGINEERING
2020 - 2021 ACADEMIC YEAR CURRICULUM

FRESHMAN

1 Fall Semester

		Theory	Practice	Lab	Credits	ECTS	Pre-requisite	Co-requisite
MATH 101	CALCULUS I	4	2	0	5	6	-	-
PHYS 101	PHYSICS I	3	0	0	3	4	-	PHYS 101L*
PHYS 101L	PHYSICS I LABORATORY	0	0	2	1	2	-	PHYS 101*
CHEM 101	GENERAL CHEMISTRY	3	2	0	4	6	-	-
ME 121	ENGINEERING DRAWING I	3	0	0	2	3	-	-
CS 101	INTRODUCTION TO PROGRAMMING I	3	0	2	4	6	-	-
ENEN 101	ENGLISH FOR ENGINEERS I	4	0	0	4	4	-	-
TURK 101	TURKISH LANGUAGE I	2	0	0	2	2	-	-
	TOTAL	22	4	4	25	33		

2 Spring Semester

		Theory	Practice	Lab	Credits	ECTS	Pre-requisite	Co-requisite
MATH 102	CALCULUS II	4	2	0	5	6	MATH 101*	-
PHYS 102	PHYSICS II	3	0	0	3	4	-	PHYS 102L*
PHYS 102L	PHYSICS II LABORATORY	0	0	2	1	2	-	PHYS 102*
MATH 201	LINEAR ALGEBRA	4	0	0	4	5	-	-
ME 122	ENGINEERING DRAWING II	0	1	2	2	3	ME 121	-
ME 112	STATICS (MECHANICS I)	3	0	0	3	5	PHYS 101, MATH 101	-
ENEN 102	ENGLISH FOR ENGINEERS II	4	0	0	4	4	ENEN 101*	-
TURK 102	TURKISH LANGUAGE II	2	0	0	2	2	-	-
	TOTAL	20	3	4	24	31		

COURSES	COURSE COUNT	CREDITS	ECTS
FUNDAMENTALS OF SCIENCE (FS)	8	26	35
FUNDAMENTALS OF ENGINEERING (FE)	4	11	17
ENGINEERING DESIGN (ED)	-	-	-
HUMAN AND SOCIETY SCIENCE (HSS)	4	12	12
ART (ART)	-	-	-
1st YEAR OVERALL	**16**	**49**	**64**

SOPHOMORE

3 Fall Semester

		Theory	Practice	Lab	Credits	ECTS	Pre-requisite	Co-requisite
MATH 202	DIFFERANTIAL EQUATIONS	4	0	0	4	5	MATH 102*	-
ME 201	FUND. OF ELECTRICAL AND ELECTRONICS ENGINEERING	2	0	1	3	4	PHYS 102	-
ME 211	STRENGTH OF MATERIALS I	3	0	0	3	5	ME 112, MATH 201	ME 221, MATH 202
ME 213	DYNAMICS (MECHANICS II)	3	0	0	3	5	ME 112, MATH 201	MATH 202
ME 221	MATERIALS SCIENCE	2	0	2	3	5	CHEM 101	-
ME 241	THERMODYNAMICS I	3	0	0	3	5	PHYS 101, CHEM 101	MATH 202
HIST 101	ATATURK'S PRINCIPLES AND REVOLUTION HISTORY I	2	0	0	2	2	-	-
	TOTAL	19	0	3	21	31		

4 Spring Semester

		Theory	Practice	Lab	Credits	ECTS	Pre-requisite	Co-requisite
ME 202	PROGRAMMING FOR ENGINEERS	2	0	2	3	5	CS 101	-
ME 204	MEASUREMENT TECHNIQUES	2	1	0	3	5	ME 201, ME 211, ME 221	-
ME 212	STRENGTH OF MATERIALS II	3	0	0	3	5	ME 211, ME 221	-
ME 214	FLUID MECHANICS I	3	0	0	3	5	ME 112, MATH 202, ME 213	-
ME 222	DESIGN AND MANUFACTURING I	3	0	0	3	5	ME 211, ME 221	-
ME 242	THERMODYNAMICS II	3	0	0	3	5	ME 241	-
HIST 102	ATATURK'S PRINCIPLES AND REVOLUTION HISTORY II	2	0	0	2	2	HIST 101*	-
	TOTAL	18	1	2	20	32		

COURSES	COURSE COUNT	CREDITS	ECTS
FUNDAMENTALS OF SCIENCE (FS)	1	4	5
FUNDAMENTALS OF ENGINEERING (FE)	11	33	54
ENGINEERING DESIGN (ED)	-	-	-
HUMAN AND SOCIETY SCIENCE (HSS)	2	4	4
ART (ART)	-	-	-
2nd YEAR OVERALL	**14**	**41**	**63**

JUNIOR

5 Fall Semester

		Theory	Practice	Lab	Credits	ECTS	Pre-requisite	Co-requisite
ME 311	FLUID MECHANICS II	3	0	0	3	5	ME 214	-
ME 321	MACHINE ELEMENTS I	3	0	0	3	5	ME 212, ME 121	-
ME 323	DESIGN AND MANUFACTURING II	3	0	0	3	5	ME 222	-
ME 341	HEAT TRANSFER I	3	0	0	3	5	ME 214, ME 241	-
ME 300	SUMMER INTERNSHIP I	0	0	0	0	0	-	-
MATH 211	PROBABILITY AND STATISTICS FOR ENGINEERING	3	0	0	3	5	-	-
MATH 300	NUMERICAL ANALYSIS FOR ENGINEERING	4	0	0	4	5	MATH 101*, MATH 201*	-
	TOTAL	19	0	0	19	30		

6 Spring Semester

		Theory	Practice	Lab	Credits	ECTS	Pre-requisite	Co-requisite
ME 322	MACHINE ELEMENTS II	3	0	0	3	5	ME 321	-
ME 342	HEAT TRANSFER II	3	0	0	3	5	ME 341	-
ME 352	MECHANICAL VIBRATIONS	3	0	0	3	5	ME 213	-
ME 354	MECHANISMS	3	0	0	3	5	ME 213, ME 122	ME 352
AE 4XXX	AREA ELECTIVES (DEPARTMENT ELECTIVE)	3	0	0	3	5	Explained below.	
AE 4XXX	AREA ELECTIVES (DEPARTMENT ELECTIVE)	3	0	0	3	5	Explained below.	
	TOTAL	18	0	0	18	30		

COURSES	COURSE COUNT	CREDITS	ECTS
FUNDAMENTALS OF SCIENCE (FS)	2	7	10
FUNDAMENTALS OF ENGINEERING (FE)	8	24	40
ENGINEERING DESIGN (ED)	3	6	10
HUMAN AND SOCIETY SCIENCE (HSS)	-	-	-
ART (ART)	-	-	-
3rd YEAR OVERALL	**13**	**37**	**60**

SENIOR

7 Fall Semester

		Theory	Practice	Lab	Credits	ECTS	Pre-requisite	Co-requisite
ME 451	SYSTEM DYNAMICS AND CONTROL	3	0	0	3	5	ME 352, ME 201	-
ME 400	SUMMER INTERNSHIP II	0	0	0	0	0	-	-
GEN 200	ENGINEERING ECONOMICS	3	0	0	3	4	-	-
GEN 401	WORKER'S HEALTH AND WORK SAFETY I	2	0	0	2	2	-	-
AE 4XXX	AREA ELECTIVES (DEPARTMENT ELECTIVE)	3	0	0	3	5	Explained below.	
AE 4XXX	AREA ELECTIVES (DEPARTMENT ELECTIVE)	3	0	0	3	5	Explained below.	
AE 4XXX	AREA ELECTIVE	3	0	0	3	5	If selected from department electives, requisites should be checked.	
NAE 401	NON AREA ELECTIVE	3	0	0	3	5	-	-
	TOTAL	20	0	0	20	31		

8 Spring Semester

		Theory	Practice	Lab	Credits	ECTS	Pre-requisite	Co-requisite
ME 402	SENIOR PROJECT	0	6	0	0	6	Explained below.	
GEN 402	WORKER'S HEALTH AND WORK SAFETY II	2	0	0	2	2	GEN 401	-
GEN 404	INOVATION AND ENTREPRENEURSHIP	2	0	0	2	2	-	-
NAE 402	NON AREA ELECTIVE	3	0	0	3	5	-	-
AE 4XXX	AREA ELECTIVE	3	0	0	3	5	If selected from department electives, requisites should be checked.	
AE 4XXX	AREA ELECTIVE	3	0	0	3	5	If selected from department electives, requisites should be checked.	
AE 4XXX	AREA ELECTIVE	3	0	0	3	5	If selected from department electives, requisites should be checked.	
	TOTAL	16	6	0	16	30		

COURSES	COURSE COUNT	CREDITS	ECTS
FUNDAMENTALS OF SCIENCE (FS)	2	6	10
FUNDAMENTALS OF ENGINEERING (FE)	2	6	9
ENGINEERING DESIGN (ED)	8	18	36
HUMAN AND SOCIETY SCIENCE (HSS)	3	6	6
ART (ART)	-	-	-
4th YEAR OVERALL	**15**	**36**	**61**

AREA ELECTIVES		Theory	Practice	Lab	Credits	ECTS	Pre-requisite	Co-requisite
0 - GENERAL COURSES								
ME 4001	INTRODUCTION TO FINITE ELEMENT METHODS	3	0	0	3	5	MATH 201, MATH 202, MATH 300	-
ME 4002	FINITE DIFFERENCE AND FINITE VOLUME METHODS	3	0	0	3	5	MATH 201, MATH 202, MATH 300	-
ME 4003	INTRODUCTION TO BOUNDARY ELEMENT METHODS	3	0	0	3	5	MATH 201, MATH 202, MATH 300	-
ME 4004	ELECTRIC MACHINERY	3	0	0	3	5	-	-
ME 4005	DATA STRUCTURES AND ALGORITHMS C / C++	3	0	0	3	5	CS 101, MATH 102, MATH 201	-
ME 4006	ENVIRONMENT	3	0	0	3	5	-	-
ME 4007	COMPUTER GRAPHICS	3	0	0	3	5	CS 101, MATH 201	
MATH 4001	LOGIC I	3	0	0	3	5	-	-
MATH 4002	LOGIC II	3	0	0	3	5	MATH 4001	-
MATH 4003	ADVANCED ENGINEERING MATHEMATICS	3	0	0	3	5	MATH 201, MATH 202, MATH 300	-
1 - MECHANICS								
ME 4101	INTRODUCTION TO HYDRODYNAMICS	3	0	0	3	5	-	-
ME 4102	INTRODUCTION TO AERODYNAMICS	3	0	0	3	5	-	-
ME 4103	INTRODUCTION TO STRUCTURAL DYNAMICS	3	0	0	3	5	-	-
ME 4104	EXPERIMENTAL STRESS ANALYSIS	3	0	0	3	5	-	-
ME 4105	STRUCTURAL ANALYSIS	3	0	0	3	5	-	-
ME 4106	INTRODUCTION TO SHELLS AND PLATES	3	0	0	3	5	-	-
ME 4107	INTRODUCTION TO FRACTURE MECHANICS	3	0	0	3	5	-	-
ME 4108	INTRODUCTION TO CONTACT MECHANICS	3	0	0	3	5	-	-
ME 4109	INTRODUCTION TO IMPACT AND COLLISION	3	0	0	3	5	-	-
ME 4110	INTRODUCTION TO ELASTICITY	3	0	0	3	5	-	-
ME 4111	INTRODUCTION TO PLASTICITY	3	0	0	3	5	-	-
2 - DESIGN AND MANUFACTURING (C.3)								
ME 4201	COMPOSITES AND POLYMERS	3	0	0	3	5	-	-
ME 4202	TRANSPORT TECHNIQUES	3	0	0	3	5	-	-
ME 4203	COMPUTER AIDED MODELLING	3	0	0	3	5	-	-
ME 4204	CUTTING TOOLS	3	0	0	3	5	-	-
ME 4205	NON-DESTRUCTIVE TESTING METHODS	3	0	0	3	5	-	-
ME 4206	COMPUTER AIDED MANUFACTURING	3	0	0	3	5	-	-
ME 4207	WELDING TECHNIQUES	3	0	0	3	5	-	-
ME 4208	PHYSICAL METALLURGY	3	0	0	3	5	-	-
ME 4209	HYDRAULICS & PNEUMATICS	3	0	0	3	5	-	-
ME 4210	CASTING PROCESSES	3	0	0	3	5	-	-
ME 4211	ADDING MANUFACTURING (RAPID PROTOTYPING)	3	0	0	3	5	-	-
ME 4212	INTRODUCTION TO BIOMEDICAL ENGINEERING	3	0	0	3	5	-	-
3 - ENERGY								
ME 4301	HEATING VENTILATION AND AIR CONDITIONING	3	0	0	3	5	-	-
ME 4302	SOLAR ENERGY	3	0	0	3	5	-	-
ME 4303	ENERGY TECHNOLOGIES AND ECONOMICS	3	0	0	3	5	-	-
ME 4304	HEAT ECONOMY	3	0	0	3	5	-	-
ME 4305	NANOTECHNOLOGY	3	0	0	3	5	-	-
ME 4306	RENEWABLE ENERGY	3	0	0	3	5	-	-
ME 4307	NUCLEAR ENERGY AND SYSTEMS	3	0	0	3	5	-	-
4 - THERMODYNAMICS								
ME 4401	COMBUSTION ENGINES I	3	0	0	3	5	-	-
ME 4402	COMBUSTION ENGINES II	3	0	0	3	5	ME 4401, ME 4406	
ME 4403	HEAT EXCHANGES	3	0	0	3	5	-	-
ME 4404	STEAM BOILERS	3	0	0	3	5	-	-
ME 4405	TURBINES	3	0	0	3	5	-	-
ME 4406	INTRODUCTION TO GAS DYNAMICS	3	0	0	3	5	-	-
5 - MACHINE THEORY AND DYNAMICS (C.3)								
ME 4501	DYNAMICS OF MACHINERY	3	0	0	3	5	-	-
ME 4502	INTRODUCTION TO ROBOTICS	3	0	0	3	5	-	-
ME 4503	GROUND VEHICLE DYNAMICS	3	0	0	3	5	-	-
ME 4504	MECHATRONICS (C.4)	3	0	0	3	5	-	-
ME 4505	NUCLEAR POWER PLANT DYNAMICS CONTROL (C.5)	3	0	0	3	5	-	-
ME 4506	AEROSPACE DYNAMICS	3	0	0	3	5	-	-

EXPLANATIONS

A. COURSE CODE DESCRIPTIONS

ME : X Y Z	X: Grade
	Y: Branch
	Z: Term (Odd: Fall / Even: Spring)

B. MECHANICAL ENGINEERING DEPARTMENT BRANCHES AND OTHER COURSES

Branch Number	Branch Name
1	Mechanics
2	Design and Manufacturing
3	Energy
4	Thermodynmics
5	Machine Theory and Dynamics
Other Course Numbers are Given Below	
0	General Courses

C. PRE and CO-REQUISTIE EXPLANATIONS FOR DEPARTMENT ELECTIVES

1. Area Elective Courses can be selected from any branch.
2. In order to select an elective course from a branch, students have to pass all the related main branch courses.
3. In order to select a course under this branch, students have to pass all the "Mechanic" branch courses.
4. We expect from students to register and pass the related classes such as; feedback systems, automation systems, electronic circuits, signals and measurements from the E&E Engineering Department.
5. In order to select this course, students have to pass all the "Thermodynamics" branch courses.

The pre and co-requisities of the Engineering Faculty common courses specified with "*" are taken from the updated curriculum of relevant departments that offer the course.

D. PRE and CO-REQUISTIES FOR ME SENIOR PROJECT

1. Prerequisite In order to select this course, students have to pass all the main Mechanical Engineering Courses (ME Course Code)
2. Corequisite: Students need an approval from their Project Adviser for the Branch they want to choose to prove that they passed enough Area Elective courses.