

CURRICULUM

1st Semester **C: Compulsory E: Elective T: Theoretical A: Application L: Laboratory**

| Prerequisite | Course Code | Course Name | C/E | T | A | L | Total | Credit | ECTS |
|--------------|-------------|--|-----|-----------|----------|----------|-----------|-------------|-----------|
| | UNV13101 | TURKISH LANGUAGE I | C | 2 | 0 | 0 | 2 | 2 | 2 |
| | UNV13103 | PRINCIPLES OF ATATURK AND RECENT TURKISH HISTORY I | C | 2 | 0 | 0 | 2 | 2 | 2 |
| | UNV13105 | ENGLISH I | C | 4 | 0 | 0 | 4 | 4 | 4 |
| | UNV13107 | OFFICE APPLICATIONS IN ENGINEERING | C | 1 | 1 | 0 | 2 | 1,5 | 2 |
| | MAT13151 | MATHEMATICS I | C | 4 | 0 | 0 | 4 | 4 | 6 |
| | FIZ13151 | PHYSICS-I | C | 3 | 0 | 0 | 3 | 3 | 5 |
| | MAK16101 | TECHNICAL DRAWING | C | 2 | 2 | 0 | 4 | 3 | 5 |
| | MAK16103 | LINEAR ALGEBRA FOR MECHANICAL ENGINEERING | C | 2 | 0 | 0 | 2 | 2 | 4 |
| | | | | 20 | 3 | 0 | 23 | 21,5 | 30 |

2nd Semester

| Prerequisite | Course Code | Course Name | C/E | T | A | L | Total | Credit | ECTS |
|--------------|-------------|---|-----|-----------|----------|----------|-----------|-----------|-----------|
| | UNV13102 | TURKISH LANGUAGE II | Z | 2 | 0 | 0 | 2 | 2 | 2 |
| | UNV13104 | PRINCIPLES OF ATATURK AND RECENT TURKISH HISTORY II | Z | 2 | 0 | 0 | 2 | 2 | 2 |
| | UNV13106 | ENGLISH II | Z | 4 | 0 | 0 | 4 | 4 | 4 |
| | MAT13152 | MATHEMATICS II | Z | 4 | 0 | 0 | 4 | 4 | 6 |
| | FIZ13152 | PHYSICS-II | Z | 3 | 0 | 0 | 3 | 3 | 5 |
| | MAK16102 | SOFTWARE TECHNOLOGY | Z | 2 | 0 | 0 | 2 | 2 | 4 |
| | MAK16104 | INTRODUCTION TO MECHANICAL ENGINEERING | Z | 2 | 0 | 0 | 2 | 2 | 2 |
| | MAK16106 | MECHANIC I | Z | 2 | 0 | 0 | 2 | 2 | 5 |
| | | | | 21 | 0 | 0 | 21 | 21 | 30 |

3rd Semester

| Prerequisite | Course Code | Course Name | C/E | T | A | L | Total | Credit | ECTS |
|------------------------------------|-------------|---------------------------------|-----|-----------|----------|----------|-----------|-----------|-----------|
| | MAT13251 | DIFFERENTIAL EQUATIONS | Z | 4 | 0 | 0 | 4 | 4 | 6 |
| MAK16101 | MAK16201 | COMPUTER AIDED DESIGN I | Z | 2 | 0 | 2 | 4 | 3 | 4 |
| MAK16106 | MAK16203 | MECHANIC II | Z | 2 | 1 | 0 | 3 | 2,5 | 5 |
| MAK16106 | MAK16205 | STRENGTH OF MATERIALS I | Z | 2 | 2 | 0 | 4 | 3 | 5 |
| | MAK16207 | MATERIALS SCIENCE I | Z | 2 | 1 | 0 | 3 | 2,5 | 4 |
| | MAK16209 | MACHINE TOOLS | Z | 4 | 0 | 0 | 4 | 4 | 4 |
| | | UNIVERSITY ELECTIVE | S | 2 | 0 | 0 | 2 | 2 | 2 |
| University Elective Courses | | | | | | | | | |
| | UNV13011 | RESEARCH METHODS AND TECHNIQUES | S | 2 | 0 | 0 | 2 | 2 | 2 |
| | UNV13012 | SCIENCE PHILOSOPHY | S | 2 | 0 | 0 | 2 | 2 | 2 |
| | UNV13019 | BUSINESS LAW | S | 2 | 0 | 0 | 2 | 2 | 2 |
| | | | | 18 | 4 | 2 | 24 | 21 | 30 |

4th Semester

| Prerequisite | Course Code | Course Name | C/E | T | A | L | Total | Credit | ECTS |
|-------------------------|-------------|--|-----|-----------|----------|----------|-----------|-----------|-----------|
| | MAK16202 | THERMODYNAMICS I | Z | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16204 | FLUID MECHANICS I | Z | 3 | 0 | 0 | 3 | 3 | 4 |
| MAK16205 | MAK16206 | STRENGTH OF MATERIALS II | Z | 4 | 0 | 0 | 4 | 4 | 5 |
| | MAK16208 | ELECTROTECHNICS AND ELECTRICAL MACHINERY | Z | 2 | 0 | 2 | 4 | 3 | 3 |
| MAK16201 | MAK16210 | COMPUTER AIDED DESIGN II | Z | 2 | 0 | 2 | 4 | 3 | 4 |
| MAK16207 | MAK16212 | MATERIALS SCIENCE II | Z | 3 | 0 | 0 | 3 | 3 | 4 |
| | STAJ16001 | INTERNSHIP PROGRAMME I(20 WORKING DAYS) | Z | 0 | 0 | 0 | 0 | 0 | 4 |
| | | ELECTIVE-1 | S | 2 | 0 | 0 | 2 | 2 | 2 |
| Elective Courses | | | | | | | | | |
| | UNV13001 | ENTREPRENEURSHIP | S | 2 | 0 | 0 | 2 | 2 | 2 |
| | UNV13027 | OCCUPATIONAL HEALTH AND SAFETY | S | 2 | 0 | 0 | 2 | 2 | 2 |
| | MUF13204 | ENVIRONMENT AND ENERGY | S | 2 | 0 | 0 | 2 | 2 | 2 |
| | MAK16214 | QUALITY | S | 2 | 0 | 0 | 2 | 2 | 2 |
| | | | | 19 | 0 | 4 | 23 | 21 | 30 |

5th Semester

| Prerequisite | Course Code | Course Name | C/E | T | A | L | Total | Credit | ECTS |
|-------------------------|-------------|----------------------|-----|---|---|---|-------|--------|------|
| MAK16202 | MAK16301 | THERMODYNAMICS II | Z | 3 | 0 | 0 | 3 | 3 | 5 |
| | MAK16303 | HEAT TRANSFER | Z | 3 | 0 | 0 | 3 | 3 | 5 |
| | MAK16305 | MACHINE ELEMENTS I | Z | 2 | 2 | 0 | 4 | 3 | 4 |
| MAK16204 | MAK16307 | FLUID MECHANICS II | Z | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16309 | MANUFACTURING I | Z | 3 | 0 | 0 | 3 | 3 | 4 |
| | | ELECTIVE 2 | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | | ELECTIVE 3 | S | 3 | 0 | 0 | 3 | 3 | 4 |
| Elective Courses | | | | | | | | | |
| | MAK16311 | MECHANISMS TECHNIQUE | S | 3 | 0 | 0 | 3 | 3 | 4 |

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|--|----------|---|---|-----------|----------|----------|-----------|-----------|-----------|
| | MAK16313 | HEAT INSULATION | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16315 | DESTRUCTIVE AND NON-DESTRUCTIVE TESTING METHODS | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | UNV13020 | TECHNICAL ENGLISH I | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | | | | 20 | 2 | 0 | 22 | 21 | 30 |

6th Semester

| Prerequisite | Course Code | Course Name | C/E | T | A | L | Total | Credit | ECTS |
|-------------------------|-------------|--|-----|-----------|----------|----------|-----------|-----------|-----------|
| MAK16305 | MAK16302 | MACHINE ELEMENTS II | Z | 2 | 2 | 0 | 4 | 3 | 4 |
| MAK16309 | MAK16304 | MANUFACTURING II | Z | 3 | 0 | 0 | 3 | 3 | 4 |
| MAK16301 | MAK16306 | ENGINES | Z | 3 | 0 | 0 | 3 | 3 | 3 |
| | MAK16308 | PRODUCTION SYSTEMS | Z | 3 | 0 | 0 | 3 | 3 | 3 |
| | STAJ16002 | INTERNSHIP PROGRAMME II(20 WORKING DAYS) | Z | 0 | 0 | 0 | 0 | 0 | 4 |
| | | ELECTIVE 4 | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | | ELECTIVE 5 | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | | ELECTIVE 6 | S | 3 | 0 | 0 | 3 | 3 | 4 |
| Elective Courses | | | | | | | | | |
| | MAK16310 | MACHINE DYNAMICS | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16312 | CONTROL THEORY | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16314 | COMPUTER AIDED MANUFACTURING(CAM) | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16316 | DRYING TECHNIQUES | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16318 | LPG AND NATURAL GAS INSTALLATION | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | | | | 20 | 2 | 0 | 22 | 21 | 30 |

7th Semester

| Prerequisite | Course Code | Course Name | C/E | T | A | L | Total | Credit | ECTS |
|-------------------------|-------------|---|-----|-----------|----------|----------|-----------|-----------|-----------|
| | MUF13401 | GRADUATION PROJECT-I | Z | 0 | 2 | 0 | 2 | 1 | 6 |
| | MAK16401 | LABORATORY I | Z | 2 | 0 | 2 | 4 | 3 | 4 |
| | | ELECTIVE 7 | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | | ELECTIVE 8 | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | | ELECTIVE 9 | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | | ELECTIVE 10 | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | | ELECTIVE 11 | S | 3 | 0 | 0 | 3 | 3 | 4 |
| Elective Courses | | | | | | | | | |
| | MAK16403 | INDUSTRIAL ROBOTS | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16405 | PRODUCT DEVELOPMENT | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16407 | INDUSTRIAL MANUFACTURING | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16409 | MACHINE VIBRATIONS | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16411 | COMPUTER AIDED ENGINEERING APPLICATIONS | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16413 | COMPOSITE MATERIALS | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16415 | ALTERNATE ENERGY SOURCES | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16417 | REGIONAL HEATING SYSTEMS | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16419 | BOILERS | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16421 | ENERGY PLANTS | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16423 | ENERGY MANAGEMENT | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16425 | GAS TURBINE | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16427 | SOLAR ENERGY | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16429 | HYDRAULIC MACHINES | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16431 | COMPUTATIONAL FLUID DYNAMICS | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | | | | 17 | 2 | 2 | 21 | 19 | 30 |

8th Semester

| Prerequisite | Course Code | Course Name | C/E | T | A | L | Total | Credit | ECTS |
|-------------------------|-------------|---|-----|---|---|---|-------|--------|------|
| | MUF13402 | GRADUATION PROJECT-II | Z | 0 | 2 | 0 | 2 | 1 | 6 |
| | MAK16402 | LABORATORY II | Z | 2 | 0 | 2 | 4 | 3 | 4 |
| | | ELECTIVE 12 | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | | ELECTIVE 13 | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | | ELECTIVE 14 | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | | ELECTIVE 15 | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | | ELECTIVE 16 | S | 3 | 0 | 0 | 3 | 3 | 4 |
| Elective Courses | | | | | | | | | |
| | MAK16404 | VEHICLE THEORY AND TRANSFERING ELEMENTS | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16406 | MECHATRONIC SYSTEMS | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16408 | THERMOPLASTIC MATERIALS MANUFACTURING METHODS | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16410 | MATERIAL SELECTION IN ENGINEERING | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16412 | POLYMER COMPOSITES TEST METHODS | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16414 | SYSTEM DESIGN OF HYRAULIC AND PNEUMATIC | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16416 | HEAT EXCHANGERS | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16418 | HEAT PUMPS | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16420 | THERMAL SYSTEMS DESIGN | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16422 | HEATING AND VENTILATION | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16424 | FUNDAMENTALS AND DESIGN OF AIR CONDITIONING | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16426 | MOTOR TECHNOLOGIES | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16428 | COOLING TECHNIQUE | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16430 | HEAT MACHINE SYSTEMS | S | 3 | 0 | 0 | 3 | 3 | 4 |

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|--|----------|----------------------------|---|----|---|---|----|----|-----|
| | MAK16432 | INDUSTRIAL FUEL TECHNIQUES | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | MAK16434 | COMBUSTION THEORY | S | 3 | 0 | 0 | 3 | 3 | 4 |
| | | | | 17 | 2 | 2 | 21 | 19 | 30 |
| | | | | | | | | | 240 |
| | | | | | | | | | |