EASTERN MEDITERRANEAN UNIVERSITY

University Curriculum Committee

(Latest update: 9/06/2005)

Program Information

Program Title	MECHANICAL ENGINEERING		Program code	23	
Faculty / School	ENGINEERING	Department	MECHANICAL ENGINEERING		

Level	☐ 2-Year Associate	☐ 3-Year Assoc.	☒ Bachelor	☐ Master (No Thesis)	☐ Master (Thesis)	☐ PhD

Catalog Information

Provide the information for the revised curriculum in sections "Program Description", "Full Curriculum" and "Course Descriptions" which will be printed in the course catalog and the on-line catalog of the University.

Program Description

The Department is committed to foster mechanical engineers who are prepared to contribute to society with reliable basic technological skills and proficiency in their field. For this purpose, some educational targets are set as the students are requested to study intensively towards these targets. Faculty members are constantly improving the educational curricula in order to prepare they graduate highly qualified students who have fulfilled all requirements by the time.

Our aim is to enable students to acquire the technological skills to see things from multiple standpoints in a global perspective by learning extensively from the humanities, social sciences, languages, etc., and by mastering an intense academic background without a favor toward technological knowledge.

The undergraduate program is designed to provide basic mechanical engineering training upon which self-learning, further studies and engineering practice can be built. The program includes various courses covering basic subjects in thermal and fluid sciences, mechanics, machine design and production engineering supplemented by a wide range of specialized senior-year technical electives, and supported by well-equipped laboratories and workshop facilities.

Graduate research in the Department is conducted primarily in the areas of thermal and fluid sciences, mechanics, machine design and manufacturing.

Full Curriculum

***UC** = University Core (like critical thinking, History etc.); **UC-M** = University core in Mathematics; **UC-PN** = University Core in Physical/Natural Sciences; **UC – AH** = University Core in Arts and Humanities; **UC-SB** = University core in Social and Behavioral Sciences; **UE-M** = University Elective in Mathematics; **UE-PN** = University Elective in Physical/Natural Sciences; **UE-MPN** = University elective in Math or Physical / Natural Sciences; **UE – AH** = University Elective in Arts and Humanities; **UE-SB** = University Elective in Social and Behavioral Sciences; **FC** = Faculty Core; **AC** = Area Core; **AE** = Area Elective;*

Semester	Ref Code	Course Code	Full Course Title	Course Category	Credit				Prerequisites	Co-requisites
					Lec	Lab	Tut	Tot		
1	23210	GEED101	SPIKE-I (Sociocult. Professional, Industr. Knowledge & Experience)	UC	0	0	0	**0**		
1	23211	MENG104	Engineering Graphics	AC	2	3	0	**3**		
1	23212	CMPE106	Fundamentals of Computing	UC	2	3	0	**3**		
1	23213	ENGL191	Communication in English-I	UC	3	0	1	**3**		
1	23214	MATH150/1	Calculus-I	UC-M	4	0	1	**4**		
1	23215	PHYS101	Physics-I	UC-PN	4	1	0	**4**		
1	23218	GEED111	General Survey of Knowledge I	UC	3	0	0	**3**		
2	23220	GEED102	SPIKE -II (Sociocult. Professional, Industr. Knowledge & Experience)	UC	0	0	0	**0**		
2	23221	CHEM101	General Chemistry	UC-PN	4	0	1	**4**		
2	23222	ENGL192	Communication in English- II	UC	3	1	0	**3**	EFL101 (P)	
2	23223	MATH152	Calculus-II	FC	4	0	1	**4**	MATH151 (P)	

2	23224	PHYS102	Physics-II	FC	4	1	0	**4**		
2	23225	MENG190	Introduction to Mechanical Eng.	AC	2	0	0	**0**		
2	23228	GEED112	General Survey of Knowledge-II	UC	3	0	0	**3**		
3	23230	GEED201	SPIKE -III (Sociocult. Professional, Industr. Knowledge & Experience)	UC	0	0	0	**0**		
3	23231	MENG284	Engineering Materials	AC	3	2	0	**4**	CHEM101(P)	
3	23232	MENG245	Thermodynamics-I	AC	3	1	0	**3**		
3	23233	CIVL211	Statics	AC	4	1	0	**4**	MATH151 (P) PHYS101(P)	
3	23234	CMPE108	Algorithms & Programming	AC	2	3	0	**3**	CMPE106 (P)	
3	23235	MATH201	Linear Algebra &Differential Equations	FC	4	0	1	**4**	MATH152	
3	23236	MENG200	Workshop Practice-I	AC	0	0	0	**0**		
4	23240	GEED202	SPIKE -IV (Sociocult. Professional, Industr. Knowledge & Experience)	UC	0	0	0	**0**		
4	23241	ENGL201	Communication Skills	AC	3	0	0	**3**	EFL102 (P)	
4	23242	MENG246	Thermodynamics-II	AC	3	1	0	**3**	MENG245 (P)	
4	23243	MENG222	Strength of Materials	AC	4	1	0	**4**	CIVL211 (P)	
4	23244	MENG233	Rigid Body Dynamics	AC	4	0	1	**4**	CIVL211 (P)	
4	23245	EENG225	Fundamentals of EEE	AC	3	1	0	**3**	PHYS102 (P)	
4	23246	MENG300	Workshop Practice-II	AC	0	0	0	**0**		
5	23250	GEED301	SPIKE -V (Sociocult. Professional, Industr. Knowledge & Experience)	UC	0	0	0	**0**		
5	23251	MENG353	Fluid Mechanics	AC	4	1	0	**4**	MATH201 (P)	
5	23252	MENG364	Manufacturing Technology	AC	4	1	0	**4**	MENG284 (P)	
5	23253	MENG331	Dynamics of Machinery	AC	4	1	0	**4**	MENG233 (P) MATH201 (P)	
5	23254	MENG375	Machine Elements -I	AC	3	0	1	**3**	MENG222 (P)	
5	23255	MATH373	Numerical Analysis for Engineers	UC-M	3	1	0	**3**	MATH201 (P)	
5	23257	TURK100/199	Communication in Turkish	UC	3	0	0	**3**		
6	23260	GEED302	SPIKE-VI (Sociocult. Professional, Industr. Knowledge & Experience)	UC	0	0	0	**0**		
6	23261	MENG332	Control Systems	AC	4	1	0	**4**	MENG331 (P)	
6	23262	MENG345	Heat Transfer	AC	4	1	0	**4**	MENG245 (P) MATH201 (P)	
6	23263	MENG376	Machine Elements--II	AC	3	0	1	**3**	MENG375 (P)	
6	23264	MENG303	Principles of CAE	AC	3	1	0	**3**	MENG104 (P)	
6	23265	MATH322	Probability & Statistical Methods	FC	3	1	0	**3**		
6	23267	HIST200/299	History of Turkish Reforms	UC	2	0	0	**2**		
7	23270	MENG491	Intro. To Capstone Design	FC	0	0	0	**0**	MENG400 (C)	
7	23271		Area Elective-I	AE	4	1	0	**4**		
7	23272		Area Elective-II	AE	4	1	0	**4**		
7	23273		University Elective - Arts & Humanities-I	UE-AH	3	0	0	**3**		
7	23274		University Elective - Social & Behavioral Sciences	UE-SB	3	0	0	**3**		
7	23275	IENG420	Engineering Economy	UC-SB	3	0		**3**		
7	23276	MENG400	Industrial Training	AC	0	0		**0**	MENG200	
8	23281	MENG492	Capstone Team Project	FC	2	5		**4**	MENG400 (P)	
8	23282		Area Elective-III	AE	4	1		**4**		
8	23283		Area Elective-IV	AE	4	1		**4**		
8	23284	IENG450	Industrial Management	UC-SB	3	0		**3**		

8	23285		University Elective - Arts & Humanities-II	UE-AH	3	0		**3**		

Course Descriptions – I - English: All compulsory courses offered by the department of the program

1. **MENG104 Engineering Graphics**

Principles of engineering graphics with the emphasis on laboratory use of AUTOCAD software. Plane Geometry, geometrical constructions, joining of arcs, principles of orthographic projection, isometric and oblique drawing, principles of sectioning, reading engineering drawing from blueprints, building plans or electrical circuit diagrams.

*Credits: (2 /3 /0) **3*** *Prerequisites: None* *Co-requisites: None*

Abbreviated Title: Engineering Graphics *Category: Area Core Course* *Teaching Language: English*

Keywords:

2. **MENG190 Introduction to Mechanical Engineering**

This curse aims to familiarize first year mechanical engineering students by introducing them to the fundamentals of discipline; job opportunities for mechanical engineers ;basic study skills; an overview of fundamentals laws and principles of mechanical engineering; introduction to problem layout and problem solving methods; simplified engineering modeling and analysis of mechanical systems; collection, manipulation and presentation of engineering data; ethical issues; and the importance of computers and language skills for effective communication.

*Credits: (1 / 0 / 0) **0*** *Prerequisites: None* *Co-requisites: None*

Abbreviated Title: Int to Mechanical Engineer *Category: Area Core Course* *Teaching Language: English*

Keywords:

3. **MENG284 Engineering Materials**

Crystal structure and crystal geometry phase diagrams of alloy systems, heat treatments applied to metallic materials and plain-carbon steels. Mechanical properties of metals stress-strain in metals, tensile test, hardness and hardness testing, fatigue and fracture of metals, impact test, creep of metals and creep test. Strengthening and plastic deformation of metals. Mechanical properties of ceramics, glasses, polymers and composites. Corrosion of metals. Material selection based on mechanical properties.

*Credits: (3 / 2 / 0) **4*** *Prerequisites: CHEM101* *Co-requisites: None*

Abbreviated Title: Engineering Materials *Category: Area Core Course* *Teaching Language: English*

Keywords:

4. **MENG245 Thermodynamics-I**

Basic concepts and definitions. Properties of pure substances. The first law of thermodynamics: closed and open systems. The second law of thermodynamics. Entropy. Second-Law analysis of engineering systems.

*Credits: (3 / 1 / 0) **3*** *Prerequisites: None* *Co-requisites: None*

Abbreviated Title: Thermodynamics-I *Category: Area Core Course* *Teaching Language: English*

Keywords:

5. **MENG200 Workshop Practice-I**

This is to be conducted in the Department's workshops by all ME students who have completed a minimum of two semesters in the Department. Students will spend at least 80 hours in the workshops, and perform various hand and machine tool operations under staff supervision. It includes introduction to engineering materials, and selected practices on laying out and setting out a job, using measuring devices. At the end of the training students will be required to complete a report regarding their training.

*Credits: (0 / 0 / 0) **0*** *Prerequisites: None* *Co-requisites: None*

Abbreviated Title: Workshop Practice-I *Category: Area Core Course* *Teaching Language: English*

Keywords:

6. **MENG246 Thermodynamics-II**

Gas power cycles. Vapor and combined power cycles. Refrigeration cycles. Thermodynamic property relations. Gas mixtures. Gas-vapor mixtures and air conditioning. Chemical reactions. Chemical and phase equilibrium. Thermodynamics of high speed fluid flow.

*Credits: (3 / 1 / 0) **3*** *Prerequisites: MENG245* *Co-requisites: None*

Abbreviated Title: Thermodynamics-II *Category: Area Core Course* *Teaching Language: English*

Keywords: Power generation, Refrigeration and Air conditioning, Combustion, entropy

7. **MENG222 Strength of Materials**

Definition of stress, strain. Hook's law. Constitutive relations for uniaxial stresses. Shearing stress and strain. Torsion of circular members. Thin walled pressure vessels. Relations between bending moment, shearing force and distributed loads. Bending of beams with symmetrical sections. Bending of composite beams

*Credits: (4 / 1 / 0) **4*** *Prerequisites: MENG211* *Co-requisites: None*

Abbreviated Title: Strength of Materials *Category: Area Core Course* *Teaching Language: English*

Keywords: Axial stress, shear stress, torsion, bending, beams, buckling

8. **MENG233 Rigid Body Dynamics**

Kinematics of rigid bodies.2-D rigid body dynamics, D` Alembert`s principle. Energy Methods. Principle of impulse and momentum Angular momentum in 3-D.Motion about a fixed axis. Undamped vibration of rigid bodies

*Credits: (4 / 0 / 1) **4*** *Prerequisites :MENG 211* *Co-requisites: None*

Abbreviated Title: Rigid Body Dynamics *Category: Area Core Course* *Teaching Language: English*

	Keywords:
9.	**MENG300 Workshop Practice-II** *. At the end of the training students will be required to complete a report regarding their training.* *Credits: (0 / 0 / 0) **0*** *Prerequisites: None* *Co-requisites: None* *Abbreviated Title: Workshop Practice-II* *Category: Area Core Course* *Teaching Language: English* *Keywords: Workshop*
10.	**MENG353 Fluid Mechanics** *Fluid static's and forces on submerged bodies Introduction to kinematics of fluid flow. Energy, continuity and momentum equations. Navier-Stokes equations. Viscous flow through closed conduits. Fundamentals of boundary layer analysis. Similitude and dimensional analysis. Potential flow. Introduction to hydraulic machinery. ME 363 Principles of Production Engineering 4 Introduction to production engineering. Material properties. Casting. Power metallurgy. Processing of polymers. Metal working, hot working and cold working processes. Chip removal process. Non-traditional machining processes. Welding. Manufacturing systems and automation.* *Credits: (4 / 1 / 0) 4* *Prerequisites: MATH201* *Co-requisites: None* *Abbreviated Title: Fluid Mechanics* *Category: Area Core Course* *Teaching Language: English* *Keywords:*
11.	**MENG364 Manufacturing Technology** Fundamentals and principles of major manufacturing processes: casting, bulk deformation, sheet metalworking, powder metallurgy. Processing of polymers, ceramics, glass, rubber and composites. Metal cutting: cutting conditions, forces, temperatures, tool life, surface finish, coolants. Cutting tool materials. Principles, tools and process capabilities of basic machining operations: turning, milling, drilling, planning, shaping, boring, broaching. Gear manufacturing. Abrasive operations: grinding, finishing operations. Non-traditional processes. Basics of joining and assembling. Fusion and solid-state welding. Essentials of computer numerical control. *Credits: (4 / 1 /01) **4*** *Prerequisites: MENG284* *Co-requisites: None* *Abbreviated Title: Manufacturing Technology* *Category: Area Core Course* *Teaching Language: English* *Keywords:*
12.	**MENG331 Dynamics of Machinery** Mechanical vibrations: 2-D.O.F. vibrating systems, vibration measuring instruments, numerical methods for multi-degree of freedom systems, Dunkerley's equations, vibration of continuous systems, random vibrations. Balancing of machinery: rigid rotors, reciprocating machines, flywheels, planar linkages, balancing machines and instrumentation. Cam dynamics, gyroscope and governors *Credits: (4 / 1 / 0) **4*** *Prerequisites: MENG233* *Co-requisites: MATH201* *Abbreviated Title: Dynamics of Machinery* *Category: Area Core Course* *Teaching Language: English* *Keywords:*
13.	**MENG375 Machine Elements-I** Transformation of stress, Mohr's circle. Constitutive equations. Combined loadings. Deflection of beams. Stability of columns. Yield criteria. Strength of mechanical elements. Failure of elements under static and dynamic loadings. *Credits: (3 / 0 / 1) **3*** *Prerequisites: MENG222* *Co-requisites: None* *Abbreviated Title: Machine Elements-I* *Category: Area Core Course* *Teaching Language: English* *Keywords:*
14.	**MENG332 Control Systems** Control engineering mathematics, complex variables and Laplace transforms. Initial and final value theorems. Introduction to practical controllers and control principles. Mathematical modeling of dynamic systems, transfer functions and block diagrams, transient response analysis, stability analysis. Analysis of systems, deviation of transfer function and frequency response for various systems, devices and elements. *Credits: (4 / 1 / 0) **4*** *Prerequisites: MENG331* *Co-requisites: None* *Abbreviated Title: Control Systems* *Category: Area Core Course* *Teaching Language: English* *Keywords: mechanical engineering control, mechanical engineering controllers, control principles, mechanical devices and elements*
15.	**MENG345 Heat Transfer** Introduction, Conservation Laws, Introduction to conduction, One-dimensional steady state conduction, thermal generation, and extended surface, Two-dimensional and transient conduction, Introduction to convection, External Flow, Internal Flow, Free Convection, Boiling and Condensation, Heat Exchangers, Thermal Radiation, Absorption, reflection, and transmission, Radiation exchange, Mass Transfer. *Credits: (4 / 1 / 0) **4*** *Prerequisites: MENG245* *Co-requisites: MATH201* *Abbreviated Title: Heat Transfer* *Category: Area Core Course* *Teaching Language: English* *Keywords:*
16.	**MENG376 Machine Elements-II** Screw threads and threaded fasteners. Bolted and riveted joints in shear. Welded and bonded joints, antifriction and journal bearings. Spur, helical worm and bevel gears, splines, force and stress analysis of gears and gear systems. Clutches, brakes and couplings. Belt and chain drives. Cam and follower systems. Systematic approach to design. *Credits: (3 / 0 / 1) **3*** *Prerequisites: MENG375* *Co-requisites: None* *Abbreviated Title: Machine Elements-II* *Category: Area Core Course* *Teaching Language: English* *Keywords:design of machine parts, machine elements, components design, mechanical engineering design*
17.	**MENG303 Principles of CAE** Integration of computers into the design cycle. Interactive computer modeling and analysis. Geometrical modeling with wire frame, surface, and solid models. Finite element modeling and analysis. Curves and surfaces and CAD/CAM data exchange. The integration of CAD, CAE and CAM systems.

	Credits: (3 /1/ 0) ***3***	*Prerequisites: MENG104*	*Co-requisites: None*
	Abbreviated Title: Principles of CAE	*Category: Area Core Course*	*Teaching Language: English*
	Keywords:		
18.	**MENG491 Introduction to Capstone Design**		
	The course aims to prepare the senior year students for their capstone design projects, and to provide guidence with the selection of their project advisors, topics and teams The students are introduced to the basic features of the Capstone Design process, elements of a Capstone Project Report and written oral presentation techniques.		
	Credits: (0 / 0 / 0) ***0***	*Prerequisites: None*	*Co-requisites: None*
	Abbreviated Title: Int to Capstone Design	*Category: Area Core Course*	*Teaching Language: English*
	Keywords:		
19.	**MENG400 Industrial Training**		
	This is a period comprising a minimum of 40 days' training to be completed in an industrial organization by all students who are effectively in their junior or senior year. Students should obtain approval of the Department before commencing training. Following this training, students will be required to write a formal report and give a short presentation before a committee regarding their training.		
	Credits: (0 / 0 / 0) ***0***	*Prerequisites: MENG200 F*	*Co-requisites: None*
	Abbreviated Title :Industrial Training	*Category: Area Core Course*	*Teaching Language: English*
	Keywords:		
20.	**MENG492 Capstone Team Project**		
	The purpose of the course is to develop an understanding of independent research through the study of a particular Mechanical Engineering topic of interest. The special project is an exercise in the professional application of specialist skills and experience developed in Mechanical Engineering program. Research topics, which may be principally experimental, theoretical or applied, will be chosen in consultation with a project supervisor.		
	Credits: (2 / 0 / 5) ***4***	*Prerequisites:* MENG 400	*Co-requisites: None*
	Abbreviated Title :Capstone Team Project	*Category: Area Core Course*	*Teaching Language: English*
	Keywords:		

Course Descriptions – II - English : All compulsory courses offered by other academic units

1.	**CMPE106 Fundamentals of Computing**		
	Information technology and computers: data, information, input, output, processing, hardware and software. Basic computer components architecture. Types of computer systems and computer networks. Working with computer software: operating systems, user programs and packaged software. Several applications of important software packages. Understanding the dynamics of internet, effectively using the Internet facilities for research and designing web-pages. Structured programming concepts. Algorithmic problem solving, tracing algorithms, Flowcharts-pseudocodes and other techniques. Examples in Fortran and Visual Basic languages.		
	Credits: (2 / 3 / 0) ***3***	*Prerequisites: None*	*Co-requisites: None*
	Abbreviated Title: Fundamentals of Computing	*Category: University Core Course*	*Teaching Language: English*
	Keywords: Computer, Hardware, Software, Algorithm, Programming, Operating Systems, Office Programs, Internet		
	Department offering the course: 23 – Department of Mechanical Engineering		
2.	**COMP108 Algorithms and Programming**		
	Introduction to Fortran, Visual Basic (VB) and Matlab programming languages: data types, constants and variables; program structures. Selection, and repetition structures and functions. Concepts of Object Oriented programming. Loops and Multi dimensional arrays. File processing. Formatted I/O. Random file access. Index structures, file organization and database applicaitons.		
	Credits: (2 / 3 / 0) ***3***	*Prerequisites: CMPE106*	*Co-requisites: None*
	Abbreviated Title: Algorithms and Programming	*Category: University Core Course*	*Teaching Language: English*
	Keywords:		
	Department offering the course: 23 – Department of Mechanical Engineering		
3.	**CHEM101 General Chemistry**		
	Atoms, molecules and ions; Mass relations in chemistry, stoichiometry; Gasses, the ideal gas law, partial pressures, mole fractions, kinetic theory of gases; Electronic structure and the periodic table; Thermo chemistry, calorimetry, enthalpy, the first law of thermodynamics; Liquids and Solids; Solutions; Acids and Bases; Organic Chemistry.		
	Credits: (4 / 0 / 1) ***4***	*Prerequisites: None*	*Co-requisites: / None*
	Abbreviated Title: General Chemistry	*Category: University Core Course*	*Teaching Language: English*
	Keywords: chemical terms, nomenclature, chemical bonds, polarity, states of matter, chemical formulas, measurements, natural science, basic science		
	Department offering the course: 43 – Department of Chemistry		

4.	**EENG225 Fundamentals of Electrical Engineering** *Credits: (3 / 0 / 1) **3*** *Prerequisites: PHYS102* *Co-requisites: / None* *Abbreviated Title: Fundamentals of Electrical Eng* *Category: University Core Course* *Teaching Language: English* *Keywords:* *Department offering the course: 21 – Department of Electrical and Electronics Engineering*
	CIVL211 Statics *Basic definitions, concepts, and principles. Statics of particles, resultant of forces in space, equilibrium and free-body concept. Statics of Rigid bodies, moments, couples, and equivalent force systems. Equilibrium of rigid bodies. Distributed forces, centroids, and centers of gravity. Analysis of trusses and frames. Shear force and bending moment diagrams. Friction. Moment of inertia. Principle of virtual work.* *Credits: (4 /0 / 1) **4*** *Prerequisites:* MATH151 *Co-requisites: / None* *Abbreviated Title: Statics* *Category: University Core Course* *Teaching Language: English* *Keywords:* *Department offering the course: 22 – Civil Engineering*
5.	**IENG355 Ethics in Engineering** This course is designed to introduce moral rights and responsibilities of engineers in relation to society, employers, colleagues and clients. Analysis of ethical value conflict in modern engineering practice. Importance of intellectual property rights and conflicting interests. Ethical aspects in engineering design, manufacturing, and operations. Safety and occupational hazard considerations in cost-benefit and risk analysis. *Credits: (3 / 0 / 0) **3*** *Prerequisites: None* *Co-requisites: Consent of instructor* *Abbreviated Title: Ethics in Engineering* *Category: University Core Course* *Teaching Language: English* *Keywords:Occupational Responsibility, Ethical Value Conflict, Intellectual Property Rights* *Department offering the course: 26 – Department of Industrial Engineering*
6.	**IENG420 Engineering Economy** An introduction to the basics of economic analysis for decisions in engineering design, in manufacturing, in manufacturing equipment, and in industrial projects. Time value of money. Cash flow analysis. Cost of capital. Return on investment. Elements of cost and cost estimation. Break-even analysis. Decision making among alternatives. Effects of depreciation. Taxes. Replacement analysis. Inflation. *Credits: (3 / 0 / 0) **3*** *Prerequisites: Senior standing* *Co-requisites: None* *Abbreviated Title: Engineering Economy* *Category: University Core Course* *Teaching Language: English* *Keywords: Financial Decision Making, Cost, Cost-Benefit, Interest, Capital Budgeting, Rate-of-return. Replacement* *Department offering the course: 26 – Department of Industrial Engineering*
7.	**IENG450 Industrial Management** This is a service course offered to non-IE engineering students. The aim is to prepare the students to assume positions in industry as engineering managers. The topics covered include the historical development of industrial management, introductory operations management, functions of technology management, managing technological change, managing engineering projects, and managing the engineering career. *Credits: (3 / 0 / 0) **3*** *Prerequisites: None* *Co-requisites: None* *Abbreviated Title: Industrial Management* *Category: University Core Course* *Teaching Language: English* *Keywords: Operations Management* *Department offering the course: 26 – Department of Industrial Engineering*
8.	**MATH150 Calculus with Precalculus** Sets, set operations and numbers. Polynomials, factorization, equations and root finding. Real axis, labeling integers, rationals and some irrationals on the number axis. Cartesian coordinates. Lines. Graphs of equations and quadratic curves. Functions and graphs of functions. Limits and continuity. Derivatives. Rules of differentiation. Higher order derivatives. Chain rule. Related rates. Rolle's and the mean value theorem. Critical Points. Asymptotes. Curve sketching. Integrals. Fundamental Theorem. Techniques of integration. Definite integrals. Application to geometry and science. Indeterminate forms. L'Hospital's Rule. Improper integrals. Infinite series. Geometric series. Power series. Taylor series and binomial series. *Credits: (4 / 0 / 1) **4*** *Prerequisites: None* *Co-requisites: None* *Abbreviated Title: Calculus with Precalculus* *Category: University Core Course* *Teaching Language: English* *Keywords:* *Department offering the course: 41 – Department of Applied Mathematics & Computer Science*
9.	**MATH151 Calculus-I** Limits and continuity. Derivatives. Rules of differentiation. Higher order derivatives. Chain rule. Related rates. Rolle's and the mean value theorem. Critical Points. Asymptotes. Curve sketching. Integrals. Fundamental Theorem. Techniques of integration. Definite integrals. Application to geometry and science. Indeterminate forms. L'Hospital's Rule. Improper integrals. Infinite series. Geometric series. Power series. Taylor series and binomial series. *Credits: (4 / 0 / 1) **4*** *Prerequisites: None* *Co-requisites: None* *Abbreviated Title: Calculus-I* *Category: University Core Course* *Teaching Language: English* *Keywords:* *Department offering the course: 41 – Department of Applied Mathematics & Computer Science*
10.	**MATH152 Calculus-II**

	Vectors in R3. Lines and Planes. Functions of several variables. Limit and continuity. Partial differentiation. Chain rule. Tangent plane. Critical Points. Global and local extrema. Lagrange multipliers. Directional derivative. Gradient, Divergence and Curl. Multiple integrals with applications. Triple integrals with applications. Triple integral in cylindrical and spherical coordinates. Line, surface and volume integrals. Independence of path. Green's Theorem. Conservative vector fields. Divergence Theorem. Stokes' Theorem. *Credits: (4 / 0 / 1)* ***4*** *Prerequisites: MATH150 or MATH151 Co-requisites: None* *Abbreviated Title: Calculus-II Category: University Core Course Teaching Language: English* *Keywords:* *Department offering the course: 41 – Department of Applied Mathematics & Computer Science*
11.	**MATH201 Linear Algebra and Differential Equations** Linear Algebra; Matrix algebra, special matrices and row operations, Gaussian elimination method, determinants, adjoint and inverse matrices, Cramer's rule, linear vector spaces, linear independence, basis and dimension. First order ordinary differential equations; definitions and general properties of solutions, separable, homogeneous and linear equations, exact equations and integration factors. Higher order equations with constant coefficients; Basic theory and the method of reduction of order, second order homogeneous equations with constant coefficients, nonhomogeneous equations, the method of undetermined coefficients, the method of variation of parameters, the Cauchy-Euler equations. Power series solutions; classification of points, ordinary and singular points, power series solutions about ordinary points, power series solutions about regular singular points, the method of frobenius. Systems of differential equations; general properties of constant coefficient systems, eigenvalues and eigenvectors, diagonalizable matrices, solutions of linear systems with constant coefficients. Boundary value problems. *Credits: (4 / 0 / 1)* ***4*** *Prerequisites: MATH152 Co-requisites: None* *Abbreviated Title: Linear Alg & Diff Equations Category: Faculty Core Course Teaching Language: English* *Keywords:* *Department offering the course: 41 – Department of Applied Mathematics & Computer Science*
12.	**MATH322 Probability and Statistical Methods** Introduction to probability and statistics. Operations on sets. Counting problems. Conditional probability and total probability formula, Bayes' theorem. Introduction to random variables, density and distribution functions. Expectation, variance and covariance. Basic distributions. Joint density and distribution function. Descriptive statistics. Estimation of parameters, maximum likelihood estimator. Hypothesis testing. *Credits: (3 / 0 / 1)* ***3*** *Prerequisites: MATH152 Co-requisites: None* *Abbreviated Title: Prob & Statistical Methods Category: Faculty Core Course Teaching Language: English* *Keywords:* *Department offering the course: 41 – Department of Applied Mathematics & Computer Science*
13.	**MATH373 Numerical Analysis for Engineers** Numerical error. Solution of nonlinear equations, and linear systems of equations. Interpolation and extrapolation. Curve fitting. Numerical differentiation and integration. Numerical solution of ordinary differential equations. *Credits: (3 / 0 / 1)* ***3*** *Prerequisites: MATH201 Co-requisites: None* *Abbreviated Title: Numerical Analysis for Eng Category: Faculty Core Course Teaching Language: English* *Keywords:* *Department offering the course: 41 – Department of Applied Mathematics & Computer Science*
14.	**PHYS101 Physics-I** Physical quantities and units. Vector calculus. Kinematics of motion. Newton`s laws of motion and their applications. Work-energy theorem. Impulse and momentum. Rotational kinematics and dynamics. Static equilibrium. *Credits: (4 / 0 / 1)* ***4*** *Prerequisites: None Co-requisites: None* *Abbreviated Title: Physics-I Category: University Core Course Teaching Language: English* *Keywords:* *Department offering the course: 42 – Department of Physics*
15.	**PHYS102 Physics-II** Kinetic theory of ideal gases. Equipartition of energy. Heat, heat transfer and heat conduction. Laws of thermodynamics, applications to engine cycles. Coulombs law and electrostatic fields. Gauss's law. Electric potential. Magnetic field. Amperes law. Faradays law. *Credits: (4 / 0 / 1)* ***4*** *Prerequisites: None Co-requisites: PHYS101* *Abbreviated Title: Physics-II Category: Faculty Core Course Teaching Language: English* *Keywords: Charge, Electromagnetic Induction* *Department offering the course: 42 – Department of Physics*
16.	**ENGL191 Communication in English-I** *Credits: : (3 / 0 / 1)* ***3*** *Prerequisites: Co-requisites: None* *Abbreviated Title: Communication in English-I Category: University Core Course Teaching Language: English* *Keywords:* *Department offering the course: FL – School of Foreign Languages*
17.	**ENGL112 Communication in English-II** *Credits: : (3 / 0 / 1)* ***3*** *Prerequisites: Co-requisites: None* *Abbreviated Title: Communication in English-I Category: University Core Course Teaching Language: English*

	Keywords: *Department offering the course: FL – School of Foreign Languages*
18.	**ENGL201 Basic Communication Skills-I** EFL 201 is a second year Mainstream Communication Skills course for students at the Faculty of Engineering. The course aims to introduce a range of skills, including effective written and oral communication, research skills and study skills. Throughout the course the students will be involved in project work intended to help them in their immediate and future academic and professional life. This will include library research, technical report writing and an oral presentation. By investigating a topic of their own choice, students will develop their understanding of independent research skills. During the report writing process, students will improve their writing and develop the ability to produce organized, cohesive work. The oral presentation aims to enhance spoken fluency and accuracy and provide training in the components of a good presentation. *Credits: : (3 / 0 / 0)* ***3*** *Prerequisites: None Co-requisites: None* *Abbreviated Title: Basic Communication Skills-I Category: Faculty Core Course Teaching Language: English* *Keywords:* *Department offering the course: FL – School of Foreign Languages*
19.	**GEED101 SPIKE-I (Sociocult. Professional, Industr. Knowledge & Experience)** *Credits: : (0 / 0 / 0)* ***0*** *Prerequisites: None Co-requisites: None* *Abbreviated Title: General Education-I Category: University Core Course Teaching Language: English* *Keywords:* *Department offering the course: 4A – Department of General Education*
20.	**GEED102 SPIKE-II (Sociocult. Professional, Industr. Knowledge & Experience)** SPIKE Seminars *Credits: : (0 / 0 / 0)* ***0*** *Prerequisites: GEED101 Co-requisites: None* *Abbreviated Title: General Education-II Category: University Core Course Teaching Language: English* *Keywords:* *Department offering the course: 4A – Department of General Education*
21.	**GEED201 SPIKE-III (Sociocult. Professional, Industr. Knowledge & Experience)** *Credits: : (0 / 0 / 0)* ***0*** *Prerequisites: GEED102 Co-requisites: None* *Abbreviated Title: General Education III Category: University Core Course Teaching Language: English* *Keywords:* *Department offering the course: 4A – Department of General Education*
22.	**GEED202 SPIKE-IV (Sociocult. Professional, Industr. Knowledge & Experience)** *Credits: : (0 / 0 / 0)* ***0*** *Prerequisites: GEED201 Co-requisites: None* *Abbreviated Title: General Education-IV Category: University Core Course Teaching Language: English* *Keywords:* *Department offering the course: 4A – Department of General Education*
23.	**GEED301 SPIKE V (Sociocult. Professional, Industr. Knowledge & Experience)** SPIKE Seminars *Credits: : (2 / 0 / 0)* ***0*** *Prerequisites: GEED202 Co-requisites: None* *Abbreviated Title: General Education V Category: University Core Course Teaching Language: English* *Keywords:* *Department offering the course: 4A – Department of General Education*
24.	**GEED302 SPIKE VI (Sociocult. Professional, Industr. Knowledge & Experience)** SPIKE Seminars *Credits: : (2 / 0 / 0)* ***0*** *Prerequisites: GEED301 Co-requisites: None* *Abbreviated Title: General Education VI Category: University Core Course Teaching Language: English* *Keywords:* *Department offering the course: 4A – Department of General Education*
25.	**GEED111 General Survey of Knowledge-I** General Education Department did not announce it yet. *Credits: : (3 / 0 / 0)* ***3*** *Prerequisites: None Co-requisites: None* *Abbreviated Title: Critical Thinking-I Category: University Core Course Teaching Language: English* *Keywords:* *Department offering the course: 4A – Department of General Education*
26.	**GEED112 General Survey of Knowledge-II** General Education Department did not announce it yet. *Credits: : (3 / 0 / 0)* ***3*** *Prerequisites: None Co-requisites: None* *Abbreviated Title: Critical Thinking-I Category: University Core Course Teaching Language: English* *Keywords:* *Department offering the course: 4A – Department of General Education*
27.	**HIST200 History of Turkish Reforms**

	*Credits: : (2 / 0 / 0) **2***	*Prerequisites: None*	*Co-requisites: None*
	Abbreviated Title: General Education VI	*Category: University Core Course*	*Teaching Language: Turkish*
	Keywords:		
	Department offering the course: HC – ATATÜRK Research Center		
28.	**TURK100 Communication in Turkish**		
	TURK100 is a Basic Turkish course introducing the Turkish language. It incorporates all four language skills and provides an introduction to basic grammar structures. Students will be encouraged to develop their writing skills through a variety of tasks. The aim of this course is for students to be able to understand and communicate in everyday situations, both in the classroom and in a Turkish-speaking environment.		
	*Credits: : (3 / 0 / 0) **3***	*Prerequisites: None*	*Co-requisites: None*
	Abbreviated Title: Communication in Turkish	*Category: University Core Course*	*Teaching Language: Turkish*
	Keywords:		
	Department offering the course: FL – School of Foreign Languages		

Course Descriptions – I - Turkish: All core courses offered by the department of the program
Ders Tanımları – I – Türkçe: Programı sunan Bölüm tarafından verilen tüm temel dersler

1.	**MENG104 Teknik Resim**		
	Mühendislik çiziminde takımlar, çizgiler, terimler ve standartlar. Temel Geometrik konstrüksiyonlar. İzdüsüm Yöntemleri. Görünüş Çesitleri. Kesit Görünüşler. Ölçülendirme. Yardımcı Görünüşler. Perspektif Çizimi. Yüzey İslemleri. Vida Dişleri. Civata ve Somunlar. AUTOCAD Çizim Programı ve Uygulamaları. Şekil ve Konum Toleransları. Makine Elemanlarının Çizimleri. Demontaj ve Montaj Çizimleri. Dişliler ve Dişli Kutusu Uygulamaları.		
	*Kredi: (2 /3 / 0) **3***	*Önkoşul: Yok*	*Yankoşul: Yok*
	Dersin Kısa Adı: Teknik Resim	*Kategorisi: Alan Ana*	*Dersi Eğitim Dili: İngilizce*
	Anahtar Kelimeler: Geometrik konstrüksiyonlar,Montaj Çizimleri,Perspektif Çizimi		
2.	**MENG190 Makine Muhendisligine Giris**		
	birinci sunif Makina muhendisligi ogrencilerine, makine muhendisligi hakkinda genel bilgi vermesi ve makine muhendisliginin olanaklrini, analtan ders, mekine muhendisligi ogrencilerine problem cozme analiz ve modellemeye iliskin temel biolgiler icerir.		
	*Kredi: (1 / 0 / 0) **0***	*Önkoşul:Yok*	*Yankoşul: Yok*
	Dersin Kısa Adı: Makine Muhendisligine Giris	*Kategorisi: Alan Ana*	*Dersi Eğitim Dili: İngilizce*
	Anahtar Kelimeler: modelleme,makine muhendisligine baslangic		
3.	**MENG284 Malzeme Bilgisi**		
	Atom Yapısı. Kristal Yapısı ve Kafes Hataları. Metallerin Plastik Deformasyonu. Faz Diyagramları. Katı Hal Dönüşümleri. Demir-Karbon Denge Diyagramı. Demir ve Çelik Üretimi. Çeliklerin Sınıflandırılması ve Standartlar. Plastik Malzemeler. Korozyon ve Oksitlenme. Çeliklerin Isıl İslemi. ZSD Diyagramları. Sertleştirme Kabiliyeti. Martemperleme ve Ostemperleme. Yüzey Sertleştirme İslemleri. Alaşımlı Çelikler. Malzeme Muayenesinin Esasları. Metalik Malzemelerin Çekme Basma ve Eğme Deneyleri. Sertlik Ölçme Yöntemleri. Darbe Deneyi. Metalografi Deneyi. Çökertme Deneyi. Yorulma ve Sürünme Deneyleri. Tahribatsız Muayene Yöntemleri. Deney Raporu Hazırlama Tekniği		
	*Kredi: (3 / 2 / 0) **4***	*Önkoşul: CHEM101*	*Yankoşul: Yok*
	Dersin Kısa Adı: Malzeme Bilgisi	*Kategorisi: Alan Ana*	*Dersi Eğitim Dili: İngilizce*
	Anahtar Kelimeler: Atom Yapısı,Demir-Karbon Denge Diyagramı,Martemperleme ve Ostemperleme		
4.	**MENG245 Termodinamik-I**		
	Temel Kavramlar ve Tanımlar. Saf Madde ve Saf Maddenin Özellikleri. İdeal Gaz ve İdeal Gazın Durum Denklemi. Termodinamiğin Birinci Kanunu. Termodinamiğin İkinci Kanunu		
	*Kredi: (3 / 1 / 0) **3***	*Önkoşul:Yok*	*Yankoşul:Yok*
	Dersin Kısa Adı: Termodinami-I	*Kategorisi: Alan Ana*	*Dersi Eğitim Dili: İngilizce*
	Anahtar Kelimeler: Durum Denklemi,Termodinamiğin Birinci Kanunu,Termodinamiğin İkinci Kanunu		
5.	**MENG200 Atolye Staji-I**		
	Atolye staji I ogrencilere almis olduklari teorik dersler yaninda, bu derslerle ilgili bazi temel kavramlari kazandirmak amaciyla bolum icerisinde zorunlu olarak vereilen bir derstir..		
	*Kredi: (0 / 0 / 0) **0***	*Önkoşul:Yok*	*Yankoşul: Yok*
	Dersin Kısa Adı: Atolye Staji-I	*Kategorisi: Alan Ana*	*Dersi Eğitim Dili: İngilizce*
	Anahtar Kelimeler: Atolye staji		
6.	**MENG246 Termodinamik-II**		
	Entropi. Tersinir ve Tersinmez Durum Değişimleri. Güç Çevrimleri. Soğutma Çevrimleri. İdeal Gaz Karışımları. Hava-Buhar Karışımları		
	*Kredi: (3 / 1 / 0) **3***	*Önkoşul: MENG245*	*Yankoşul: Yok*
	Dersin Kısa Adı: Termodinamik-II	*Kategorisi: Alan Ana*	*Dersi Eğitim Dili: İngilizce*
	Anahtar Kelimeler: Güç üretimi, soğutma ve iklimlendirme, yanma, entropi		
7.	**MENG222 Cisimlerin Dayanımı**		
	İç Kuvvetler ve Kesit Tesirleri Diyagramları. Gerilme ve Şekil Değiştirme Kavramları. Malzemelerin Mekanik Özellikleri. Eksenel Yükleme. Burulma. Basit Eğilme. Kesmeli Eğilme. Gerilme ve Şekil Değişimlerinin Transformasyonu. Kiriş ve Saftların Tasarımı. Kiriş ve Saftların Çökmesi. Enerji Yöntemleri. Kolonların Burkulması.		

	*Kredi: (4 / 1 / 0) **4***	*Önkoşul:MENG211*	*Yankoşul: Yok*
	Dersin Kısa Adı: Cisimlerin Dayanımı	*Kategorisi: Alan Ana*	*Dersi Eğitim Dili: İngilizce*
	Anahtar Kelimeler: Çekme ve basma dayanımı, kesme dayanımı, burulma dayanımı, eğme dayanımı, kolonların burkulması		
8.	**MENG233 Katı Cisim Dinamiği**		
	Maddesel Nokta ve Rigid Cisim Kavramı. Maddesel Nokta Kinematiği; Maddesel Noktanın Doğrusal ve Açısal Hareketleri. Maddesel Nokta Kinetiği. Hareket Denklemleri. İş ve Enerji Yöntemi. İmpuls ve Momentum Yöntemi. Maddesel Sistem Kinetiği. Rigit Cisim Kinetiği. Hareket Denklemleri. İs ve Enerji Yöntemi. İmpuls ve Momentum Yöntemi. Titreşim		
	*Kredi: (4 / 1 / 1) **4***	*Önkoşul: MENG211*	*Yankoşul: Yok*
	Dersin Kısa Adı: Katı Cisim Dinamiği	*Kategorisi: Alan Ana*	*Dersi Eğitim Dili: İngilizce*
	Anahtar Kelimeler: Maddesel Nokta,Rigit Cisim,Hareket Denklemleri,Enerji Yöntemi		
9.	**MENG300 Atolye Staji-II**		
	ATOLYE STAJI II ogrencilere teorik olarak aldiklari derlerle ilgili bazi pratik biulgileri de kazadirmak icin zorunlu olarak verilen bir dersir.		
	*Kredi: (0 / 0 / 0) **0***	*Önkoşul:Yok*	*Yankoşul: Yok*
	Dersin Kısa Adı: Atolye Staji-II	*Kategorisi: Alan Ana*	*Dersi Eğitim Dili: İngilizce*
	Anahtar Kelimeler: Atolye staji		
10.	**MENG353 Akışkanlar Mekaniği**		
	*Kredi: (4 / 1 / 1) **4***	*Önkoşul:MATH201*	*Yankoşul: Yok*
	Dersin Kısa Adı: Akışkanlar Mekaniği	*Kategorisi: Alan Ana Dersi*	*Eğitim Dili: İngilizce*
	Anahtar Kelimeler:		
11.	**MENG364 Üretim Teknolojisi**		
	Döküm. Modeller. Döküm Kumları. Maçalar. Kalıp Hazırlama. Döküm Yöntemleri. Ergitme Fırınları. Alev ve Arkla Kesme. Kaynak Elektrodları. Tozaltı ve Gazaltı Kaynağı. Lehimleme. Plastik Deformasyon. Soguk İlık ve Sıcak Şekil Verme. Dövme. Haddeleme. Ekstrüzyon. Tel Çekme. Saçların Şekillendirilmesi. Derin Çekme. Genel Talas Kaldırma Bilgisi. Kesici Malzemeler. Takımlar. Kesme Güçleri. Tahrik Güçleri. Kesme Zamanları. Tezgah Gövdeleri. Kızak Kayıt Sistemleri. İs Milleri. Tezgahlarda Tahrik ve Dişli Kutular.		
	*Kredi: (4 / 1 / 1) **4***	*Önkoşul:MENG284*	*Yankoşul: Yok*
	Dersin Kısa Adı: Üretim Teknolojisi	*Kategorisi: Alan Ana*	*Dersi Eğitim Dili: İngilizce*
	Anahtar Kelimeler: Ergitme Fırınları,Döküm,Ekstrüzyon,Deformasyon,Modeller		
12.	**MENG331 Makinalar Dinamiği**		
	*Kredi: (4 / 1 / 1) **4***	*Önkoşul: MENG233*	*Yankoşul: MATH201*
	Dersin Kısa Adı: Makinalar Dinamiği	*Kategorisi: Alan Ana Dersi*	*Eğitim Dili: İngilizce*
	Anahtar Kelimeler:		
13.	**MENG375 Makine Elemanları -I**		
	Tasarımın Anlamı ve Adımları. Statik Yükleme. Gerilme Yığılması. Akma Teorileri. Değişken yükleme. Yorulma Mukavemeti. Sürekli Mukavemet Değeri. Emniyet katsayısı. Millerin boyutlandtırılması. Kaynak. Lehim ve Yapıştırma Bağlantıları. Civata ve Perçinlerin Boyutlandırılması. Kama ve pim Bağlantıları. Pres ve Sıkma Geçmeler. Yaylar.		
	*Kredi: (3 / 0 / 1) **3***	*Önkoşul: MENG222*	*Yankoşul: 8.Akademik dönem*
	Dersin Kısa Adı: Makine Elemanları-I	*Kategorisi: Alan Ana Dersi*	*Eğitim Dili: İngilizce*
	Anahtar Kelimeler: Statik Yükleme,Lehim ve Yapıştırma Bağlantıları, Kama ve pim Bağlantıları,Yaylar		
14.	**MENG332 Kontrol Sistemleri**		
	Temel Kavramlar. Blok Diyagramları. Kontrol Sistemlerinin Sınıflandırılması. Fiziksel Sistemlerin Matematik Modellerinin kurulması. Benzeşimler. Laplace Dönüşümü. Transfer Fonksiyonları. Frekans Cevabı. Kontrol Devresi Elemanları. Kontrol Devresinin Kararlılığı		
	*Kredi: (4 / 1 / 0) **4***	*Önkoşul:MENG331*	*Yankoşul: Yok*
	Dersin Kısa Adı: Kontrol Sistemleri	*Kategorisi: Alan Ana Dersi*	*Eğitim Dili: İngilizce*
	Anahtar Kelimeler: makine muhandisigi temel kontrol kavramlari, makine muhandisligi kontrol cihazlari, kontrol kurallari, mekanik parcalar ve elementler		
15.	**MENG345 Isı Transferi**		
	Temel Tanıtım ve Kavramlar. Kararlı Rejimde Bir Boyutlu İsı İletimi Kararsız Rejimde (zamana bağlı) İsı İletimi. Taşınımla İsı Transferinin Prensipleri. Zorlanmış Taşınımla İsı Transferinde Amprik ve Pratik Bağıntılar. Doğal Taşınımda İsı Transferi. Kaynamada ve Yoğuşmada İsı Transferi. İsı Esanjörleri,İşınımla İsı Transferı.		
	*Kredi: (4 / 1 / 0) **4***	*Önkoşul:MENG245*	*Yankoşul: MATH201*
	Dersin Kısa Adı: Isı Transferi	*Kategorisi: Alan Ana Dersi*	*Eğitim Dili: İngilizce*
	Anahtar Kelimeler: İsı İletimi,İsı Transferi,İsı Esanjörleri		
16.	**MENG376 Makine Elemanları- II**		
	Sürtünme ve Yağlama Teorisi. Kaymalı Yataklar. Rulmanlı Yatakların Seçimi. Kayış-Kasnak Baglantıları. Dişli Çarklar. 2.Proje.		
	*Kredi: (3 / 0 / 1) **3***	*Önkoşul:MENG375*	*Yankoşul:Yok*
	Dersin Kısa Adı: Makine Elemanları-II	*Kategorisi: Alan Ana Dersi*	*Eğitim Dili: İngilizce*
	Anahtar Kelimeler: makine, makine parcalarinin dizayni ,makine elemanlari, parca dizayni, makine muhendisligi dizayni,		
17.	**MENG303 Bilgisayar Destekli Muhendisliğin Prensipleri**		
	Bilgisayarların üretimle birleştirilmesi, Mekanik parçaların interaktif olarak Bilgisayarla modellenip analiz edilmesi. Tel iskelet yöntemi ile Geometrik modelleme, Yüzeysel ve Katı modelleme. Sonlu eleman modellemesi ve analizine giriş. CAD/CAM data dönüşümleri. CAD,		

	CAM ve CAE sistemlerinin birleştirilmesi. *Kredi: (3 / 1 / 0) **3*** *Önkoşul:MENG104* *Yankoşul: MENG364* *Dersin Kısa Adı: Bilg Des Muh Prensipleri* *Kategorisi: Alan Ana Dersi* *Eğitim Dili: İngilizce* *Anahtar Kelimeler: Dizayn, CAE, CAM, CAD*
19.	**MENG491 Bitirme Projesine Giriş** Bu Ders dorduncu sinif birinci donem ogrencilerini bitirme projelerine yardimci olmasi icin hazirlik dersidir.Ogrenciler bitirme porejelerini hazirlamak icin gerekli asamalari ogrenir ve buna yonelik alistirmalarlar yapmakla yukumludur *Kredi: (0 / 0 / 0) **0*** *Önkoşul:Yok* *Yankoşul: Yok* *Dersin Kısa Adı: Bitirme Projesine Giriş* *Kategorisi: Alan Ana Dersi* *Eğitim Dili: İngilizce* *Anahtar Kelimeler: capstone dizayn projeleri*
20.	**MENG400 Yaz Stajı** Bu staj üretim/servis sektöründeki bir organizasyonda en az dört hafta (20 iş günü) yapılmalıdır. Ögrencilerin, organizasyonun değisik yönlerini tartışmaları ve aynı zamanda organizasyonda gözlemlenen bir Makina Mühendisliği problemini tanımlayıp formüle ederek uygun bir çözüm sunmaları gerekmektedir. *Kredi: (0 / 0 / 0) **0*** *Önkoşul:MENG200 F* *Yankoşul: Yok* *Dersin Kısa Adı: Yaz Stajı* *Kategorisi: Alan Ana Dersi* *Eğitim Dili: İngilizce* *Anahtar Kelimeler: Staj*
21.	**MENG492 Bitirme Projesi** Oğrenciler bu derste bitirme projelerini hazirlar ve sunusunu yaparlar, Bagimsiz bir sekilde olusturduklari guruplarla konusu olan projeye yonelik bagimsiz arastirma yapar ve projelerinin teorik geliştirmesini ve pratik uretimini yapmakla yukumludur. *Kredi: (2 / 0 / 5) **4*** *Önkoşul:Yok* *Yankoşul: Yok* *Dersin Kısa Adı: Bitirme Projesi* *Kategorisi: Alan Ana Dersi* *Eğitim Dili: İngilizce* *Anahtar Kelimeler: Capstone,Bitirme Projesi*

Course Descriptions – II - Turkish : All compulsory courses offered by other academic units **Ders Tanımları – II – Türkçe : Diğer akademik birimler tarafından verilen tüm temel dersler**	
1.	**DERSXXX Tam Ders Adı** Ders içeriği… *Kredi: (L / L / T) **X*** *Önkoşul: XXXXXX / Yok* *Yankoşul: XXXXXX / Yok* *Dersin Kısa Adı: XXXXXXXXXXXXXXX* *Kategorisi: XXXXXXXX Dersi Eğitim Dili: XXXXX* *Anahtar Kelimeler: XXXXXX, XXXXXX* *Dersi veren Bölüm: XXXXXXX XXXXXXXX*
2.	**DERSXXX Tam Ders Adı** Ders içeriği… *Kredi: (L / L / T) **X*** *Önkoşul: XXXXXX / Yok* *Yankoşul: XXXXXX / Yok* *Dersin Kısa Adı: XXXXXXXXXXXXXXX* *Kategorisi: XXXXXXXX Dersi Eğitim Dili: XXXXX* *Anahtar Kelimeler: XXXXXX, XXXXXX* *Dersi veren Bölüm: XXXXXXX XXXXXXXX*
3.	**DERSXXX Tam Ders Adı** Ders içeriği… *Kredi: (L / L / T) **X*** *Önkoşul: XXXXXX / Yok* *Yankoşul: XXXXXX / Yok* *Dersin Kısa Adı: XXXXXXXXXXXXXXX* *Kategorisi: XXXXXXXX Dersi Eğitim Dili: XXXXX* *Anahtar Kelimeler: XXXXXX, XXXXXX* *Dersi veren Bölüm: XXXXXXX XXXXXXXX*
4.	**DERSXXX Tam Ders Adı** Ders içeriği… *Kredi: (L / L / T) **X*** *Önkoşul: XXXXXX / Yok* *Yankoşul: XXXXXX / Yok* *Dersin Kısa Adı: XXXXXXXXXXXXXXX* *Kategorisi: XXXXXXXX Dersi Eğitim Dili: XXXXX* *Anahtar Kelimeler: XXXXXX, XXXXXX* *Dersi veren Bölüm: XXXXXXX XXXXXXXX*
5.	**DERSXXX Tam Ders Adı** Ders içeriği… *Kredi: (L / L / T) **X*** *Önkoşul: XXXXXX / Yok* *Yankoşul: XXXXXX / Yok* *Dersin Kısa Adı: XXXXXXXXXXXXXXX* *Kategorisi: XXXXXXXX Dersi Eğitim Dili: XXXXX*

	Anahtar Kelimeler: XXXXXX, XXXXXX *Dersi veren Bölüm: XXXXXXX XXXXXXXX*
6.	**DERSXXX Tam Ders Adı** Ders içeriği… *Kredi: (L / L / T) **X** Önkoşul: XXXXXX / Yok Yankoşul: XXXXXX / Yok* *Dersin Kısa Adı: XXXXXXXXXXXXXX Kategorisi: XXXXXXXX Dersi Eğitim Dili: XXXXX* *Anahtar Kelimeler: XXXXXX, XXXXXX* *Dersi veren Bölüm: XXXXXXX XXXXXXXX*
7.	**DERSXXX Tam Ders Adı** Ders içeriği… *Kredi: (L / L / T) **X** Önkoşul: XXXXXX / Yok Yankoşul: XXXXXX / Yok* *Dersin Kısa Adı: XXXXXXXXXXXXXX Kategorisi: XXXXXXXX Dersi Eğitim Dili: XXXXX* *Anahtar Kelimeler: XXXXXX, XXXXXX* *Dersi veren Bölüm: XXXXXXX XXXXXXXX*
8.	**DERSXXX Tam Ders Adı** Ders içeriği… *Kredi: (L / L / T) **X** Önkoşul: XXXXXX / Yok Yankoşul: XXXXXX / Yok* *Dersin Kısa Adı: XXXXXXXXXXXXXX Kategorisi: XXXXXXXX Dersi Eğitim Dili: XXXXX* *Anahtar Kelimeler: XXXXXX, XXXXXX* *Dersi veren Bölüm: XXXXXXX XXXXXXXX*
9.	**DERSXXX Tam Ders Adı** Ders içeriği… *Kredi: (L / L / T) **X** Önkoşul: XXXXXX / Yok Yankoşul: XXXXXX / Yok* *Dersin Kısa Adı: XXXXXXXXXXXXXX Kategorisi: XXXXXXXX Dersi Eğitim Dili: XXXXX* *Anahtar Kelimeler: XXXXXX, XXXXXX* *Dersi veren Bölüm: XXXXXXX XXXXXXXX*
10.	**DERSXXX Tam Ders Adı** Ders içeriği… *Kredi: (L / L / T) **X** Önkoşul: XXXXXX / Yok Yankoşul: XXXXXX / Yok* *Dersin Kısa Adı: XXXXXXXXXXXXXX Kategorisi: XXXXXXXX Dersi Eğitim Dili: XXXXX* *Anahtar Kelimeler: XXXXXX, XXXXXX* *Dersi veren Bölüm: XXXXXXX XXXXXXXX*