

Program Information Form

Program Name	Department of Biomedical Engineering Undergraduate
Academic Unit	Department of Biomedical Engineering
Programme Director	Mihrigül Altan
Type	Undergraduate Major Program
Level Of Qualification	This is a First Cycle (Bachelor's Degree) Program
Qualification Awarded	The students who successfully complete the program are awarded the degree of Bachelor of Science (B.S.) in Department of Biomedical Engineering Undergraduate
Mode Of Study	Full-Time
Specific Admission Requirements	Those who want to enroll in YTU undergraduate degree programs must get the sufficient score required by YTU from the exam administered by the Student Selection and Placement Center (OSYM) and should not have an existing enrollment in another higher education program. The rules and regulations in "Directive On Application and Registration of Foreign Students" are applied to the students from abroad who want to enroll in this program. The students who qualify to enroll in undergraduate degree programs whose medium of instruction is 30% English have to take English Proficiency Exam. "Directive on Instruction and Examination, School of Foreign Languages (YDYO)-YTU" and other regulations apply to English Proficiency Exam and Preparatory English Courses, except for the Foreign Languages Department English Language Teaching Program.
Specific Arrangements For Recognition Of Prior Learning	Admissions to YTU undergraduate programs via transfers from outside YTU are conducted as per the principles determined by the Senate within the framework of the provisions of the Rules and Regulations on the Principles of Transfers between Associate and Bachelor's Degree Programs at Higher Education Institutions, Double Major, Double Minor and Credit Transfers Between Higher Education Institutions published in the Official Gazette No.27561 of 24/4/2010. Procedures for the students placed in this programs through the Vertical Transfer Exam held by the Student Selection and Placement Center (OSYM) are to be carried out pursuant to the rules and principles stipulated in the Regulation on Transfer of the Students graduated from Vocational Schools and Open University Associate Degrees to the Undergraduate Education published in the Official Gazette No.24676 of 19/2/2002.
Qualification Requirements And Regulations	The undergraduate students in this program must be successful in all of the courses with a minimum achievement grade of DC, must have completed at least 240 ECTS credits and have scored a minimum CGPA of 2.00/4.00. At the same time, the students must complete their compulsory internship within the designated period of time and within the scope of necessary qualifications.
Profile Of The Programme	Biomedical Engineering is an interdisciplinary department that aims to solve the problems in the field of medicine and biology by using engineering methods and acts as a bridge between the biology-medicine and engineering. Designing new devices for diagnosis and treatment for diseases, development of artificial organs, researching biomaterial, enabling a better understanding of clinical functions by correctly interpreting clinical findings using various calculations and models to detect physiological signals etc. In this regard, Purpose of the Biomedical Engineering Programme; A- to educate both R&D and design and application engineers who can work in national and international organizations professionally by using the Biomedical Engineering theoretical knowledge and practical skill acquisition, B- to educate entrepreneurial and responsible engineers who can offer solutions in the field of biology and medicine.

Occupational Profiles Of Graduates With Examples	Graduates of this program are expect to work in various sectors. Design, production, R&D, sales and technical services in the companies that produce medical devices; in biomedical calibration units, purchasing and technical specification commissions as a technical specialist and clinical engineer; law, regulation, market, surveillance and control, medical software, bioinformatics in public institutions such as the Ministry of Health.
Access To Further Studies	The graduates of this program can apply to master programs to enhance their academic skills and career.
Examination Regulations Assessment And Grading	Assessment of Success a) In assessing a student's performance in a course, the grade the student has scored during the semester work over a hundred and the grade the student has scored at the end of the semester over a hundred are taken into consideration. b) In measuring success, the weight of the grade during the semester is 60% and the weight of the final exam is 40%. Achievement Grade
	(1) In determining a grade, relative evaluation system is used. Achievement Grade is designated as follows:
	a) The meanings of the achievement grades are defined as follows:
	Achievement Grade Coefficient Achievement Degree AA 4.00 Excellent
	BA 3.50 Very good BB 3.00 Good
	CB 2.50 Average
	CC 2.00 Satisfactory
	DC 1.50 Provisionally Successful
	DD 1.00 Fail
	FD 0.50 Fail FF 0.00 Fail
	F0 0.00 NA
	G: Pass K: Fail İ: Leave of Absence M: Exemption E: Incomplete
	 2) (DC) indicates that the student has been provisionally successful in a course. For a student to be considered successful in a course, he must have a minimum GPA of 2.0. If a student has courses in which he has been provisionally successful in his instructional plan, he must have a minimum GPA of 2.0 to qualify for graduation. And, this course is included in his GPA. 3) G (Pass) indicates that the student has been successful/satisfactory in a course and not included in his GPA. 4) K (Fail) indicates that the student has been unsuccessful/unsatisfactory in a
	course and not included in his GPA. 5) İ (Leave of Absence) indicates that the student has been unable to complete the requirements of a course because of sickness or some other valid reason pursuant to the relevant provision of this Regulation and is not included in GPA until it is transformed into an achievement grade. If this course is not completed the following semester in which the course is available, İ automatically turns into an FF.
	6) M (Exemption) indicates that the student have exemption for the previous program courses which are deemed equivalent to the courses offered in their new undergraduate program. Decision for the course exemption is made by the relevant faculty committee. The courses that student is exempt from are processed as a non-credit exemption and they are not included in the student's GPA.

	Make-up, Resit and Graduation Exams (1) A make-up exam is administered in place of a mid-term exam. In case of multiple make-up exams, the student can only sit in one of these exams. The provisions stipulated by the Senate apply to whether a student can sit in a make-up exam or how to administer a make-up exam. A make-up exam for the exams at the end of the semester won't be allowed. (2) The provisions regarding resit exams are as follows: a) For a student to be able to sit in a resit exam, he must have added the course at the beginning of the semester and must have fulfilled the requirements to be able to take this exam at the end of the semester. Students who have missed a resit exam cannot have a make-up exam for it. b) Students who have been unsuccessful or provisionally successful (not F0) can sit in resit exams. The score in a resit exam is considered a final at the end of the semester. An achievement grade is assigned at the end of a resit exam by taking the percentages of visas, assignments and the resit exam into consideration. c) A student who have missed a resit exam gets E (Incomplete) and remains as the achievement grade of the course. The resit achievement grades are included in semester grade average points. (3) The provisions regarding graduation exams are as follows: a) To be able to sit in a graduation exam at the end of the semester. The students who haven't qualified for a graduation exam at the end of the semester. The students who haven't qualified for a graduation exam for the classes they have failed after the resit exam and within the period stated in the academic calendar. The students who are unable to graduate due to their GPA below 2.00 can take a graduation exam in two courses in which they have been provisionally successful. c) To be considered successful in a graduation exam, a student must get at least a CC. The grade taken in the exam takes the place of the achievement grade of the course. Visas and assignments aren't included in the assessment.
Graduation Requirements	To be able to qualify for graduation, students must complete all the courses in the instructional plan, assignments, field work, applied projects, assignments, workshops, seminars, attendance, laboratory work and other related activities with a minimum CGPA of 2.00.

Prog	ram Outcomes
1	PO-1.1) Getting sufficient knowledge in the field of Mathematics and Science
2	PO-1.2) Getting sufficient knowledge in the field of Civil Engineering
3	PO-1.3) An ability to apply knowledge gained in the field of Civil Engineering to solve complex engineering problems
4	PO-2.1) An ability to identify, define, formulate, and solve complex engineering problems
5	PO-2.2) An ability to select and apply appropriate analysis and modeling methods for this purpose.
6	PO-3.1) Ability to design a complex system, process, device or product to meet specific requirements under realistic constraints and conditions.
7	PO-3.2) An ability to apply modern design methods for this purpose.
8	PO-4.1) Ability to develop, select and use modern techniques and tools necessary for the analysis and solution of complex problems encountered in engineering applications.
9	PO-4.2) An ability to use information technologies effectively.
10	PO-5.1) An ability to design experiments to study complex engineering problems or discipline-specific research topics.

11	PO-5.2) Ability to conduct experiments to investigate complex engineering problems or discipline-specific research topics.
12	PO-5.3) Ability to collect data to examine complex engineering problems or discipline-specific research topics.
13	PO-5.4) An ability to analyze and interpet results for the study of complex engineering problems or discipline-specific research topics.
14	PO-6.1) Ability to work individually.
15	PO-6.2) Ability to work effectively in disciplinary teams.
16	PO-6.3) Ability to work effectively in multidisciplinary teams.
17	PO-7.1) An ability to communicate effectively, both orally and in writing.
18	PO-7.2) At least one foreign language knowledge.
19	PO-7.3) Ability to write effective reports and understand written reports.
20	PO-7.4) Ability to prepare design and production reports.
21	PO-7.5) Ability to give clear and understandable instructions.
22	PO-8.1) Being aware of the need for lifelong learning.
23	PO-8.2) Ability to constantly renew itself, access information and follow the developments in science and technology.
24	PO-9.1) Behaving in accordance with ethical principles, awareness of professional and ethical responsibility.
25	PO-9.2) To gain knowledge about the standards used in engineering applications.
26	PO-10.1) Information on business practices such as project management, risk management and change management.
27	PO-10.2) Awareness of entrepreneurship and innovation.
28	PO-10.3) Information on sustainable development.
29	PO-11.1) Universal and social health, environment and safety of engineering applications information about the effects on the problems and the problems reflected in the engineering field of the era.
30	PO-11.2) Awareness of the legal consequences of engineering solutions.

	Curriculum								
1. Year - Fall Semester									
Code	Req.	Title	Lecture	Practical	Laboratory	Local Credit	ECTS		
MAT1071		Mathematics 1	3	2	0	4	6		
FIZ1001		Physics 1	3	0	2	4	6		
KIM1170		General Chemistry	3	0	2	4	5		
BME1101		Introduction to Biomedical Engineering	3	0	0	3	5		
BME1901		Introductory Computer Sciences	2	0	2	3	4		
MDB1031		Advanced English 1	3	0	0	3	3		
TDB1031		Turkish language 1	2	0	0	0	2		
			-			Total:	31		
	1. Year - Spring Semester								
Code	Req.	Title	Lecture	Practical	Laboratory	Local Credit	ECTS		

MAT1072 FIZ1002					1		
FIZ1002	—	Mathematics 2	3	2	0	4	6
		Physics 2	3	0	2	4	6
BME1132		Probability& Biostatistics	3	0	0	3	5
BME1532	<u> </u>	Cell Biology	3	0	0	3	5
BME1902		Computer Aided Design	2	0	2	3	4
MDB1032		Advanced English 2	3	0	0	3	3
TDB1032		Turkish language 2	2	0	0	0	2
						Total:	31
		2. Year - Fall Semester					
Code	Req.	Title	Lecture	Practical	Laboratory	Local Credit	ECTS
MAT1320		Linear Algebra	2	0	0	2	3
MAT2411		Differential Equations	4	0	0	4	5
BME2911		Introduction to Human Anatomy & Physiology	3	0	0	3	4
BME2901		Biochemistry	3	0	2	4	5
BME2301		Circuit Theory	4	0	2	5	6
BME2011		Occupational Health And Safety 1	2	0	0	2	2
SEC0001		Social Elective 1-1	3	0	0	3	3
SEC0002		Elective 1-1	2	0	0	2	2
	•		•	•		Total:	30
		2. Year - Spring Semeste	er				
Code	Req.	Title	Lecture	Practical	Laboratory	Local Credit	ECTS
BME2122		Signals & Systems	3	0	0	3	5
BME2912		Numerical Methods in Biomedical Engineering	3	0	0	3	5
BME2312		Analog Electronics	3	0			l .
		Tritalog Electromos	J	U	2	4	6
BME2322		Logic Design	2	0	2	3	6 5
BME2322 BME2002							
		Logic Design	2	0	2	3	5
BME2002		Logic Design General Internship	2	0	2	3	5
BME2002 BME2012		Logic Design General Internship Occupational Health And Safety 2	2 0 2	0 0 0	2 0 0	3 0 2	5 3 2
BME2002 BME2012		Logic Design General Internship Occupational Health And Safety 2	2 0 2 3	0 0 0	2 0 0	3 0 2 3	5 3 2 4
BME2002 BME2012	Req.	Logic Design General Internship Occupational Health And Safety 2 Social Elective 2-1	2 0 2 3	0 0 0	2 0 0	3 0 2 3	5 3 2 4
BME2002 BME2012 SEC0003	Req.	Logic Design General Internship Occupational Health And Safety 2 Social Elective 2-1 3. Year - Fall Semester	2 0 2 3	0 0 0 0	2 0 0 0	3 0 2 3 Total:	5 3 2 4 30
BME2002 BME2012 SEC0003	Req.	Logic Design General Internship Occupational Health And Safety 2 Social Elective 2-1 3. Year - Fall Semester	2 0 2 3 Lecture	0 0 0 0	2 0 0 0	3 0 2 3 Total:	5 3 2 4 30 ECTS
BME2002 BME2012 SEC0003 Code BME3321	Req.	Logic Design General Internship Occupational Health And Safety 2 Social Elective 2-1 3. Year - Fall Semester Title Introduction to Microcontroller Programming	2 0 2 3 Lecture 3	0 0 0 0	2 0 0 0	3 0 2 3 Total:	5 3 2 4 30 ECTS
BME2002 BME2012 SEC0003 Code BME3321 BME3921	Req.	Logic Design General Internship Occupational Health And Safety 2 Social Elective 2-1 3. Year - Fall Semester Title Introduction to Microcontroller Programming Biomechanics 1	2 0 2 3 Sector 2 3 3 3 3 3 3 5 5 6 6 6 6 6 6 6 6 6 6 6 6	0 0 0 0 Practical 0 0	2 0 0 0	3 0 2 3 Total: Local Credit 4 3	5 3 2 4 30 ECTS 5
BME2002 BME2012 SEC0003 Code BME3321 BME3921 BME3161	Req.	Logic Design General Internship Occupational Health And Safety 2 Social Elective 2-1 3. Year - Fall Semester Title Introduction to Microcontroller Programming Biomechanics 1 Biosignal Processing	2 0 2 3 SECTION 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 0 0 0	2 0 0 0 Laboratory 2 0	3 0 2 3 Total:	5 3 2 4 30 ECTS 5 5
BME2002 BME2012 SEC0003 Code BME3321 BME3921 BME3161 BME3711	Req.	Logic Design General Internship Occupational Health And Safety 2 Social Elective 2-1 3. Year - Fall Semester Title Introduction to Microcontroller Programming Biomechanics 1 Biosignal Processing Biothermodynamics Principles of Atatürk and History of Modern	2 0 2 3 Section 2 2 3 3 3 3 3 3 3 3 3 3 3 3 5 5 5 5 5 5	0 0 0 0	2 0 0 0 1 Laboratory 2 0 0	3 0 2 3 Total: Local Credit 4 3 3 3	5 3 2 4 30 ECTS 5 5 4 4

Section Req Title Biomedical Modeling & Simulation 3							Total:	30
Medical Instrumentation			3. Year - Spring Semes	ter				
BME3402 Medical Instrumentation 3 0 2 4 6 6	Code	Req.	Title	Lecture	Practical	Laboratory		ECTS
BME3522 Biomaterials 3 0 0 3 5 BME3922 Biomechanics 2 3 0 0 3 5 BME3002 Professional Internship 0 0 0 0 0 0 3 3 5 BME3002 Principles of Natürk and History of Modern Turkey 2 2 0 0 0 0 3 3 5 **Turkey 2 3 0 0 3 5 5 **Total: 30 0 3 5 ***Total: 30 0 3 5 ****Total: 30 0 3 5 ************************************	BME3142		Biomedical Modeling & Simulation	3	0	0	3	4
BME3922 Biomechanics 2 3 0 0 3 5	BME3402		Medical Instrumentation	3	0	2	4	6
BME3002 Professional Internship 0 0 0 0 0 0 3	BME3522		Biomaterials	3	0	0	3	5
ATA1032	BME3922		Biomechanics 2	3	0	0	3	5
SEC0006 Occupational Elective 1-2 3 0 0 3 5	BME3002		Professional Internship	0	0	0	0	3
Total Square Total Square Square Total Square Squa	ATA1032			2	0	0	0	2
March Code Req. Title Engineering Design 2 2 0 3 3	SEC0006		Occupational Elective 1-2	3	0	0	3	5
Code Req. Title Lecture Practical Laboratory Local Credit ECTS Credit BME4901 Engineering Design 2 2 0 3 3 BME4911 Medical Imaging 3 0 2 4 5 SEC0007 Occupational Elective 1-3 3 0 0 3 5 SEC0009 Occupational Elective 2-2 3 0 0 3 5 SEC0010 Social Elective 2-2 3 0 0 3 4 SEC0011 Elective 2-1 0 2 0 1 3 4. Year - Spring Semester Code Req. Title Lecture Practical Laboratory Local Credit ECTS Credit ECTS Credit ECTS BME4000 Graduation Thesis 0 8 0 4 8 BME4352 Therapeutic and Prosthetic Devices 3 0 0 3 5 SEC0012 Occupational Elective 1				-			Total:	30
BME4901 Engineering Design 2 2 0 3 3 3 3 3 3 3 3 3			4. Year - Fall Semeste	er				
BME4911 Medical Imaging 3 0 2 4 5 SEC0007 Occupational Elective 1-3 3 0 0 3 5 SEC0008 Occupational Elective 1-4 3 0 0 3 5 SEC0010 Social Elective 2-2 3 0 0 3 4 SEC0011 Elective 2-1 0 2 0 1 3 4. Year - Spring Semester Total: 30 4. Year - Spring Semester Code Req. Title Lecture Practical Laboratory Local Credit ECTS BME4000 Graduation Thesis 0 8 0 4 8 BME4901 BME49352 Therapeutic and Prosthetic Devices 3 0 0 3 5 SEC0012 Occupational Elective 1-5 3 0 0 3 5 SEC0013 Occupational Elective 2-4 3 0 0 <td>Code</td> <td>Req.</td> <td>Title</td> <td>Lecture</td> <td>Practical</td> <td>Laboratory</td> <td></td> <td>ECTS</td>	Code	Req.	Title	Lecture	Practical	Laboratory		ECTS
SEC0007 Occupational Elective 1-3 3 0 0 3 5 SEC0008 Occupational Elective 1-4 3 0 0 3 5 SEC0009 Occupational Elective 2-2 3 0 0 3 5 SEC0011 Elective 2-1 0 2 0 1 3 ** Total: Blective 2-1 0 2 0 1 3 ** Total: Blective 2-1 0 2 0 1 3 ** Total: Blective 2-1 0 2 0 1 3 ** Total: Blective 2-1 0 8 0 4 8 ** Total: Blective 1-5 3 0 0 3 4 ** Secon13 Occupational Elective 2-3 3 0 0 3 5 SEC0014 Occupational Elective 2-4 3 0 0 3 3 SEC0015 Social Elective 1-2 3 0 <t< td=""><td>BME4901</td><td></td><td>Engineering Design</td><td>2</td><td>2</td><td>0</td><td>3</td><td>3</td></t<>	BME4901		Engineering Design	2	2	0	3	3
SEC0008 Occupational Elective 1-4 3 0 0 3 5 SEC0009 Occupational Elective 2-2 3 0 0 3 5 SEC0010 Social Elective 2-1 0 2 0 1 3 4. Year - Spring Semester Code Req. Title Lecture Practical Laboratory Local Coredit ECTS Credit ECTS Credi	BME4911		Medical Imaging	3	0	2	4	5
SEC0009 Occupational Elective 2-2 3 0 0 3 5	SEC0007		Occupational Elective 1-3	3	0	0	3	5
SEC0010 Social Elective 2-2 3 0 0 3 4 SEC0011 Elective 2-1 0 2 0 1 3 Total: 30 4. Year - Spring Semester Code Req. Title Lecture Practical Laboratory Local Laboratory Local Laboratory Credit ECTS BME4000 Graduation Thesis 0 8 0 4 8 BME4352 Therapeutic and Prosthetic Devices 3 0 0 3 4 SEC0012 Occupational Elective 1-5 3 0 0 3 5 SEC0013 Occupational Elective 2-3 3 0 0 3 5 SEC0014 Occupational Elective 2-4 3 0 0 3 3 SEC0015 Social Elective 1-2 3 0 0 3 3 SEC0015 Coccupational Elective 1 ECTS 242 Program Total ECTS: 242 Code Req. Title	SEC0008		Occupational Elective 1-4	3	0	0	3	5
SEC0011 Elective 2-1 0 2 0 1 3 Total: 30 A. Year - Spring Semester Code Req. Title Lecture Practical Laboratory Local Credit ECTS Credit ECTS BME4000 ☑ Graduation Thesis 0 8 0 4 8 Onk: BME4901 BME4901 BME4952 Therapeutic and Prosthetic Devices 3 0 0 3 4 SEC0012 Occupational Elective 1-5 3 0 0 3 5 SEC0013 Occupational Elective 2-3 3 0 0 3 5 SEC0014 Occupational Elective 2-4 3 0 0 3 3 SEC0015 Social Elective 1-2 3 0 0 3 3 SEC0015 Coccupational Elective 1-2 3 0 0 3 3 SEC0015 Social Elective 1-2 3 0 0 3 3 Code	SEC0009		Occupational Elective 2-2	3	0	0	3	5
A. Year - Spring Semester	SEC0010		Social Elective 2-2	3	0	0	3	4
4. Year - Spring Semester Code Req. Title Lecture Practical Laboratory Local Credit ECTS Credit BME4000 ☑ Graduation Thesis 0 8 0 4 8 Onk: BME4901 BME4352 Therapeutic and Prosthetic Devices 3 0 0 3 4 SEC0012 Occupational Elective 1-5 3 0 0 3 5 SEC0013 Occupational Elective 2-3 3 0 0 3 5 SEC0014 Occupational Elective 2-4 3 0 0 3 5 SEC0015 Social Elective 1-2 3 0 0 3 3 SEC0015 Social Elective 1-2 3 0 0 3 3 SEC0015 Social Elective 1-2 3 0 0 3 3 SEC0015 Social Elective 1-2 3 0 0 3 3 Code Req. Tit	SEC0011		Elective 2-1	0	2	0	1	3
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SEC0012 Occupational Elective 1-5 3 0 0 3 5 SEC0013 Occupational Elective 2-3 3 0 0 3 5 SEC0014 Occupational Elective 2-4 3 0 0 3 5 SEC0015 Social Elective 1-2 3 0 0 3 3 Program Total ECTS: 242 Occupational Elective 1 Courses Code Req. Title Lecture Practical Laboratory Local Credit ECTS EHM4130 Telecommunication Circuits 3 0 0 3 5 EHM4140 Electronic Design Automation 3 0 0 3 5 EHM4210 Sensors and Transducers 3 0 0 3 5		Önk:	BME4901		•			
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SEC0015 Social Elective 1-2 3 0 0 3 3 Total: 30 Program Total ECTS: 242 Occupational Elective 1 Courses Code Req. Title Lecture Practical Laboratory Credit Local Credit ECTS EHM4130 Telecommunication Circuits 3 0 0 3 5 EHM4140 Electronic Design Automation 3 0 0 3 5 EHM4210 Sensors and Transducers 3 0 0 3 5	SEC0013		Occupational Elective 2-3	3	0	0	3	5
Total: 30 Program Total ECTS: 242	SEC0014		Occupational Elective 2-4	3	0	0	3	5
Program Total ECTS: 242 Code Req. Title Lecture Practical Laboratory Local Credit	SEC0015		Social Elective 1-2	3	0	0	3	3
Occupational Elective 1 CoursesCodeReq.TitleLecturePracticalLaboratoryLocal CreditECTSEHM4130Telecommunication Circuits30035EHM4140Electronic Design Automation30035EHM4210Sensors and Transducers30035							Total:	30
CodeReq.TitleLecturePracticalLaboratoryLocal CreditECTSEHM4130Telecommunication Circuits30035EHM4140Electronic Design Automation30035EHM4210Sensors and Transducers30035					Pro	gram Tota	al ECTS:	242
EHM4130 Telecommunication Circuits 3 0 0 3 5 EHM4140 Electronic Design Automation 3 0 0 3 5 EHM4210 Sensors and Transducers 3 0 0 3 5			·	ourses				
EHM4140 Electronic Design Automation 3 0 0 3 5 EHM4210 Sensors and Transducers 3 0 0 3 5	Code	Req.	Title	Lecture	Practical	Laboratory		ECTS
EHM4210 Sensors and Transducers 3 0 0 3 5	EHM4130		Telecommunication Circuits	3	0	0	3	5
	EHM4140		Electronic Design Automation	3	0	0	3	5
FUNACOO Catallita Communication	EHM4210		Sensors and Transducers	3	0	0	3	5
EHIVI4220 Satellite Communication 3 0 0 3 5	EHM4220		Satellite Communication	3	0	0	3	5

EHM4240	Computational Electromagnetics	3	0	0	3	5
EHM4260	Data Communications	3	0	0	3	5
EHM4270	Cellular Communication Systems 1	3	0	0	3	5
EHM4280	Cellular Communication Systems 2	3	0	0	3	5
EHM4290	Quantic Field Theory	3	0	0	3	5
BME4992	Vocational Education in Business 1	3	0	0	3	5
EHM4300	Introduction to Optical Fibers	3	0	0	3	5
EHM4310	Microwave Electronics	3	0	0	3	5
EHM4320	Introduction to Optoelectronics	3	0	0	3	5
EHM4330	Optical Communications Systems	3	0	0	3	5
EHM4340	Analog Integrated Circuits	3	0	0	3	5
EHM4350	Digital Electronic Circuits	3	0	0	3	5
EHM4360	Industrial Electronics	3	0	0	3	5
EHM4380	Integrated Circuit Design	3	0	0	3	5
EHM4390	Power Electronics	3	0	0	3	5
EHM4800	SEMICONDUCTOR ELECTRONICS	3	0	0	3	5
BME4530	Biofluid Mechanics and Mass Transport	3	0	0	3	5
EHM4810	Medical Electronics	3	0	0	3	5
BME3330	Biolectromagnetism	3	0	0	3	5
EHM4830	Programmable Logic Circuit Design	3	0	0	3	5
BME4120	Biomedical Image Processing	3	0	0	3	5
EHM4850	Communication Theory	3	0	0	3	5
BME3341	Biomedical Sensors & Actuators	3	0	0	3	5
EHM4860	Principles Digital Communications Systems	3	0	0	3	5
EHM4870	Computer-Aided Analysis, Modelling Design of Microwave Networks by the Wave Approach	3	0	0	3	5
EHM4880	An Introduction to Electronic Defence Systems	3	0	0	3	5
BME3511	Instrumental Analysis	3	0	0	3	5
EHM4890	Digital Video Transmission and Broadcasting	3	0	0	3	5
BME3170	Medical Informatics	3	0	0	3	5
BME4142	Physiological Control Systems	3	0	0	3	5
BME3380	Robotics for Healthcare	3	0	0	3	5
BME3700	Analog Electronic Applications	3	0	0	3	5
IKT3650	Sustainable Development	3	0	0	3	5
BYM3802	Artificial Organs	3	0	0	3	5
BME4600	Fluid Mechanics	3	0	0	3	5
BME3310	System Identification	3	0	0	3	5
BME2132	Discrete Mathematics	3	0	0	3	5
BME3120	Digital Signal Processing	3	0	0	3	5
BME4141	Biomedical System Estimation	3	0	0	3	5

BME4110		Quantum Physics for Engineers	3	0	0	3	5
BLM3110		Special Topics in Computer Engineering	3	0	0	3	5
BLM3120		Information Retrieval and Web Search Engines	3	0	0	3	5
BLM3130		Introduction To Game Development	3	0	0	3	5
BLM3580		System Programming	3	0	0	3	5
BLM3620		Digital Signal Processing	3	0	0	3	5
BLM3720		Introduction to Computer Graphics	3	0	0	3	5
BLM3740		Operational Research	3	0	0	3	5
BLM3760		Introduction to Expert Systems	3	0	0	3	5
BLM3810		Introduction to Bioinformatics	3	0	0	3	5
BLM4110		Web Services and Service Oriented Architecture	3	0	0	3	5
BLM4120		Big Data Processing and Analytics	3	0	0	3	5
BLM4520		Introduction to Neural Networks	3	0	0	3	5
BLM4530		Fuzzy Logic	3	0	0	3	5
BLM4540		Image Processing	3	0	0	3	5
BLM4580		Introduction to Natural Language Processing	3	0	0	3	5
BLM4760		Distributed Systems	3	0	0	3	5
BLM4830		Introduction to Robot Technologies	3	0	0	3	5
BLM4860		Compiler Design	3	0	0	3	5
BLM4920		Real Time Systems	3	0	0	3	5
BME3210		Cardiovascular Mechanics	3	0	0	3	5
BME3360		Biomems	3	0	0	3	5
BME3500		Introduction to Neural Engineering	3	0	0	3	5
BME2112		Advenced Engineering Mathematics	3	0	0	3	5
BME3180		Machine Learning in Biomedical Engineering	3	0	0	3	5
		Elective 1 Courses					
Code	Req.	Title	Lecture	Practical	Laboratory	Local Credit	ECTS
MDB2051		Reading and Speaking in English	2	0	0	2	2
MDB3032		Business English	2	0	0	2	2
		Elective 2 Courses					
Code	Req.	Title	Lecture	Practical	Laboratory	Local Credit	ECTS
BLM4991		Multidisciplinary Design Project	0	2	0	1	3
BME4991		Multidisciplinary Design Project	0	2	0	1	3
EHM4991		Multidisciplinary Design Project	0	2	0	1	3
ELM4991		Multidisciplinary Design Project	0	2	0	1	3
KOM4991		Multidisciplinary Design Project	0	2	0	1	3
		Social Elective 1 Course	S				
Code	Req.	Title	Lecture	Practical	Laboratory	Local Credit	ECTS

SBP2020	Earthquake and Planning	3	0	0	3	3
MIM2010	Sustainability	3	0	0	3	3
MDB1010	Greek for Beginners 2	3	0	0	3	3
CEV3334	Environment and Human	3	0	0	3	3
MAT4279	Fundamental Rights and Responsibilities in Higher Education	3	0	0	3	3
BME4995	Vocational Education in Business 4	3	0	0	3	3
PDR2021	Special Education	3	0	0	3	3
TRO2271	Motifs in the Old Turkish Literature	3	0	0	3	3
TRO2281	Turkish Language History	3	0	0	3	3
EGT1022	Social anthropology	3	0	0	3	3
EGT4041	Education management	3	0	0	3	3
EGT2031	Human Resources Management	3	0	0	3	3
BED3011	Education of Basic Techniques in Basketball	3	0	0	3	3
BED4021	Exercise and Mental Health	3	0	0	3	3
BED3041	Soccer and Basic Movement Teaching	3	0	0	3	3
BED4031	Principle figures of the folk dances	3	0	0	3	3
BED3051	Education of Basic Techniques in Handball	3	0	0	3	3
BED3012	Education of Basic Techniques in Korfball	3	0	0	3	3
BED4022	Tennis Technic and Tactic Education	3	0	0	3	3
BED3042	Education of Basic Techniques in Volleyball	3	0	0	3	3
BED4032	Education of Fundamental Swimming Techniques	3	0	0	3	3
MEM4501	Ceramics	3	0	0	3	3
TRO2261	Turkish Language Teaching Literary Texts	3	0	0	3	3
TRO4522	Structure of Discourse and Genre Analysis	3	0	0	3	3
SNF2112	Geography and geopolitics of Turkey	3	0	0	3	3
TRO4532	Rhetorical Structure Theory and Text Analysis	3	0	0	3	3
ISL2560	Public Relations in Business	3	0	0	3	3
ISL2710	Family Businesses and Institutionalization	3	0	0	3	3
ISL2630	Team Building and Development	3	0	0	3	3
ISL2901	Direct Marketing	3	0	0	3	3
ISL2760	Fundamentals of Logistics Management	3	0	0	3	3
SBP2031	Urban Economics	3	0	0	3	3
ITB3330	Environment and Ecology	3	0	0	3	3
ILT1611	Techniques Of Photography	3	0	0	3	3
ISL2170	Accounting Organization	3	0	0	3	3
ITB3610	Technics Of Writing	3	0	0	3	3
ITB3320	Economic Crimes	3	0	0	3	3

ITB3310	Crime and Punishment: Criminological Perspective	3	0	0	3	3
TRO2291	The Art of Applied	3	0	0	3	3
ILT1621	Graphic Media Design Tools	3	0	0	3	3
SBP2082	Urban Sociology	3	0	0	3	3
SYP2192	Cultural management and Its Agents 2	3	0	0	3	3
SYP3241	Public Relations	3	0	0	3	3
MIM1422	Introduction to History of Art and Architecture	3	0	0	3	3
MIM2421	History of Architecture	3	0	0	3	3
MIM2411	Archeology	3	0	0	3	3
MIM1412	History of Civilization	3	0	0	3	3
HRT2941	History of Geomatic Engineering Science	3	0	0	3	3
MDB1052	English 2	3	0	0	3	3
MDB4031	Advanced German	3	0	0	3	3
MDB4041	Reading &Speaking in German	3	0	0	3	3
FIZ1110	Scientific Research Techniques	3	0	0	3	3
INS2462	Traffic Safety	3	0	0	3	3
FEL2160	Moral Philosophical Texts 1	3	0	0	3	3
FEL2270	Western Philosophy 1	3	0	0	3	3
FEL2280	Western Philosophy 2	3	0	0	3	3
FEL3230	Contemporary Philosophy Readings 1	3	0	0	3	3
FEL4251	Philosophy of Science	3	0	0	3	3
FEL3240	Contemporary Philosophy Readings 2	3	0	0	3	3
FEL3330	Philosophical Literatures 1	3	0	0	3	3
FEL3340	Philosophical Literatures 2	3	0	0	3	3
FEL3350	Ancient Philosophy	3	0	0	3	3
FEL3410	Political Philosophy Texts	3	0	0	3	3
MTP4760	Dance in Istanbul from the 16th Century to the Present	3	0	0	3	3
TDB4011	Effective Communication and Impromptu Presentation Skills	3	0	0	3	3
TDB4021	Speech Techniques and Elocution	3	0	0	3	3
TDB4031	Oratory and Diction	3	0	0	3	3
TDB4041	Turkish Story and Novel	3	0	0	3	3
GRA4120	Experimental Typography	3	0	0	3	3
BLM2110	Introduction to Cyber Security	3	0	0	3	3
ITB1680	Introduction to Polyphonic Music	3	0	0	3	3
ITB2110	Grammatical Structure of Ottoman Turkish and Texts 1	3	0	0	3	3
ITB2120	Grammatical Structure of Ottoman Turkish and Texts 2	3	0	0	3	3

ISL1150	Career Planning	3	0	0	3	3
MDB1009	Greek for Beginners 1	3	0	0	3	3
GIM4151	Innovation and Entrepreneurship	3	0	0 3 3		3
MDB1013	Japanese for Beginners 1 3 0 0		0	3	3	
DNS1220	Body Awareness and Breathing Techniques		0	0	3	3
MDB1016	Arabic for Beginners 2	3	0	0	3	3
DNS1230	Introduction to Contemporary Dance Technique	3	0	0	3	3
MDB1011	Chinese for Beginners 1	3	0	0	3	3
DNS1240	Yoga and Anatomy	3	0	0	3	3
MDB1015	Arabic for Beginners 1	3	0	0	3	3
TDB4051	Academic Turkish	3	0	0	3	3
MDB1017	Persian for Beginners 1	3	0	0	3	3
TDB4061	Seven Hills İstanbul	3	0	0	3	3
BED1013	Pilates Basic Training	3	0	0	3	3
BED1014	Yoga Basic Training	3	0	0	3	3
EUT2022	Introduction to NFT	3	0	0	3	3
GRA2024	Sanal Evrene Giriş	3	0	0	3	3
MDB1001	French for Beginners 1	3	0	0	3	3
MDB1003	Spanish for Beginners 1	3	0	0	3	3
MDB1004	Spanish for Beginners 2	3	0	0	3	3
MDB1005	Hungarian for Beginners 1	3	0	0	3	3
MDB1007	Italian for Beginners 1	3	0	0	3	3
MDB1019	Russian for Beginners 1	3	0	0	3	3
MDB1101	Bulgarian for Beginners 1	3	0	0	3	3
MDB1201	Romanian for Beginners 1	3	0	0	3	3
MDB2001	Introduction to Translation Skills	3	0	0	3	3
MDB2003	Public Speaking	3	0	0	3	3
ITB4040	Volunteering Studies	2	2	0	3	3
MDB4011	Introduction to German Language Skills	3	0	0	3	3
MDB4021	German Language Skills	3	0	0	3	3
ITB2020	History of Science	3	0	0	3	3
ITB2030	Philosophy of Science	3	0	0	3	3
ITB2040	Economic Policies and Applications	3	0	0	3	3
ITB2080	Women in Social Transformations	3	0	0	3	3
ITB2090	Democracy Culture Principles and Institutions	3	0	0	3	3
ITB3010	Sociology	3	0	0	3	3
ITB3020	Introduction to Philosophy	3	0	0	3	3
ITB3040	Political Developments and Social Movements in Twentieth-Century	3	0	0	3	3

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ITB3130		Political Ideologies: Theory and History	3	0	0	3	3
ITB3150		History and Cinema	3	0	0	3	3
ITB3210		Communication in Contemporary Society	3	0	0	3	3
ITB3220		Modernity and Consumer Society	3	0	0	3	3
ITB3250		Introduction to Psychology	3	0	0	3	3
ITB3260		Cultural Studies and Identity	3	0	0	3	3
ITB3270		Istanbul: Past, Present, and Future	3	0	0	3	3
ITB3330		Environment and Ecology	3	0	0	3	3
ITB3360		History of Art	3	0	0	3	3
ITB3390		History of Civilizations	3	0	0	3	3
ITB3420		The Social Structure of Ottoman Empire	3	0	0	3	3
ITB3550		Human Rights	3	0	0	3	3
ITB3560		Political Philosophy	3	0	0	3	3
ITB3570		Philosophy of Education	3	0	0	3	3
ITB4930		History of Architecture	3	0	0	3	3
ITB4100		Social Structures and Historical Transformations	3	0	0	3	3
		Social Elective 2 Course	es				
Code	Req.	Title	Lecture	Practical	Laboratory	Local Credit	ECTS
IKT3322		Macroeconomic Policies	3	0	0	3	4
IKT3562		History of Turkish Administration	3	0	0	3	4
ISL1611		Introduction to Business	3	0	0	3	5
ISL1711		Introduction to Law	3	0	0	3	5
ISL1622		Behavior Science	3	0	0	3	4
ISL3411		Marketing	3	0	0	3	4
ISL3621		Production Management	3	0	0	3	4
ISL3522		International Marketing	3	0	0	3	4
ISL3912		Human Resource Management (Business Administration)	3	0	0	3	4
ISL4551		Operations Research 1	3	0	0	3	4
ISL3040		Team Building and Development in Organizations	3	0	0	3	4
ISL3531		Behavioral Sustainability	3	0	0	3	4
ISL3631		Career and Work Psychology	3	0	0	3	4
ISL3660		Business Communication	3	0	0	3	4
ISL3930		Corporate Reputation from the Behavioral Perspective	3	0	0	3	4
ISL3972		Occupational Health and Safety Law	3	0	0	3	4
ISL4420		Sales Management	3	0	0	3	4
ISL4611		Business Ethics	3	0	0	3	4
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ISL4640		Entrepreneurship	3	0	0	3	4
ISL4760		Financial and Cost Accounting	3	0	0	3	4
ISL4851		nnovation Management in Management 3 0 0		0	3	4	
ISL4860		Consumer Behaviour	3	0	0	3	4
		Occupational Elective 2 Cou	ırses				
Code	Req.	Title	Lecture	Practical	Laboratory	Local Credit	ECTS
BME4993		Vocational Education in Business 2	3	0	0	3	5
BME4994		Vocational Education in Business 3	3	0	0	3	5
BME4370		Artificial Organs & Life Support Systems	3	0	0	3	5
BME4570		Biomedical Optics & Lasers	3	0	0	3	5
BME3150		Clinical Engineering	3	0	0	3	5
BME4730		Medical Device Development Guidelines & Regulation	3	0	0	3	5
BME4550		Nanotechnology & Nanomaterials	3	0	0	3	5
BME4220		Neurophysiologv & Applications	3	0	0	3	5
BME4500		Introduction to Nuclear Medicine	3	0	0	3	5
BME3600		Special Topics in Biomedical Engineering	3	0	0	3	5
BME4360		Teuraupethic Devices	3	0	0	3	5
BME4720		Medical Instrumentation Safety	3	0	0	3	5
BME3540		Cell and Tissue Engineering	3	0	0	3	5
BME4580		Genetic Engineering	3	0	0	3	5
BME3570		Biosensors	3	0	0	3	5
BME3160		Bioinformatics	3	0	0	3	5

Extra Notes	
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