

EK-1a

YILDIZ TECHNICAL UNIVERSITY
FACULTY OF ELECTRICAL & ELECTRONICS
DEPARTMENT OF BIOMEDICAL ENGINEERING
UNDERGRADUATE CURRICULUM

	1st SEMESTER										2nd SEMESTER									
	Course		Hours			Credits		Other Issues			Course		Hours			Credits		Other Issues		
	Code	Name	T	U	L	Local (K)	ECTS	R/E	Language	Prerequisites	Code	Name	T	U	L	Local (K)	ECTS	R/E	Language	Prerequisites
1st SEMESTER	MAT1071	Mathematics 1	3	2	0	4	6	R	EN		MAT1072	Mathematics 2	3	2	0	4	6	R	EN	
	FIZ1001	Physics 1	3	0	2	4	5	R	EN		FIZ1002	Physics 2	3	0	2	4	5	R	EN	
	KIM1170	General Chemistry	3	0	2	4	5	R	EN		BME1132	Probability & Biostatistics	3	0	0	3	5	R	EN	
	BME1101	Introduction to Biomedical Engineering	3	0	0	3	5	R	EN		BME1532	Cell Biology	3	0	0	3	5	R	EN	
	BME1901	Introductory Computer Sciences	2	0	2	3	4	R	EN		BME1902	Computer Aided Design	2	0	2	3	4	R	EN	
	MDB1031	Advanced English I	3	0	0	3	3	R	EN		MDB1032	Advanced English II	3	0	0	3	3	R	EN	
	TDB1031	Turkish Language 1	2	0	0	0	2	R	TR		TDB1032	Turkish Language 2	2	0	0	0	2	R	TR	
	Total	7 Courses				21	30				Total	7 Courses				20	30			
3rd SEMESTER	MAT1320	Linear Algebra	2	0	0	2	3	R	EN		BME2122	Signals & Systems	3	0	0	3	5	R	EN	MAT2411
	MAT2411	Differential Equations	4	0	0	4	5	R	EN		BME2912	Numerical Methods in Biomedical Engineering	3	0	0	3	5	R	EN	BME1901
	BME2911	Introduction to Human Anatomy & Physiology	3	0	0	3	4	R	EN		BME2312	Analog Electronics	3	0	2	4	6	R	EN	BME2301
	BME2901	Biochemistry	3	0	2	4	5	R	EN	KIM1170										
	BME2301	Circuit Theory	4	0	2	5	6	R	EN											
	BME2011	Occupational Health and Safety 1	2	0	0	2	2	R	EN											
	SEC0001	Social Elective 1-1	3	0	0	3	3	E	EN											
	SEC0002	Elective 1-1	2	0	0	2	2	E	EN											
	Total	8 Courses				25	30			Total	7 Courses					18	30			
5th SEMESTER	BME3321	Introduction to Microcontroller Programming	3	0	2	4	5	R	EN	BME2322										
	BME3921	Bioelectronics I	3	0	0	3	5	R	EN											
	BME3361	Biosignal Processing	3	0	0	3	4	R	EN	BME2122										
	BME3711	Biothermodynamics	3	0	0	3	5	R	EN											
	SEC0004	Occupational Elective 1-1	3	0	0	3	5	E	EN											
	SEC0005	Occupational Elective 2-1	3	0	0	3	4	E	EN											
	ATA1031	Principles of Atatürk and History of Modern Turkey I	2	0	0	0	2	R	TR											
	Total	7 Courses				19	30			Total	7 Courses					16	30			
7th SEMESTER	BME4901	Engineering Design	2	2	0	3	3	R	EN											
	BME4911	Medical Imaging	3	0	2	4	6	R	EN	BME2911, BME3212										
	SEC0007	Occupational Elective 1-3	3	0	0	3	5	E	EN											
	SEC0008	Occupational Elective 1-4	3	0	0	3	5	E	EN											
	SEC0009	Occupational Elective 2-2	3	0	0	3	4	E	EN											
	SEC0010	Social Elective 2-2	3	0	0	3	4	E	EN											
	SEC0011	Elective 2-1	0	2	0	1	3	E	EN											
	Total	7 Courses				20	30			Total	6 Courses					19	30			
OCCUPATIONAL ELECTIVE 1 COURSES	BME3540	Cell and Tissue Engineering	3	0	0	3	5	E	EN	BME1532										
	BME4580	Genetic Engineering	3	0	0	3	5	E	EN	BME1532										
	BME3570	Biosensors	3	0	0	3	5	E	EN											
	BME3210	Cardiovascular Mechanics	3	0	0	3	5	E	EN	BME3142										
	BME3360	BioMEMS	3	0	0	3	5	E	EN											
	BME3500	Introduction to Neural Engineering	3	0	0	3	5	E	EN											
	BME3600	Special Topics in Biomedical Engineering	3	0	0	3	5	E	EN											
	BME3160	Bioinformatics	3	0	0	3	5	E	EN											
OCCUPATIONAL ELECTIVE 2 COURSES	BME3180	Machine Learning in Biomedical Engineering	3	0	0	3	4	E	EN											
	BME2132	Discrete Mathematics	3	0	0	3	4	E	EN											
	BME2112	Advanced Engineering Mathematics	3	0	0	3	4	E	EN											
	BME3310	System Identification	3	0	0	3	4	E	EN											
ELECTIVE 2 COURSES	BME4991	Multidisciplinary Design Project	0	2	0	1	3	E	EN											
	BLM4991	Multidisciplinary Design Project	0	2	0	1	3	E	EN											
	ELM4991	Multidisciplinary Design Project	0	2	0	1	3	E	EN											
	EHM4991	Multidisciplinary Design Project	0	2	0	1	3	E	EN											
	KOM4991	Multidisciplinary Design Project	0	2	0	1	3	E	EN											
ELECTIVE 1 COURSES	MDB2051	Reading and Speaking in English	2	0	0	2	2	E	EN											
	MDB3032	Business English	2	0	0	2	2	E	EN											
SOCIAL ELECTIVE 1 COURSES	MDB4011	Introduction to German Language Skills	3	0	0	3	3	E	EN											
	MDB4021	German Language Skills	3	0	0	3	3	E	EN											
	ITB2020	History of Science	3	0	0	3	3	E	EN											
	ITB2030	Philosophy of Science	3	0	0	3	3	E	EN											
	ITB2040	Economic Policies and Applications	3	0	0	3	3	E	EN											
	ITB2080	Women in Social Transformations	3	0	0	3	3	E	EN											
	ITB2090	Democracy Culture Principles and Institutions	3	0	0	3	3	E	EN											
	ITB3010	Sociology	3	0	0	3	3	E	EN											
	ITB3020	Introduction to Philosophy	3	0	0	3	3	E	EN											
	ITB3040	Political Developments and Social Movements in Twentieth-Century	3	0	0	3	3	E	EN											
	ITB3130	Political Ideologies: Theory and History	3	0	0	3	3	E	EN											
	ITB3150	History and Cinema	3	0	0	3	3	E	EN											
	ITB3210	Communication in Contemporary Society	3	0	0	3	3	E	EN											
	ITB3220	Modernity and Consumer Society	3	0	0	3	3	E	EN											
	ITB3250	Introduction to Psychology	3	0	0	3	3	E	EN											
ITB3260	Cultural Studies and Identity	3	0	0	3	3	E	EN												
ITB3270	Istanbul: Past, Present, and Future	3	0	0	3	3	E	EN												
ITB3330	Environment and Ecology	3	0	0	3	3	E	EN												
ITB3360	History of Art	3	0	0	3	3	E	EN												
ITB3390	History of Civilizations	3	0	0	3	3	E	EN												
ITB3420	The Social Structure of Ottoman Empire	3	0	0	3	3	E	EN												
ITB3550	Human Rights	3	0	0	3	3	E	EN												
ITB3560	Political Philosophy	3	0	0	3	3	E	EN												
ITB3570	Philosophy of Education	3	0	0	3	3	E	EN												
ITB4130	History of Architecture	3	0	0	3	3	E	EN												
ITB4100	Social Structures and Historical Transformations	3	0	0	3	3	E	EN												
SOCIAL ELECTIVE 2 COURSES	IKT3322	Macroeconomic Policies	3	0	0	3	4	E	EN											
	IKT3562	History of Turkish Administration	3	0	0	3	4	E	EN											
	ISL1611	Introduction to Business	3	0	0	3	4	E	EN											
	ISL1711	Introduction to Law	3	0	0	3	4	E	EN											
	ISL1622	Behavior Science	3	0	0	3	4	E	EN											
	ISL3411	Marketing	3	0	0	3	4	E	EN											
	ISL3621	Production Management	3	0	0	3	4	E	EN											
	ISL3522	International Marketing	3	0	0	3	4	E	EN											
	ISL3912	Human Resource Management (Business Administration)	3	0	0	3	4	E	EN											
	ISL4351	Operations Research I	3	0	0	3	4	E	EN											
	ISL3040	Team Building and Development in Organizations	3	0	0	3	4	E	EN											
	ISL3531	Behavioral Sustainability	3	0	0	3	4	E	EN											
	ISL3631	Career and Work Psychology	3	0	0	3	4	E	EN											
	ISL3660	Business Communication	3	0	0	3	4	E	EN											
	ISL3930	Corporate Reputation from the Behavioral Perspective	3	0	0	3	4	E	EN											
	ISL3972	Occupational Health and Safety Law	3	0	0	3	4	E	EN											
	ISL4420	Sales Management	3	0	0	3	4	E	EN											
	ISL4611	Business Ethics	3	0	0	3	4	E	EN											
	ISL4640	Entrepreneurship	3	0	0	3	4	E	EN											
	ISL4760	Financial and Cost Accounting	3	0	0	3	4	E	EN											
ISL4851	Innovation Management in Management	3	0	0	3	4	E	EN												
ISL4860	Consumer Behaviour	3	0	0	3	4	E	EN												