

ALANYA ALAADDİN KEYKUBAT UNIVERSITY RAFET KAYIŞ FACULTY OF ENGINEERING DEPARTMENT OF GENETICS AND BIOENGINEERING (English) BACHELOR DEGREE CURRICULUM															
YEAR 1															
SEMESTER 1															
COURSE CODE	COURSE NAME	COURSE HOUR			LOCAL CREDIT	ECTS	COURSE TYPE	TEACHIN G LANGUAG E	SIDE CONDITION STATUS	SIDE CONDITION CODE	PRECONDITION STATUS	PRECONDITION CODE	GROUP STATUS	GROUP COURSE CODE	DESCRIPTION CODE
		T	P	L											
GBE 101	MATHEMATICS I	4	0	0	4	5	C	English	N	-	N	-	N	-	-
GBE 103	PHYSICS I	3	0	1	4	5	C	English	N	-	N	-	N	-	-
GBE 105	BIOLOGY	3	0	0	3	5	C	English	N	-	N	-	N	-	-
GBE 107	GBE LAB I	0	0	2	1	2	C	English	N	-	N	-	N	-	-
GBE 109	ENGINEERING ETHICS	2	0	0	2	2	C	English	N	-	N	-	N	-	-
GBE 111	CHEMISTRY	3	0	0	3	4	C	English	N	-	N	-	N	-	-
GBE 113	CHEMISTRY LAB	0	0	2	1	1	C	English	N	-	N	-	N	-	-
GBE 115	INTRO. to COMP. and INFO. SYSTEMS	1	1	0	2	2	C	English	N	-	N	-	N	-	-
TDB 101	TURKISH LANGUAGE I	2	0	0	2	2	C	Turkish	N	-	N	-	N	-	-
ATA 101	TURKISH HISTORY I	2	0	0	2	2	C	Turkish	N	-	N	-	N	-	-
<u>TOTAL</u>		<u>20</u>	<u>1</u>	<u>5</u>	<u>24</u>	<u>30</u>									
YEAR 1															
SEMESTER 2															
COURSE CODE	COURSE NAME	COURSE HOUR			LOCAL CREDIT	ECTS	COURSE TYPE	TEACHIN G LANGUAG E	SIDE CONDITION STATUS	SIDE CONDITION CODE	PRECONDITION STATUS	PRECONDITION CODE	GROUP STATUS	GROUP COURSE CODE	DESCRIPTION CODE
		T	P	L											
GBE 102	MATHEMATICS II	4	0	0	4	5	C	English	N	-	N	-	N	-	-
GBE 104	PHYSICS II	3	0	1	4	5	C	English	N	-	N	-	N	-	-
GBE 106	MICROBIOLOGY	3	0	0	3	5	C	English	N	-	N	-	N	-	-
GBE 108	GBE LAB II	0	0	2	1	2	C	English	N	-	N	-	N	-	-
GBE 110	INTRO. to GENETICS and BIOENGINEERING	2	0	0	2	4	C	English	N	-	N	-	N	-	-
GBE 112	ORGANIC CHEMISTRY	3	0	0	3	5	C	English	N	-	N	-	N	-	-
TDB 102	TURKISH LANGUAGE II	2	0	0	2	2	C	Turkish	N	-	N	-	N	-	-
ATA 102	TURKISH HISTORY II	2	0	0	2	2	C	Turkish	N	-	N	-	N	-	-
<u>TOTAL</u>		<u>19</u>	<u>0</u>	<u>3</u>	<u>21</u>	<u>30</u>									
YEAR 2															
SEMESTER 3															
COURSE CODE	COURSE NAME	COURSE HOUR			LOCAL CREDIT	ECTS	COURSE TYPE	TEACHIN G LANGUAG E	SIDE CONDITION STATUS	SIDE CONDITION CODE	PRECONDITION STATUS	PRECONDITION CODE	GROUP STATUS	GROUP COURSE CODE	DESCRIPTION CODE
		T	P	L											
GBE 201	DIFFERENTIAL EQUATIONS	4	0	0	4	5	C	English	N	-	N	-	N	-	-
GBE 203	GENETICS	3	0	0	3	5	C	English	N	-	N	-	N	-	-
GBE 205	CELL BIOLOGY	3	0	0	3	5	C	English	N	-	N	-	N	-	-
GBE 207	THERMODYNAMICS	3	0	0	3	5	C	English	N	-	N	-	N	-	-
GBE 209	BIOCHEMISTRY	3	0	0	3	4	C	English	N	-	N	-	N	-	-
GBE 211	GBE LAB III	0	0	4	2	3	C	English	N	-	N	-	N	-	-
SEC 201	ELECTIVE COURSE I	3	0	0	3	3	CE	English	N	-	N	-	Y	-	1
SEC 201.1	REPORT WRITING and PRESENTATION	3	0	0	3	3	E	English	N	-	N	-	Y	SEC 201	-
SEC 201.2	TECHNOLOGY and R&D														
SEC 201.3	BUSINESS PLANNING														
<u>TOTAL</u>		<u>19</u>	<u>0</u>	<u>4</u>	<u>21</u>	<u>30</u>									
YEAR 2															
SEMESTER 4															
COURSE CODE	COURSE NAME	COURSE HOUR			LOCAL CREDIT	ECTS	COURSE TYPE	TEACHIN G LANGUAG E	SIDE CONDITION STATUS	SIDE CONDITION CODE	PRECONDITION STATUS	PRECONDITION CODE	GROUP STATUS	GROUP COURSE CODE	DESCRIPTION CODE
		T	P	L											
GBE 202	STATISTICS and PROBABILITY	2	2	0	3	5	C	English	N	-	N	-	N	-	-
GBE 204	MOLECULAR BIOLOGY	3	0	0	3	5	C	English	N	-	N	-	N	-	-
GBE 206	PHYSIOLOGY	3	0	0	3	5	C	English	N	-	N	-	N	-	-
GBE 208	HEAT and MASS TRANSFER	3	0	0	3	5	C	English	N	-	N	-	N	-	-
GBE 210	SCIENTIFIC PROGRAMMING	2	2	0	3	4	C	English	N	-	N	-	N	-	-
GBE 212	GBE LAB IV	0	0	4	2	3	C	English	N	-	N	-	N	-	-
SEC 202	ELECTIVE COURSE II	3	0	0	3	3	CE	English	N	-	N	-	Y	-	1
SEC 202.1	SCIENTIFIC RESEARCH METHODS	3	0	0	3	3	E	English	N	-	N	-	Y	SEC 202	-
SEC 202.2	ENTREPRENEURSHIP														
SEC 202.3	CAREER PLANNING														
SEC 202.4	BIOMEDICAL PRODUCT REGULATIONS														

ALANYA ALAADDİN KEYKUBAT UNIVERSITY RAFET KAYIŞ FACULTY OF ENGINEERING DEPARTMENT OF GENETICS AND BIOENGINEERING (English) BACHELOR DEGREE CURRICULUM															
<u>TOTAL</u>		<u>16</u>	<u>4</u>	<u>4</u>	<u>20</u>	<u>30</u>									
YEAR 3															
SEMESTER 5															
COURSE CODE	COURSE NAME	COURSE HOUR			LOCAL CREDIT	ECTS	COURSE TYPE	TEACHING LANGUAGE	SIDE CONDITION STATUS	SIDE CONDITION CODE	PRECONDITION STATUS	PRECONDITION CODE	GROUP STATUS	GROUP COURSE CODE	DESCRIPTION CODE
		T	P	L											
GBE 301	GENETIC ENGINEERING	3	0	0	3	5	C	English	N	-	N	-	N		-
GBE 303	BIOPROCESS ENGINEERING I	3	0	0	3	5	C	English	N	-	N	-	N		-
GBE 305	BIOMATERIALS	3	0	0	3	5	C	English	N	-	N	-	N		-

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GBE 307	GBE LAB V	0	0	4	2	3	C	English	N	-	N	-	N		-
SEC 301	ELECTIVE COURSE III	3	0	0	3	5	CE	English	N	-	N	-	Y		2
SEC 301.1	BIOLOGY of AGING	3	0	0	3	5	E	English	N	-	N	-	Y	SEC 301	-
SEC 301.2	CANCER BIOLOGY														
SEC 301.3	CHROMOSOME BIOLOGY														
SEC 301.4	CYTOGENETICS														
SEC 301.5	EPIGENETICS														
SEC 301.6	FLUID MECHANICS														
SEC 301.7	FUNCTIONAL FOODS														
SEC 301.8	NEUROQUANTOLOGY														
SEC 301.9	PLANT BIOLOGY and GENETICS														
SEC 301.10	PROKARYOTIC MOLECULAR GENETICS														
SEC 301.11	VIRUS BIOLOGY														
SEC 301.12	GENOMICS														
SEC 301.13	IMAGING TECHNOLOGIES in BIOLOGY														
SEC 301.14	HUMAN GENETICS														
SEC 301.15	SECONDARY METABOLITES														
SEC 303	ELECTIVE COURSE IV	2	0	0	2	2	CE	English	N	-	N	-	Y		1
SEC 303.1	WESTERN CIVILIZATION HISTORY I	2	0	0	2	2	E	English	N	-	N	-	Y	SEC 303	-
SEC 303.2	HISTORY of ART														
SEC 303.3	HISTORY and PHILOSOPHY OF SCIENCE														
SEC 303.4	DISASTER AWARENESS														
SEC 303.5	ELOQUENT SPEECH														
SEC 303.6	BASIC FIRST AID and EMAKERGENCY														
SEC 303.7	ARCHERY														
SEC 303.8	BOXING, KARATE and TAEKWONDO														
SEC 303.9	FOOTBALL														
SEC 303.10	VOLLEYBALL														
SEC 303.11	BASKETBALL														
SEC 303.12	TENNIS														
SEC 303.13	TABLE TENNIS														
SEC 303.14	FOLK DANCES														
SEC 303.15	MUSIC CULTURE														
SEC 303.16	ARTS&PAINTING														
SEC 303.17	THEATRE and CINEMA														
SEC 303.18	HEALTHY LIVING														
SEC 303.19	NUTRITION														
SEC 303.20	MEDIA LITERACY														
SEC 303.21	MATHEMATICAL ESTHETICS														
SEC 303.22	INDUSTRIAL DESIGN														
SEC 303.23	BASIC PHOTOGRAPHY														
SEC 303.24	SURFING														
SEC 303.25	JAPANESE I														
SEC 303.26	JAPANESE II														
SEC 303.27	MYTHOLOGY														
SEC 303.28	ANCIENT CITY														
SEC 303.29	SOCIOLOGY														
SEC 303.30	PHILOSOPHY														
SEC 303.31	ANCIENT DNA: HISTORY of THE PAST														
SEC 303.32	GENETIC HERITAGE														
SEC 303.33	MODERN GENETIC APPLICATIONS: GENE CLONING														
SEC 303.34	FOOD and FOOD CULTURE														
SEC 303.35	DIET and EFFECTS														
SEC 303.36	TRADITIONAL FOODS														
SEC 303.37	ORGANIC AGRICULTE														
SEC 303.38	HUMAN RIGHTS														
SEC 303.39	VOLUNTEERING STUDIES														
SEC 303.40	DEFENCE INDUSTRY 102														
SEC 303.41	DEFENCE INDUSTRY 402														
SEC 303.42	ETHICS														

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SEC 303.43	FIGHTING ADDICTION														
<u>TOTAL</u>		<u>17</u>	<u>0</u>	<u>4</u>	<u>19</u>	<u>30</u>									

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YEAR 3															
SEMESTER 6															
COURSE CODE	COURSE NAME	COURSE HOUR			LOCAL CREDIT	ECTS	COURSE TYPE	TEACHING LANGUAGE	SIDE CONDITION STATUS	SIDE CONDITION CODE	PRECONDITION STATUS	PRECONDITION CODE	GROUP STATUS	GROUP COURSE CODE	DESCRIPTION CODE
		T	P	L											
GBE 302	BIOINFORMATICS	2	2	0	3	5	C	English	N	-	N	-	N	-	-
GBE 304	BIOPROCESS ENGINEERING II	3	0	0	3	5	C	English	N	-	Y	GBE 303	N	-	5
GBE 306	GBE LAB VI	0	0	4	2	3	C	English	N	-	N	-	N	-	-
GBE 308	INTERNSHIP	0	0	0	0	5	C	English	N	-	N	-	N	-	A
SEC 302	ELECTIVE COURSE V	3	0	0	3	5	CE	English	N	-	N	-	Y	-	2
SEC 302.01	BIOLOGY of STRESS	3	0	0	3	5	E	English	N	-	N	-	Y	SEC 302	-
SEC 302.02	BIOMATERIALS CHARACTERIZATION														
SEC 302.03	BIOMECHANICS														
SEC 302.04	BIOTECHNOLOGY														
SEC 302.05	BIOTRANSPORT PHENOMENA														
SEC 302.06	DEVELOPMENTAL BIOLOGY														
SEC 302.07	EUKARYOTIC MOLECULAR GENETICS														
SEC 302.08	FORENSIC GENETICS														
SEC 302.09	IMMUNOLOGY														
SEC 302.10	MICROSCOPY														
SEC 302.11	MOLECULAR CELL BIOLOGY														
SEC 302.12	NEUROSCIENCE														
SEC 302.13	NEUROTOXICOLOGY														
SEC 302.14	NUTRACEUTICALS														
SEC 302.15	NUTRITION in HEALTH and DISEASE														
SEC 302.16	PROTEOMICS and METABOLOMICS														
SEC 302.17	TOXICOLOGY														
SEC 304	ELECTIVE COURSE VI	2	0	0	2	2	CE	English	N	-	N	-	Y	-	1
SEC 304.1	WESTERN CIVILIZATION HISTORY 2	2	0	0	2	2	E	English	N	-	N	-	Y	SEC 304	-
SEC 304.2	HISTORY of ART														
SEC 304.3	HISTORY and PHILOSOPHY of SCIENCE														
SEC 304.4	DISASTER AWARENESS														
SEC 304.5	ELOQUENT SPEECH														
SEC 304.6	BASIC FIRST AID and EMAKERGENCY														
SEC 304.7	ARCHERY														
SEC 304.8	BOXING, KARATE and TAEKWONDO														
SEC 304.9	FOOTBALL														
SEC 304.10	VOLLEYBALL														
SEC 304.11	BASKETBALL														
SEC 304.12	TENNIS														
SEC 304.13	TABLE TENNIS														
SEC 304.14	FOLK DANCES														
SEC 304.15	MUSIC CULTURE														
SEC 304.16	ARTS&PAINTING														
SEC 304.17	THEATRE and CINEMA														
SEC 304.18	HEALTHY LIVING														
SEC 304.19	NUTRITION														
SEC 304.20	MEDIA LITERACY														
SEC 304.21	MATHEMATICAL ESTHETICS														
SEC 304.22	INDUSTRIAL DESIGN														
SEC 304.23	BASIC PHOTOGRAPHY														
SEC 304.24	SURFING														
SEC 304.25	JAPANESE I														
SEC 304.26	JAPANESE II														
SEC 304.27	MYTHOLOGY														
SEC 304.28	ANCIENT CITY														
SEC 304.29	SOCIOLOGY														
SEC 304.30	PHILOSOPHY														
SEC 304.31	ANCIENT DNA: HISTORY of THE PAST														
SEC 304.32	GENETIC HERITAGE														
SEC 304.33	MODERN GENETIC APPLICATIONS: GENE CLONING														

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SEC 304.34	FOOD and FOOD CULTURE														
SEC 304.35	DIET and EFFECTS														
SEC 304.36	TRADITIONAL FOODS														
SEC 304.37	ORGANIC AGRICULTE														
SEC 304.38	HUMAN RIGHTS														

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SEC 304.39	VOLUNTEERING STUDIES															
SEC 304.40	DEFENCE INDUSTRY 102															
SEC 304.41	DEFENCE INDUSTRY 402															
SEC 304.42	ETHICS															
SEC 304.43	FIGHTING ADDICTION															
TOTAL		13	2	4	16	30										
YEAR 4																
SEMESTER 7																
COURSE CODE	COURSE NAME	COURSE HOUR			LOCAL CREDIT	ECTS	COURSE TYPE	TEACHIN G LANGUAG E	SIDE CONDITION STATUS	SIDE CONDITION CODE	PRECONDITION STATUS	PRECONDITION CODE	GROUP STATUS	GROUP COURSE CODE	DESCRIPTION CODE	
		T	P	L												
GBE 401	GRADUATION PROJECT I	0	2	0	1	5	C	English	N	-	Y	-	N	-	4	
GBE 403	GENETICS and BIOENGINEERING DESIGN	3	0	0	3	5	C	English	N	-	N	-	N	-	-	
GBE 405	ECONOMICS	3	0	0	3	3	C	English	N	-	N	-	N	-	-	
ISG 401	OCCUPATION H&S I	2	0	0	2	2	C	English	N	-	N	-	N	-	-	
SEC 401	ELECTIVE COURSE VII	3	0	0	3	5	CE	English	N	-	N	-	Y	-	3	
SEC 401.1	BIOMEDICAL MATERIALS ENGINEERING	3	0	0	3	5	E	English	N	-	N	-	Y	SEC 401	-	
SEC 401.2	CELL CULTURE TECHNIQUES															
SEC 401.3	CHARACTERIZATION of NANOMATERIALS															
SEC 401.4	CLINICAL BIOCHEMISTRY															
SEC 401.5	DRUG DELIVERY SYSTEMS															
SEC 401.6	ENZYME KINETICS and TECHNOLOGIES															
SEC 401.7	EPIDEMIOLOGY															
SEC 401.8	INDUSTRIAL BIOTECHNOLOGY															
SEC 401.9	INSTRUMENTAL ANALYSIS															
SEC 401.10	MACROMOLECULAR DYNAMICS															
SEC 401.11	MOLECULAR EVOLUTION															
SEC 401.12	MOLECULAR MEDICINE															
SEC 401.13	MOLECULAR NEUROSCIENCE															
SEC 401.14	NANOTECHNOLOGY															
SEC 401.15	PHARMACOGENETICS															
SEC 401.16	POPULATION GENETICS															
TOTAL		17	2	0	18	30										
YEAR 4																
SEMESTER 8																
COURSE CODE	COURSE NAME	COURSE HOUR			LOCAL CREDIT	ECTS	COURSE TYPE	TEACHIN G LANGUAG E	SIDE CONDITION STATUS	SIDE CONDITION CODE	PRECONDITION STATUS	PRECONDITION CODE	GROUP STATUS	GROUP COURSE CODE	DESCRIPTION CODE	
		T	P	L												
GBE 402	GRADUATION PROJECT II	0	6	0	3	8	C	English	N	-	Y	GBE 401	N	-	5	
GBE 404	CURRENT TOPICS IN GBM	2	2	0	3	5	C	English	N	-	N	-	N	-	-	
ISG 402	OCCUPATION H&S II	1	0	0	1	2	C	English	N	-	N	-	N	-	-	
SEC 402	ELECTIVE COURSE VIII	3	0	0	3	5	CE	English	N	-	N	-	Y	-	3	
SEC 402.1	MOLECULAR SIGNALLING PATHWAYS and C	3	0	0	3	5	E	English	N	-	N	-	Y	SEC 402	-	
SEC 402.2	MITOCHONDRIAL BIOLOGY															
SEC 402.3	MOLECULAR ANTHROPOLOGY															
SEC 402.4	MEDICAL BIOCHEMISTRY															
SEC 402.5	IMMUNOGENETICS															
SEC 402.6	NEURODEGENERATIVE DISEASES															
SEC 402.7	BIOSENSORS															
SEC 402.8	GENE THERAPY															
SEC 402.9	MOLECULAR PHARMACOLOGY															
SEC 402.10	STEM CELLS															
SEC 402.11	PLANT TISSUE CULTURE															
SEC 402.12	PHARMACEUTICAL BIOTECHNOLOGY															
SEC 402.13	TISSUE ENGINEERING															
SEC 402.14	NEUROGENETICS															
SEC 402.15	PROTEIN ENGINEERING															
TOTAL		12	8	0	16	30										

*Abbreviations: T: Theoretical, P: Practice, L: Laboratory, C: Compulsory, E: Elective, CE: Compulsory Elective, Y: Yes, N: No

ACIKLAMALAR	
1	At least 1 course must be taken from the courses under this group.
2	At least 2 courses must be taken from the courses under this group.

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3	At least 3 courses must be taken from the courses under this group.
4	To be able to take this course, the student must have successfully completed at least one course from the sixth semester.
5	To take this course, the course specified in the relevant row and offered in the previous semester must be taken and passed with at least a DD grade.
A	Starting from the third year, students are required to complete workplace training (internships) of at least 20 working days. Students who complete workplace training are considered successful in this course. The workplace training course is not included in the grade point average.

COURSE CATEGORY	T	P	C	ECTS	Percentage of Total ECTS (%)	COMPULSORY COURSES		ELECTIVE COURSES	
						ECTS	Percentage of Total ECTS (%)	ECTS	Percentage of Total ECTS (%)

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Core Courses	42	32	58	102	42,50	102	42,50	50	20,83
Vocational Courses	51	9	57	78	32,50	69	28,75	6	2,50
Elective Courses	40	0	40	60	25,00	9	3,75	4	1,67
Total	133	41	155	240	100,00	180	75,00	60	25,00