

MOLECULAR BIOLOGY AND GENETICS DOUBLE MAJOR PROGRAM

1. YEAR 1. SEMESTER

Course Code	Course Name	ECTS	EXPLANATION
KHAS101	Origins and Consequences	5	COMMON
KHAS103	History of Humankind	5	COMMON
KHAS105	Universal Values and Ethics	5	COMMON
KHAS107	Design	5	COMMON N (KHAS107 is not a compulsory course in the Law Department. Students of the Law Department must take KHAS107 in the Molecular Biology and Genetics Double Major Program)
KHAS109	Computational Thinking	5	COMMON (KHAS109 is not a compulsory course in the Theatre Department. Students of the Theatre Department must take KHAS109 in the Civil Engineering Double Major Program)
TLL101 / TLL103	Critical Reading and Writing in Turkish I / Speaking, Reading and Writing in Turkish for International Students I	3	COMMON

1. YEAR 2. SEMESTER

Course Code	Course Name	ECTS	EXPLANATION
2 Core Elective Course of 5 ECTS, 10 ECTS in total		10	<i>Core Electives taken from the Major Program and passed successfully can be transferred as Core Electives in the Molecular Biology and Genetics Double Major Program. However, if the courses to be transferred as Core Elective courses to the Molecular Biology and Genetics Double Major Program are not 2 Core electives 10 ECTS in total, must be completed.</i>
KHAS102	Scientific Discoveries and Engineering	5	KHAS102 is not a common course in the Law, Psychology, Economics, International Relations, Business, Management Information Systems, International Trade and Finance, Visual Communication Design, Public Relations and Information, Radio, Television and Cinema, Advertising, New Media, Industrial Design, Interior Architecture and Environmental Design, Theatre, Computer Engineering, Industrial Engineering Departments and students from those departments must take KHAS102 as compulsory in the Molecular Biology and Genetics Double Major Program. KHAS102 is a COMMON course with Mechatronics Engineering and Electrical-Electronics Engineering Departments.
KHAS112	Thinking Mathematically	6	KHAS112 is not a common course in the Law, Psychology, Visual Communication Design, Public Relations and Information, Radio, Television and Cinema, Advertising, New Media, Industrial Design, Interior Architecture and and Environmental Design, Theatre Departments. Students of the Law, Psychology, Visual Communication Design, Public Relations and Information, Radio, Television and Cinema, Advertising, New Media, Industrial Design, Interior Architecture and and Environmental Design, Theatre Departments and students from those departmnets must take KHAS112 in the Molecular Biology and Genetics Double Major Program. KHAS112 is a COMMON course with Architecture Political Science and Public Administration, Economics, International Relations, Business, Management Information Systems, Computer Engineering, Industrial Engineering, Civil Engineering, Mechatronics Engineering, Electrical-Electronics Engineering Departments.
KHAS110 / KHAS120	Civic Responsibility Project / Civic Responsibility Project for International Students	2	COMMON
TLL102 / TLL104	Critical Reading and Writing in Turkish II / Speaking, Reading and Writing in Turkish for International Students II	3	COMMON
MBG106	Biology I	6	

2. YEAR 3. SEMESTER			
Course Code	Course Name	ECTS	EXPLANATION
HST101	History of Modern Turkey I	2	COMMON
FENS201	Applied Engineering Mathematics I	6	COMMON for Civil Engineering, Mechatronics Engineering, Computer Engineering, Electrical-Electronics Engineering. Students from Economics Major can take ECON203 , students from Industrial Engineering Major can take MA211 , students from Business Administration, International Trade and Finance, Management Information Systems can take MAN203 instead of this course
MBG211	Bioorganic Chemistry I	6	
MBG299	Internship I	5	
MBG203	Modern Basic Sciences and Applications I	5	
MBG215	Biology II	6	
2. YEAR 4. SEMESTER			
Course Code	Course Name	ECTS	EXPLANATION
HST102	History of Modern Turkey II	2	COMMON
FENS200/GE204	Probability and Statistics	4	COMMON for Civil Engineering, Mechatronics Engineering, Computer Engineering, Electrical-Electronics Engineering. Students from Industrial Engineering Major can transfer GE204 , Students from Economics, Business Administration, Psychology, Political Science and Public Administration, International Trade and Finance, Management Information Systems Major programs can transfer MAN201 instead of this course.
MBG212	Bioorganic Chemistry II	8	
MBG208	Virtual Basic Lab	5	
MBG204	Modern Basic Sciences and Applications II	5	
MBG210	Human Physiology	6	
3. YEAR 5. SEMESTER			
Course Code	Course Name	ECTS	EXPLANATION
MBG321	Molecular Biology and Genetics I	6	
MBG309	Biopython	6	CME140/CMPE140, EEE206, MIS106 can be transferred instead of this course for those students who are from Computer Engineering, Electrical-Electronics Engineering, Industrial Engineering, Management and Information Systems major programs
MBG305	Biochemistry I	6	
3. YEAR 6. SEMESTER			
Course Code	Course Name	ECTS	EXPLANATION
MBG322	Molecular Biology and Genetics II	6	
MBG306	Biochemistry II	6	
MBG304	Introduction to Bioinformatics	5	
MBG399	Internship II	5	
4. YEAR 7. SEMESTER			
Course Code	Course Name	ECTS	EXPLANATION
MBG403	Advanced Genetics	6	
MBG409	Neuroscience	7	
MBG411	Graduate Project I	6	
4. YEAR 8. SEMESTER			

Course Code	Course Name	ECTS	EXPLANATION
MBG402	Genomics	6	
MBG412	Graduate Project II	10	
MOLECULAR BIOLOGY AND GENETICS DOUBLE MAJOR PROGRAM FIELD AND FREE ELECTIVE COURSES			
5 MBG Field Elective Course of 25 ECTS in total	25		<i>Free Elective courses taken from the Major Program and successfully completed, the MBG coded and non-compulsory courses in the Department of Molecular Biology and Genetics Engineering can be transferred as the Field Elective of the Department of Molecular Biology and Genetics. However, if the courses to be transferred to the Molecular Biology and Genetics Engineering Double Major Program are not 5 MBG coded and 25 ECTS in total, must be completed.</i>
4 Free Elective Course of 20 ECTS in total	20		<i>Field Elective courses (non-MBG coded courses and Field Elective and NonCompulsory Courses in the Department of Molecular Biology and Genetics Engineering taken from the Major Program and passed successfully can be transferred as Free Elective courses in the Department of Molecular Biology and Genetics Engineering. However, if the free elective courses to be transferred to the Molecular Biology and Genetics Engineering Double Major Program are not 4 electives with 5 ECTS (20 ECTS in total), must be completed.</i>
			GRAND TOTAL: 240 ECTS