

COURSE LIST : Faculty of Arts & Sciences Department of Molecular Biology and Genetics

Please note that Erasmus students are allowed to take courses from lists of all faculties/schools according to their needs or interests.

Courses offered in Turkish are listed at the website of the faculty <http://fef.comu.edu.tr/> or

you can contact Departmental Coordinator to get the necessary information

Courses offered in English

Course Title	Code	ECTS Credit	COMU Credit	Lecturer
Biology I	ULP-02-271	7	3	Teaching Staff Ahmet Karatürk
Biology II	ULP-02-272	7	3	Teaching Staff Ahmet Karatürk
Microbiology	ULP-02-273	3	3	Assist. Prof. Dr. Tülay Turgut Genç
Microbiology Lab	ULP-02-274	3	1	Assist. Prof. Dr. Tülay Turgut Genç
Plant Biology	ULP-02-275	3	3	Assits. Prof. Dr. Hilal Özkılınç
Genetics	ULP-02-276	6	3	Prof. Dr. Akın Pala
Cell Biology	ULP-02-277	6	3	Assist. Prof. Dr. Tuğba Boyuneğmez Tümer
Cell Biology Lab	ULP-02-278	3	1	Assist. Prof. Dr. Tuğba Boyuneğmez Tümer
Genetics Lab	ULP-02-279	3	1	Assits. Prof. Dr. Hilal Özkılınç

Course Code	ULP-02-271
Name of the course in English	Biology I
Name of the course in Turkish	Biyoloji I
Language of the course	English
Status	Undergraduate Course
Lecturer	Teaching Staff Ahmet Karatürk
ECTS Credits	7
COMU Credits	3
Description	This course introduces the principles and concepts of biology. Emphasis is on basic biological chemistry, cell structure and function, metabolism and energy transformation, genetics, evolution, classification, and other related topics. Upon completion, students should be able to demonstrate understanding of life at the molecular and cellular levels

Course Code	ULP-02-272
Name of the course in English	Biology II
Name of the course in Turkish	Biyoloji II
Language of the course	English
Status	Undergraduate Course
Lecturer	Teaching Staff Ahmet Karatürk
ECTS Credits	7
COMU Credits	3
Description	An introduces to environmental science and ecology with emphasis on the interrelationships living and non-living things in ecosystems. In addition to what, the course also covers the topics of gene regulation, alterations in genomes, basic knowledge in cancer genetics and techniques used in genetics and molecular biology

Course Code	ULP-02-273
Name of the course in English	Microbiology
Name of the course in Turkish	Mikrobiyoloji
Language of the course	English
Status	Undergraduate Course
Lecturer	Assist. Prof. Dr.Tülay Turgut Genç
ECTS Credits	3
COMU Credits	3
Description	Structure and characteristics of bacteria, viruses, and fungi, with special emphasis on forms pathogenic for humans. The course is aimed at teaching the students metabolism of microorganisms and principles of immunology as well as teaching various groups of microorganisms, their structure, physiology, microbial pathogenicity, and selected practical applications.

Course Code	ULP-02-274
Name of the course in English	Microbiology Lab
Name of the course in Turkish	Mikrobiyoloji Lab
Language of the course	English
Status	Undergraduate Course
Lecturer	Assist. Prof. Dr.Tülay Turgut Genç
ECTS Credits	3
COMU Credits	1
Description	Student should be able to demonstrate knowledge and skills, including microscopy, aseptic technique, staining, microscopy, aseptic technique, staining, culture methods, and identification of microorganisms. Lab safety and working sterilized are given priority in this lab. Basic microbiological techniques for isolating, examining, and identifying bacteria, fungi, and viruses; experimental investigation of their characteristics.

Course Code	ULP-02-275
Name of the course in English	Plant Biology
Name of the course in Turkish	Bitki Biyolojisi
Language of the course	English
Status	Undergraduate Course
Lecturer	Assist. Prof. Dr. Hilal Özkılınç
ECTS Credits	3
COMU Credits	3
Description	An introductory course on plant sciences, which covers mainly the elementary aspects of plant morphology (forms and structures of plant parts), plant physiology (functional processes), plant ecology (relationships between plants and their environment) and plant genetics (inheritance of traits in plants ) and plant-pathogen interactions.

Course Code	ULP-02-276
Name of the course in English	Genetics
Name of the course in Turkish	Genetik
Language of the course	English
Status	Undergraduate Course
Lecturer	Prof. Dr. Akın Pala
ECTS Credits	6
COMU Credits	3

Description	The course covers principle of prokaryotic and eukaryotic cell genetics. Emphasis is placed on the molecular basis of heredity, chromosome structure, patterns of Mendelian and non- Mendelian inheritance, evolution, and biotechnological applications. Upon completion, students should be able to recognize and describe genetic phenomena and demonstrate knowledge of important genetic principle.
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Course Code	ULP-02-277
Name of the course in English	Cell Biology
Name of the course in Turkish	Hücre Biyolojisi
Language of the course	English
Status	Undergraduate Course
Lecturer	Assist. Prof. Dr.Tuğba Boyuneğmez Tümer
ECTS Credits	6
COMU Credits	3
Description	The cell is the fundamental unit of all life. In this course, we will explore cell's main components and functions as well as the great diversity of all cellular forms. The course is organized into the major areas of cell membrane, membranous organelles, other organelles, communication within the cell and between cells and cell motility. This course will be serve as a bridge between foundational courses of molecular basis of life and advanced courses showing the complexity of multicellular organisms

Course Code	ULP-02-278
Name of the course in English	Cell Biology Lab
Name of the course in Turkish	Hücre Biyolojisi Lab
Language of the course	English
Status	Undergraduate Course
Lecturer	Assist. Prof. Dr.Tuğba Boyuneğmez Tümer
ECTS Credits	3
COMU Credits	1
Description	Practice of fundamental laboratory techniques will be employed to observe and stain cellular and subcellular structures. The techniques include: cytochemical methods, karyotyping, abd permanent slide preparation, sub-cellular fractionation and basic cell cultures techniques.

Course Code	ULP-02-279
Name of the course in English	Genetics Lab
Name of the course in Turkish	Genetik Lab
Language of the course	English
Status	Undergraduate Course
Lecturer	Assist. Prof. Dr. Hilal Özkılınç
ECTS Credits	3
COMU Credits	1
Description	The lecture includes basic genetics concepts using through experimentation, analysis, and simulation models and introduce students to basic molecular genetics laboratory skills like nucleic acid isolations, PCR analysis, bacterial transformation, restriction endonuclease of DNA, DNA fingerprinting and chromosomal analyses. Besides, students learn about designing genetics experiments using various model organisms, acquire laboratory skills and gain the ability to make adjustments in the laboratory protocols as needed.