



2025-2026 Academic Year
List of Courses Offered in Foreign Language
2025-2026 Akademik Yılı
Yabancı Dilde Açılacak Dersler Listesi

Institute of Natural and Applied Sciences
Fen Bilimleri Enstitüsü

	Department <i>Bölüm</i>	Course Code <i>Ders Kodu</i>	ECTS <i>AKTS</i>	Course Title <i>Dersin Adı</i>	Semester <i>Dönem</i>	Course Content <i>Dersin İçeriği</i>	Academic Staff <i>Dersi Veren Öğretim Elemanı</i>	Online Available <i>Çevrimiçi</i>
1	Agricultural Biotechnology (MA)	BTİ 5001	8	Molecular Biology and Genetics	Fall	Structure and Functions of DNA, Chromosomes, DNA Replication, Transcription, Post-transcriptional modifications, Repair and Recombination, Gene Expression and Regulation, Translation	Assoc. Prof. Dr. Aysun Özçelik	NA
2	Agricultural Biotechnology (MA)	TBI 5002	8	Advanced Cellular Biology	Spring	The objective of the course is teaching subjects such as structure of the cell, organelles, macromolecules of the cell, cellular reactions, cellular transport mechanisms and reading latest articles on these subjects. Emphasizing the importance and relevance of these topics in biotechnology. Topics include; structure of the cell membrane; cellular organelles; membrane transport; intracellular trafficking; vesicular transport; cytoskeleton; signaling mechanisms.	Assoc. Prof. Dr. Münevver Aksoy	NA
3	Agricultural Biotechnology (MA)	TBI 5007	8	Plant Physiology I	Fall	This course offers all aspects of plant physiology. Photosynthesis, stress physiology, plant-water relationship, plant nutrient synthesis and uptake are some of the main subjects of the course.	Prof. Dr. Songül Sever Mutlu	NA
4	Agricultural Biotechnology (MA)	TBI 5009	8	Plant Genetics	Fall	Plant genome, poliploidization, chloroplast and mitochondrial genetics, male sterility and incompatibility	Prof. Dr. Nedim Mutlu	NA
5	Agricultural Biotechnology (MA)	TBI 5014	8	Conservation Genetics in Animals	Spring	The importance of genetic diversity and conservation in farm animals, phenotypic and genetic variation in populations, molecular approaches to genetic conservation, Hardy Weinberg equation, populations and genetic shift, identification methods of populations and softwares	Assoc. Prof. Dr. Demir Özdemir	NA
6	Agricultural Biotechnology (MA)	TBI 5017	8	Scientific Research Methods and Ethics I	Fall	his course enables students to learn the basic concepts of scientific research (law, principle, theory, hypothesis, assumption, variable) and philosophy and ethical principals of scientific research. It also provides an opportunity for students to examine and evaluate the related literature they are planning to carry out a research. The students also gain knowledge on sampling, sampling terminology, statistical terms in sampling, measurement validity and reliability, types of designs, and designing designs for research.	Assoc. Prof. Dr. Demir Özdemir	NA
7	Agricultural Biotechnology (MA)	New Course	8	Use of Bioinformatics Tools Plant Biotechnology	Fall	his graduate-level course introduces key bioinformatics tools used in plant biotechnology, with a focus on data retrieval, genome analysis, and functional interpretation. Students will gain hands-on experience with platforms such as NCBI, Phytosome, Arabidopsis.org, and Clustal Omega, and learn to design primers, genome-editing vectors, and analyze RT-qPCR and RNA-seq data.	Assoc. Prof. Dr. M. Aydın Akbudak	NA
8	Agricultural Biotechnology (PhD)	BTİ 7031	10	Chromatographic Analysis of Biological Molecules	Fall	The scope of the course includes laboratory safety, introduction of basic chemicals, consumables, tools and equipment used in laboratory and application of basic laboratory analysis.	Prof. Dr. Mehmet Fatih Cengiz	NA
9	Agricultural Biotechnology (PhD)	BTİ 7033	10	Scientific Literature Analysis in Biotechnology	Fall	Reading and analyses of biotechnology related articles; such as mutant analyses, gene expression analyses, techniques used in biotechnology (RT-PCR, qPCR, western blot, immunoprecipitation etc.), genetics.	Assoc. Prof. Dr. Münevver Aksoy	NA
10	Agricultural Biotechnology (PhD)	BTİ 7035	14	Scientific Research Methods and Ethics I	Fall	What are the ethical problems in scientific research? • What are the unethical behaviors in scientific research and how to prevent unethical behaviors? • Instructions on scientific research and publication ethics of Higher Education Council. • Scientific research methods • Scientific research examples.	Assoc. Prof. Dr. Demir Özdemir	NA