

2026-2027 Academic Year
List of Courses Offered in Foreign Language
2026-2027 Akademik Yılı
Yabancı Dilde Açılacak Dersler Listesi

Faculty of Engineering
Mühendislik Fakültesi

	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	Food Engineering	Code: FE421	5	Food Processing	Winter and Spring	This course covers the processing schemes applied for the production of various foods. Among these foods are staple foods such as coffee, sugar, glucose and high fructose syrup, as well as some traditional Turkish foods such as lokum, tahin, helva and leblebi	Assoc. Prof. Dr. Barçın KARAKAŞ BUDAK	No
2	Food Engineering	Code: FE316	5	Novel Food Manufacturing Technology	Winter and Spring	The aim of this course is to provide students with the basic principles of some of the more recently developed technologies applied in food processing. Specific subjects covered are irradiation, microwave heating, sonication, UV and IR applications, pulsed light, electrolyzed water and ozone applications.	Assoc. Prof. Dr. Barçın KARAKAŞ BUDAK	No
3	Food Engineering	Code: FE422	5	Technology of Fermented Foods	Winter and Spring	This course covers the processing schemes applied for the production of various fermented foods. Among these foods are beer, wine, fermented olives, fermented vegetables, vinegar and fermented oriental foods.	Assoc. Prof. Dr. Barçın KARAKAŞ BUDAK	No
4	Food Engineering	Code: FE666	5	Food Hydrocolloids	Winter and Spring	In this course following an introduction to the food hydrocolloids; definition, sources, their functional properties, their use in foods, manufacture, health properties, regulatory status, specific lectures are presented to students on food hydrocolloid groups (eg. agar, xanthan gum, galactomannans, starch, gum arabic, celluloses, glucans, inulin)	Assoc. Prof. Dr. Barçın KARAKAŞ BUDAK	No
5	Food Engineering	Code: FE460	5	General Microbiology	Winter and Spring	The aim of this course is to provide students with the basic principles of microbiology. Specific subjects covered are microbial classification microbial growth factors, bacterial cell structure and basics of molecular biology.	Assist. Prof. Dr. Reha Onur AZİZOĞLU	No
6	Food Engineering	Code: EFE358	5	Bioprocess Engineering	Winter and Spring	The aim of this course is to generate core competencies through an understanding of the complementary biotechnology disciplines and their interdependence, and an appreciation of the challenges associated with the application of engineering principles in a life science context. Bioprocess engineering emphasizes the engineering and sciences of industrial processes that are biobased; biomass feedstock conversion for a sustainable society or biorefinery; biocatalysis based processing; and manipulation of microorganisms for a sustainable and socially desirable goal specifically good based product and functional foods.	Prof. Dr. Osman Kadir TOPUZ	No
7	Food Engineering	Code: EFE467	5	Introduction to Industrial Microbiology	Winter and Spring	This course aims to provide foundational knowledge of microbiological principles as applied to industrial processes, with a focus on the use of microorganisms in the production of commercially valuable products. The course introduces students to microbial metabolism, fermentation technology, and the screening and selection of industrial strains. Emphasis is placed on the application of industrial microbiology in food production, pharmaceuticals, biofuels, and waste treatment, with a focus on sustainability and innovation in microbial process development. Students will gain an appreciation of the role of microbes in modern biotechnological industries and how microbial systems can be engineered for enhanced productivity and product quality.	Assist. Prof. Dr. Murat Yanat	No
8	Food Engineering	Code: FE468	5	Advanced dehydration technology and food preservation	Winter and Spring	This course provides a comprehensive overview of advanced dehydration technologies and their role in food preservation, covering the fundamental principles of heat and mass transfer, drying kinetics, conventional and emerging drying methods, and pre-drying treatments. It also examines the effects of dehydration on the physical, chemical, nutritional, and microbiological quality of foods, as well as packaging strategies, storage conditions, and shelf-life optimization of dehydrated food products.	Prof. Dr. Ayhan TOPUZ	No

**** Students must consult the instructor prior to enrollment in the course so that measures can be taken to integrate the course into the workplan.**

**** Öğrenciler ders kaydı yapmadan evvel dersi veren öğretim üyesi ile iletişime geçmelidir ki ders programına entegrasyon sağlanabilsin.**