

Department	Course	Comment
Bioengineering	BE304 Physiology (3+0)3, 5 ECTS	Contact the professor for the required background before registering.
	BE351 Research Project I (0+6)3, 4 ECTS	
	BE352 Research Project II (0+6)3, 4 ECTS	
	BE407 Uses of Biotechnology in Pharmacology (3+0)3, 3 ECTS	
	BE408 Enzyme Kinetics & Technology (3+0)3, 3 ECTS	
	BE409 Introduction to Biomolecular Engineering (3+0)3, 3 ECTS	
	BE410 Introduction to Tissue Engineering (3+0)3, 3 ECTS	
	BE411 Biomechanics (3+0)3, 3 ECTS	
	BE414 Controlled Drug Delivery Technology (3+0)3, 3 ECTS	
	BE417 Macromolecular Dynamics from Structure to Function (3+0)3, 5 ECTS	
	BE418 Bioinformatics Tools for Macromolecular Systems (3+0)3, 5 ECTS	
	BE451 Research Project III (0+6)3, 4 ECTS	
	BE452 Research Project IV (0+6)3, 4 ECTS	
	BE505 Advanced Physiology (3+0)3, 8 ECTS	
	BE585 Machine Learning for Computational Biochemistry (3+0)3, 8 ECTS	
	CHEM352 Introduction to Environmental Chemistry (3+0)3, 5 ECTS	

Department	Course	Comment
Chemistry	CHEM353 Introduction to Chemometry (3+0)3, 5 ECTS	Contact the professor for the required background before registering.
	CHEM447 Solar Fuels & Artificial Photosynthesis (3+0)3, 5 ECTS	
	CHEM481 Reaction Mechanisms in Organic Chemistry (3+0)3, 5 ECTS	
	CHEM495 Molecular Photonics (3+0)3, 5 ECTS	
	CHEM497 Introduction to Mass Spectrometry (3+0)3, 5 ECTS	

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Chemical Engineering	CHE372 Physical Aspects of Biological Systems (3+0)3, 3 ECTS	Contact the professor for the required background before registering. Students should cc Dr. Dildare Basalp on emails to the professors.
	CHE455 Process Design for Biotechnology (3+0)3, 3 ECTS	
	CHE462 Enzyme Technology (3+0)3, 3 ECTS	
	CHE464 Separation and Purification Processes for Biochemical Products (3+0)3, 3 ECTS	
Computer Engineering	CENG463 Introduction to Machine Learning (3+0)3, 6 ECTS	Contact the professor for the required background before registering.
	CENG464 Introduction to Text Mining (3+0)3, 6 ECTS	
	CENG482 Evolutionary Computation (3+0)3, 6 ECTS	
	CENG399 Concepts of Artificial Intelligence (3+0)3, 6 ECTS	
Electronic Engineering	EE401 Neural Networks (3+0)3, 6 ECTS	Contact the professor for the required mathematics background before registering.
	EE402 Introduction To Natural Language Processing (3+0)3, 6 ECTS	Contact the professor for the required background before registering. EE401 is recommended for the background.
	EE430 Introduction to Systems Biology (3+0)3, 6 ECTS	Contact the professor for the required background before registering.
Mathematics	MATH255 Differential Equations (4+0)4, 6 ECTS	Contact the professor for the required background before registering.
	MATH261 Linear Algebra I (3+2)4, 6 ECTS	
	MATH262 Linear Algebra II (3+2)4, 6 ECTS	
	MATH265 Basic Linear Algebra (3+0)3, 4 ECTS	
	MATH355 Partial Differential Equations (3+2)4, 8 ECTS	

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Food Engineering	FE312 Introduction to Industrial Microbiology (3+0)3, 7 ECTS	Contact the professor for the required background before registering.
	FE314 Food Enzymes (3+0)3, 7 ECTS	
	FE318 Introduction to Food Biotechnology (3+0)3, 7 ECTS	
	FE402 Nutrition in Health and Diseases (3+0)3, 7 ECTS	
	FE410 Introduction to Nutrigenomics and Nutrigenetics (3+0)3, 7 ECTS	
	FE418 Introduction To R Programming (3+0)3, 7 ECTS	
	FE420 Graduation Project (0+6)3, 7 ECTS	
Photonics	PHOT201 Fundamentals of Optics & Photonics I (4+0)4, 5 ECTS	Contact the professor for the required background before registering.
	PHOT202 Fundamentals of Optics & Photonics II (4+0)4, 6 ECTS	
	PHOT412 Introduction to Biophotonics (3+0)3, 5 ECTS	Contact the professor for the required background before registering. PHOT201 and PHOT202 are recommended.
Biotechnology	BTEC580 Special Topics in Biotechnology (3+0)3, 9 ECTS	Contact the professor for the required background before registering.
Medical Biotechnology	MBT645 Bio Accessibility-Bioavailability-Bio Functionality (3+0)3, 9 ECTS	Contact the professor for the required background before registering.
Physics	PHYS453 Molecular Biophysics (3+0)3, 6 ECTS	Contact the professor for the required background before registering.
	PHYS461 Research Project I (1+4)3, 6 ECTS	
	PHYS462 Research Project II (1+4)3, 6 ECTS	