MSc Biomedical Engineering **Track Bioelectronics** **Spring Semester 2025 (FS25)** last update: Dec. 4, 2024

Core Course | Recommended Elective Course | Biology Course

Time	Monday					
08:00			Physiology and Anatomy for Biomedical Engineers II		Elements of Microscopy	
09:00				Neural Systems		
10:00	Machine Learning for Health Care	Soft and Biohybrid Robotics	Principles in Tissue Engineering			
11:00						
12:00						
13:00					Biological Methods for Engineers	
14:00		Finite Element Analysis in Biomedical Engineering	Mobile Health and Activity Monitoring			
15:00	Microsystems II: Devices and Applications					
16:00		MaP Distinguished Lecture Series on Engineering with Living Materials	Introduction to Robotics and Mechatronics			Advanced Topics in Control
17:00						
18:00						

Time	Tuesday					
08:00			Rehabilitation Engineering I: Motor Functions	Optics and Photonics		
09:00	Medical Technology Innovation for Underrepresented Groups	Translational Neuromodeling			Applications of Thermal Modeling: From Hot Atoms to Heated Tissues	
10:00			Nanorobotics			Biomedical Photonics
11:00						
12:00						
13:00	Neuromorphic Engineering II	Soft and Biohybrid Robotics			Machine Learning for Health Care	
14:00			Lasers in Medicine *		Large-Scale Convex Optimization	Introduction to Machine Learning
15:00						
16:00						
17:00						
18:00						

Time	Wednesday					
08:00				Cell and Molecular Biology for Engineers		
09:00	Applications of Thermal Modeling: From Hot Atoms to Heated Tissues					
10:00						
11:00						
12:00						
13:00						
14:00		Introduction to Machine Learning	Recursive Estimation			
15:00						
16:00	Orthopaedic Biomechanics					
17:00						
18:00						

Time	Thursday					
08:00						
09:00				Quantitative Big Imaging: From Images to Statistics		
10:00	Nanophotonics: from Fundamentals to Applications				Development Strategies for Medical Implants	
11:00						
12:00						
13:00	Microsystems II: Devices and Applications				Development Strategies for Medical Implants	
14:00		Nanophotonics: from Fundamentals to Applications				Cell and Molecular Biology for Engineers
15:00						
16:00			Nanorobotics			
17:00						
18:00						

Time	Friday					
08:00	Rehabilitation Engineering I: Motor Functions					
09:00					Chemistry of Devices and Technologies *	
10:00	Advanced Topics in Control		Biofluiddynamics	Physics Against Cancer: The Physics of Imaging and Treating Cancer		Nano-Optics
11:00						
12:00						
13:00						
14:00	Model-Based Estimation and Signal Analysis	Translational Neuromodeling	Physics in Medical Research: From Humans to Cells	Nano-Optics	Introduction to Machine Learning	
15:00						
16:00						
17:00						
18:00						

Various dates: Computational Psychiatry & Computational Psychosomatics *

June 2025 : Large-Scale Convex Optimization

*: not offered in FS25

Note: This is informal help for students. The official courses can be seen on the Course Catalogue of ETH (www.vvz.ethz.ch)