Department of Biomedical Engineering

List of elective courses
Fall Semester

Due to timetable constraints, students can only choose courses within the same track

COURSE	HOURS	ECTS
TRACK 1: ENGINEERING WITH LIFE AND PHYSICAL SCIENCES		
Biomechanics and numerical modeling	56	5
Biomechanics and materials	25	2
Biomechanics and rheology	25	2
3D Modeling and Surgical Simulation	43	4
Biomechanics of shocks and vibrations	14	1
TRACK 2: DIAGNOSIS AND INNOVATIVE MEDICAL TREATMENT		
Advanced Medical Image Processing	21	2
Technology of Imaging Systems	27	3
Biomedical Acoustics	19	2
Robotics	26	3
Pose Estimation	14	1
3D Medical Registration	23	2
Computer-Assisted Medical Interventions	28	3
Modeling of Living Systems	20	2
Biomechanics and Numerical Simulation	16	1
Real-time Simulation	33	3
TRACK 3: INNOVATIVE THERAPIES		
Optical Biosensor (Plasmonics)	30	3
Impedance Spectroscopy	11	1
Optical Instrumentation for Biomedical	11	1
Cell Culture and Instrumentation	22	2
Nanosciences	23	2
Biochip Practical Works	20	2
Lab-on-chips	20	2
INNOVEC Winter School	30	3