Studies Plan

Mineur : Technologies biomédicales 2026-27

Minor : Biomedical Technologies

Lang.	Courses Code	Sect.	Teacher	Exam Session	Exam	Credit
E	**Analog circuits for biochip** EE-518	EL	Carrara Schmid Skrivervik	Sum	Written	3
E	**Applied biomedical signal processing** EE-512	EL	Jorge Lemay	Win	Written	4
E	**Basics in bioinstrumentation** BIOENG-421	SV	Merten	Win	During the semester	4
E	**Bioelectronics and biomedical microelectronics** EE-519	EL	Schmid	Win	Written	3
E	**Bioimage informatics** BIO-410	SV	Sage Seitz	Sum	Written	4
E	**Biomechanics of the musculoskeletal system** ME-482	GM	Pioletti	Sum	During the semester	5
E	**Biomedical optics** BIOENG-445	SV	Wagnières	Win	Oral	3
E	**Bio-nano-chip design** EE-517	EL	Carrara	Win	Written	4
E	**Biophysics : physics of the cell** PHYS-301	PH	Manley	Sum	Written	3
E	**Cellular biology and biochemistry for engineers** BIO-105	SV	Zufferey	Win	Written	4
E	**Computational neurosciences: neuronal dynamics** NX-465	NX	Gerstner	Sum	Written	5
E	**Experimental biomicroscopy** MICRO-562	SV	Altug Seitz	Sum	During the semester	4
E	**Fundamentals of biomicroscopy** MICRO-561	SV	Altug	Win	Written	4
E	**Fundamentals of biophotonics** BIO-443	SV	Radenovic	Sum	During the semester	3
E	**Fundamentals of biosensors and electronic biochips** EE-515	EL	Guiducci	Win	Written	3
E	**Introduction to biomedical imaging** PHYS-438	PH	Xin	Win	Written	4
E	**Laboratory introduction to biochemistry** MICRO-408	MT	Maerkl	Win	During the semester	4
E	**Light, liquids and interfaces** MICRO-390	MT	Roke	Sum	Written	4
E	**Mechanobiology: how mechanics regulate life** ME-480	GM		Win	During the semester	4

	MRI Practicals on CIBM preclinical imaging systems					
E	*PHYS-473*	*PH*	*Cudalbu Moldovan Lanz Lê*	*Win*	*During the semester*	*4*
	Nanobiotechnology					
E	*CH-413*	*CGC*	*Steinauer*	*Sum*	*During the semester*	*3*
	Neural interfaces					
E	*NX-422*	*NX*	*Schiavone Shoaran*	*Win*	*During the semester*	*6*
	Neural signals and signal processing					
E	*NX-421*	*NX*	*Micera Van De Ville*	*Win*	*Written*	*6*
	Neuroscience: cellular and circuit mechanisms					
E	*BIO-482*	*SV*	*Crochet Petersen*	*Win*	*During the semester*	*5*
	New tools & research strategies in personalized health					
E	*BIO-491*	*SV*	*Fellay Friedli*	*Sum*	*During the semester*	*4*
	Numerical methods in biomechanics					
E	*ME-484*	*GM*	*Terrier*	*Sum*	*Written*	*3*
	Optical engineering (for MT)					
F	*MICRO-321(a)*	*MT*	*Achouri Martin*	*Win*	*Written*	*6*
	Physics of magnetic resonance imaging					
E	*PHYS-478*	*PH*	*Karampinos*	*Sum*	*Written*	*4*
	Physiology by systems					
F	*BIO-377*	*SV*	*Roy*	*Sum*	*Written*	*4*
	Project in biomedical technologies					
E	*MICRO-563*	*MT*	*Profs divers*	*Sum Win*	*During the semester*	*8*
	Regulatory, quality and clinical affairs					
E	*NX-451*	*NX*	*Rochat*	*Sum*	*During the semester*	*3*
	Seminar in physiology and instrumentation					
	MICRO-568	*MT*	*Radenovic*	*Win*	*Written*	*2*
	Sensors in medical instrumentation					
E	*EE-511*	*EL*	*Chételat Ionescu*	*Sum*	*Written*	*3*
	Translational neuroengineering					
E	*NX-423*	*NX*	*Blanke Hummel Micera Moraud*	*Sum*	*Written*	*6*

C : Course, E : Exercise, L : Lab, TP : Practical work, P : Course based project, I : Individual project, * : option course / F : French courses, D : Deutsch courses, E : English Courses / Sum : Summer, Win : Winter