

Master of Science and Technology CSE BME

Biomedical engineering

1st year - 70ECTS

Name	Course unit code	Year	Semester	Hour	ECTS	Teacher
Transport phenomena	TRPH	1	1	32	4	F. Anselmet, O. Boiron, P. Denis, F. Schwander
Computer Sciences and Num. methods	CSNM	1	1	24	3	B. Favier, B. Piar
Introduction to clinical medicine	CLMD	1	1	24	3	J. Fade, O. Boiron
Introduction to material science and structural design	MTSC	1	1	24	3	Y. Knapp, S. Bourgeois
Introduction to biomedical signal processing	SIPR	1	1	24	3	C. Fossati
Engineering & biological systems	ENBS	1	1	24	3	A. Soric
Wave propagation	WAPG	1	1	24	3	M. Alonso
Industrial engineering	INE7	1	1	32	4	C. Delabroye
Train'Eng	JOT7	1	1	32	2	
French	LAN7	1	1	20	2	V. Hamel
Project	PRO7	1	1	30	3	
Seminars	SEM7	1	1		1	
Winter Lab internship	STG7	1	2	8 weeks	6	
Name	Course unit code	Year	Semester	Hour	ECTS	Teacher
The living bricks	BRI	1	2	78	6	M. Jaeger
Imaging and wave therapy	IMA	1	2	68	5	J. Fade
Biotechnologies and chemical therapies	PHA	1	2	68	5	A. Martinez
Bio Planet	BIO	1	2	46	6	J. Fade, M. Jaeger
French	LAN8	1	2	20	2	V. Hamel
Summer internship	STG8	1	2	8 weeks	6	

The detailed syllabus of the second semester of 1st year (M1) can be downloaded [here](#)

2nd year - 70ECTS

Name	Course unit code	Year	Semester	Hour	ECTS	Teacher
Computer Sciences & data sciences	CSDS	2	1	24	3	T. Artières
Advanced imaging	IFPR	2	1	24	3	L. Abel-Tiberini
Biomechanics	BIOM	2	1	24	3	V. Deplano

Name	Course unit code	Year	Semester	Hour	ECTS	Teacher
Integrated design of biomedical systems	INDE	2	1	24	3	C. Jalain
Advanced image processing	IMAB	2	1	24	3	M. Roche
Numerical modeling for BME	NUMB	2	1	24	3	V. Deplano , C. Guivier , J-M Rossi
Advanced material sciences and structural design	ADMS	2	1	24	3	Y. Knapp
Sensors & biomedical monitoring	SEN1	2	1	12	1.5	A. Khalighi
IoT for medecine	SEN2	2	1	12	1.5	A. Khalighi
Elective course	ELC9	2	1	24	3	
Inter. elective course	ELFO	2	1	12	1	
Industrial engineering	INE9	2	1	100	6	
French	LAN9	2	1	30	2	V. Hamel
Project – Lab work	PRO9	2	1	100	2	
Seminars	SEM9	2	1		2	
Name	Course unit code	Year	Semester	Hour	ECTS	Teacher
Master thesis	THES	2	2	4-6months	30	

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