

MASTER COURSE IN BIOENGINEERING FOR PERSONALIZED MEDICINE (LM 21) - A.A. 2024/2025

A2 Curriculum Emerging and Sustainable Medical Technologies

FIRST YEAR												PROFESSOR
FIRST SEMESTER												
Esse3 code	N°	Courses	SSD	CFU	B	C	D	E	F	Duration (hours)	Notes	
146249	1	System physiology and integrated biological processes	BIO/09	6	6					48		Piccoli Giovanni
146250	2a	Medical devices quality and safety (Mod. 1 Medical devices quality and safety)	ING-IND/34	6	6					52		Nollo Giandomenico
	2b	Medical devices quality and safety (Mod. 2 Value based health care)	ING-INF/06	3	3					24		
146251	3a	Fundamentals of materials engineering and biomechanics for healthcare applications (Mod. 1 Materials)	ING-IND/22	6	6					48		Pegoretti Alessandro
	3b	Fundamentals of materials engineering and biomechanics for healthcare applications (Mod. 2 Biomechanics)	ING-IND/14	6		6				48		Fontanari Vigilio
		SAFETY COURSES									(1)	
				<i>Tot.</i>	27	21	6	0	0	0		
SECOND SEMESTER												PROFESSOR
Esse3 code	N°	Courses	SSD	CFU	B	C	D	E	F	Duration (hours)	Notes	
146252	4a	Informatics and electronics for healthcare 4.0 (Mod. 1 Cloud computing and Distributed systems)	ING-INF/05	6		6				48		Carra Damiano
	4b	Informatics and electronics for healthcare 4.0 (Mod. 2. Embedded electronics and sensors)	ING-INF/01	6	6					52		Brunelli Davide
146253	5a	Complements of bioengineering (Mod. 1 - Design and manufacturing of biomedical products)	ING-IND/34	6	6					52		Tirella Annalisa
	5b	Complements of bioengineering (Mod. 2 - Data engineering for biomedical sciences)	ING-INF/06	6	6					52		Rovati Luigi
146254	6	Engineered materials for precision medicine	ING-IND/34	6	6					54		Motta Antonella
		Other activities		3					3		(2)(3)	
				<i>Tot.</i>	33	24	6	0	0	3		
				Tot. 1st year	60	45	12	0	0	3		

SECOND YEAR - INACTIVE A.A. 24/25											
FIRST SEMESTER											
Esse3 code	N°	Courses	SSD	CFU	B	C	D	E	F	Duration (hours)	Notes
146255	7	Additive technologies for customized metallic implants	ING/IND21	6		6				48	
146256	8	Technologies and innovation in health: food and medical grade products	ING-IND/34	6	6					52	
146257	9	Transport phenomena in living systems	ICAR/01	6		6				52	
	12a	Elective course		6			6			48	
				<i>Tot.</i>	24	6	12	6	0	0	
SECOND SEMESTER											
Esse3 code	N°	Courses	SSD	CFU	B	C	D	E	F	Duration (hours)	Notes
146258	10	Diagnostic and therapeutic technologies for personalized medicine	ING-IND/34	6	6					52	
146259	11	Laboratory diagnostics for precision medicine	MED/04	6	6					48	
	12b	Elective course		6			6			48	
146265		Final project		18				18			
				<i>Tot.</i>	36	12	0	6	18	0	
				Tot. 2nd year	60	18	12	12	18	0	
				TOTAL CFU	120	63	24	12	18	3	

NOTES:

(1) = All students must have the certifications of:

- the **general training course "Sicurezza formazione generale"**, or similar course;
- the **specific training course - medium risk "Sicurezza in laboratorio- UniTrento"**, or similar course;
- For any further information about safety training, please visit the website: <https://infostudenti.unitn.it/en/safety-training-for-students>

(2) = The curriculum is considered complete with a total of 3CFU - type F. The credits have to be obtained during the master with the following regulation: <https://www.dii.unitn.it/en/121/other-activities-type-f-credits>.

(3) = **International students** are required to demonstrate an adequate level of competence of the Italian Language (Level A1 CEFR – 3 ECTS/CFU – type F) before starting the exam session of the second year.