

**Study plan of the Master of Science in
MEDICAL ENGINEERING (CL LM-21)**

a.y. 2025-2026

1st year

Number	Course	Area (SSD)	Credits	Code	Period
1	Cardiovascular medicine	MED/11 MEDS-07/B	8	148001-MOD1	2
	General medicine	MED/09 MEDS-05/A		148001-MOD3	1
2a	Advanced biomedical imaging & machine learning	ING-INF/06 IBIO-01/A	6	17500-M1	2
2b	Medical informatics	ING-INF/06 IBIO-01/A	6	17500-M2	1
3a	Biomechanics and medical device simulations	ING-IND/34 IBIO-01/A	9	175001-M1	2
3b	Technologies for regenerative medicine	ING-IND/34 IBIO-01/A	6	175001-M2	1
4	Medical support systems for chronic diseases	ING-IND/34 IBIO-01/A	6	148003	1
Two elective courses chosen from the following					
5-6	Healthcare operations	ING-IND/17 IIND-05/A	12	148005-M1	1
	Advanced biomaterials	ING-IND/22 IMAT-01/A		175002	2
	Control and modeling of biological systems	ING-INF/04 IINF-04/A		175003	2
Total 1st year			53		

2nd year

Number	Course	Area (SSD)	Credits	Code	Period
7a	Digital human modelling & rehabilitation	ING-IND/15 IIND-03/B	6	148008	1
7b	Biomedical sensors	ING-INF/01 IINF-01/A	6		1
8	Advanced regulatory affairs for medical devices	ING-IND/34 IBIO-01/A	6	175004	2
9	Data Science in medicine	ING-INF/04 IINF-04/A ING-INF/06 IBIO-01/A	6 (3+3)	175013	2
Biomechanical Lab				175009	
10	Biomechanics lab	ING-IND/34 IBIO-01/A	3	148021-5	1
	Rehabilitation lab	ING-IND/15 IIND-03/B	3	148021-4	
	Biofluids and microfluidics lab	ING-IND/06 IIND-01/F	3	175006	
ICT/Electronic Lab				175010	
11	Sensing devices lab	ING-INF/01 IINF-01/A	3	148021-3	2
	Data analysis lab	ING-INF/04 IINF-04/A	3	148021-1	
	Virtual reality Lab	ING-IND/15 IIND-03/B	3	175007	
12	Nr. 2 elective courses		12		
Total 2nd year			48		

Thesis work and final defense		12	175008
Credits reserved for activities under Article 10, paragraph 5, letter d		1	175011
TOTAL		114	

Elective courses	Area (SSD)	Credits	Code	Language
Virtual and physical prototyping	ING-IND/15 IIND-03/B	6	161001-M1	ENG
Project management	ING-IND/35 IEGE-01/A	6	37197-ENG	ENG
Epidemiology and policy decision	SECS-P/01 ECON-01/A SECS-S/02 ECON-02/A	6	148034	ENG
Forensic medicine for medical technologies	MED/43 MEDS-25/A	6	148023	ENG
Computational fluid dynamics	ING-IND/06 IIND-01/F	6	39070-ENG	ENG
Materials for advanced engineering applications	ING-IND/22 IMAT-01/A	6	39171-ENG	ENG
Computational mechanics of solids and structures	ICAR/08 CEAR-06/A	6	60039-ENG	ENG
Scienza delle costruzioni	ICAR/08 CEAR-06/A	6	22034	ITA
Acustica applicata	ING-IND/10 IIND-07/A	6	60118	ITA

Additional elective activities	Area (SSD)	Credits	Code
Internship		6	60065
CREO-LAB Salute		6	165021
CREO-LAB Tecnologie digitali e intelligenza artificiale		6	38110