



**MASTER'S DEGREE IN BIOMEDICAL ENGINEERING**  
**DEGREE PROGRAMME 2025/26**

Course contents are available at this [link](#)

**1<sup>st</sup> year (CAGLIARI)**

Sem	Teaching course	SSD*	TAF*	Credits	h
1	Integrated course: Digital Phenotyping				
	- Module: Bioengineering of the Motor System	ING-IND/34	B	6	45
1	- Module: Digital Biomarkers and Processing Techniques	ING-INF/06	B	6	53
	Integrated Course: Numerical and Statistical Methods for Bioengineering				
1	- Module: Statistical Methods for Bioengineering	ING-IND/26	C	3	30
1	- Module: Numerical Methods for Bioengineering	MAT/08	C	6	45
1	Advanced Cell Biology and Elements of Genomics	BIO/13	B	6	45
	Integrated course: Advanced Processing of Biosignals and Medical Images				
1	- Module: Advanced Biomedical Signal Processing	ING-INF/06	B	6	55
2	- Module: Multimodal Bioimaging ( <i>in streaming</i> )	ING-INF/06	B	6	50
<b>Curriculum on Information Engineering</b>					
2	Electronic Systems for Precision Medicine	ING-INF/01	C	9	72
2	Microwave Imaging Technologies	ING-INF/02	C	6	45
<b>Curriculum on Industrial Engineering</b>					
2	Bioengineering of Tissue-Organ Systems and Artificial Organs	ING-IND/24	C	6	60
2	Clinical Applications of Personalized Medicine	ING-IND/34	B	9	68

**2<sup>nd</sup> year (PAVIA)**

Sem*	Teaching course	SSD*	TAF*	Credits	h
1	Bioinformatics and Synthetic Biology	ING-INF/06	B	9	78
1	Foundations of Telemedicine	ING-INF/06	B	6	62
1	Advanced Sensors for Precision Medicine	ING-INF/06	B	6	45
2	Computational Learning in Biomedicine	ING-INF/06	B	9	80




### Additional credits to be acquired

Sem	Teaching course	SSD*	TAF*	Credits	h
	1 course from Tab 1 - curriculum on Information Engineering		C	6	
	1 course from Tab 2 - curriculum on Industrial Engineering		C	6	
	Elective activities <sup>1</sup>		D	9	
	English Language Test - B2 or other activities <sup>2</sup>		F	3	
	Final Examination		E	18	

**TOTAL CREDITS 120**

- (1) The elective activities must be consistent with the personal educational plan and they need approval by the Degree Programme Board.
- (2) The credits of European language level can be acquired passing the English language test at B2 European level (CEFR) at Centro Linguistico d'Ateneo. If the student can show appropriate certification of B2 European level (CEFR) knowledge other activities could be acquired.

**Tab 1. Courses TAF C Curriculum on Information Engineering (1 from the list)**

Sem	Teaching course	SSD*	TAF*	Credits	h
	<b>1<sup>st</sup> year (Cagliari)</b>				
1	Cybersecurity 	ING-INF/05	C	6	60
2	Nanotechnology for Diagnostic and Therapeutic Applications	CHIM/07	C	6	60
2	Virtual Reality and Neurorehabilitation Models	ING-INF/06	C	6	55
2	Materials and Devices for Innovative Sensors	ING-INF/06	C	6	45
2	Fabrication Technologies for Biosensing	ING-INF/06	C	6	60
2	Radiofrequency Technologies for Therapeutic Treatments	ING-INF/02	C	6	45
2	Management of Investment Projects in the Health Sector	ING-IND/35	C	6	45
	<b>2<sup>nd</sup> year (Pavia)</b>				
1	Medical Decision Making and Decision Analysis	ING-INF/06	C	6	56
1	Pharmacometrics	ING-INF/06	C	6	74
2	Design of Telemedicine Systems	ING-INF/06	C	9	66

**Tab 2. Courses TAF C Curriculum on Industrial Engineering (1 from the list)**

Sem	Teaching course	SSD*	TAF*	Credits	h
	<b>1<sup>st</sup> year (Cagliari)</b>				
2	Nanotechnology for Diagnostic and Therapeutic Applications	CHIM/07	C	6	60
2	Risk Assessment and Management in Healthcare Facilities	ING-IND/33	C	6	50
2	Power Electronics For Medical Devices	ING-IND/32	C	6	60
2	Ergonomics for Health Care	ING-IND/34	C	6	45
2	Virtual Reality And Neurorehabilitation Models	ING-INF/06	C	6	55
2	Integrated Course: Materials Technology and Computational Methods				
2	- Module: Computational Methods	ICAR/08	C	3	30
2	- Module: Materials Technology	ING-IND/22	C	3	30
2	Management of Investment Projects in the Health Sector	ING-IND/35	C	6	45
	<b>2<sup>nd</sup> year (Pavia)</b>				
1	Pharmacometrics	ING-INF/06	C	6	74
	Integrated course: Health Technologies Management				
	- Module: Health Technologies Management - Mod. A	ING-IND/35	C	3	23
	- Module: Health Technologies Management - Mod. B	ING-IND/35	C	3	23

**Other optional activities**

Sem	Teaching course	SSD	TAF	CFU	Ore
	<b>1<sup>st</sup> year (Cagliari)</b>				
2	Ethics and Law of Digital Healthcare	IUS/20	D	3	24
2	Radiological Integration in Healthcare Processes	MED/36	D	3	24

The semester could change; check in [Course bulletin](#) of the academic year.

**\*Abbreviations**

SSD	Scientific Disciplinary Sector
TAF	Type of Educational Activity