Università degli Studi di Cagliari
FACOLTA' DI INGEGNERIA E ARCHITETTURA

BACHELOR'S DEGREE IN BIOMEDICAL ENGINEERING

DEGREE PROGRAMME 2016/2017

Course contents are available at this link

1st year

Sem	Teaching course	SSD*	TAF*	Credits	h
1	Mathematical Analysis 1	MAT/05	A	9	90
1	Chemistry	CHIM/07	A	6	60
1	Physics 1	FIS/01	A	8	80
	Integrated Course: Mathematics				
2	- Module: Mathematical Analysis 2	MAT/05	A	5	50
2	- Module: Geometry and Algebra	MAT/03	A	7	70
	Integrated Course: Information Processing Systems				
2	- Module: Fundamentals of Computer Science	ING-INF/05	A	6	60
2	- Module: Computer Architectures	ING-INF/05	A	6	60
2	Physics 2	FIS/01	A	7	70

2nd year

Sem	Teaching course	SSD*	TAF*	Credits	h
	Integrated Course: Biochemistry and Molecular Biology				
1	- Module: Biochemistry	BIO/10	C	3	30
1	- Module: Molecular Biology	BIO/11	C	2	20
	Integrated Course: Fundamentals of Mechanics and Biomaterials				
1	- Module: Fundamentals of Mechanics and Biomechanics	ING-IND/13	B	5	50
1	- Module: Biomaterials	ING-IND/24	B	5	50
	Integrated Course: Transport Phenomena and Chemical Bioengineering				
1	- Module: Transport Phenomena in Biomedical Systems	ING-IND/24	B	5	50
1	- Module: Chemical Bioengineering	ING-IND/24	B	5	50
1	Applied Mathematics	MAT/08	A	6	60
	Integrated Course: Anatomy and Physiology				
2	- Module: Human Anatomy	BIO/16	C	4	40
2	- Module: Fundamentals of Physiology	BIO/09	C	3	30
	Integrated Course: Fundamentals of Information Engineering				
2	- Module: Fundamentals of Systems Theory	ING-INF/04	B	5	50
2	- Module: Electronical Signal Processing	ING-INF/06	B	5	50
	Integrated Course: Electronic Design				
2	- Module: Analog Electronics	ING-INF/01	B	5	50
2	- Module: Digital Electronics	ING-INF/01	B	5	50

3rd year

Sem	Teaching course	SSD*	TAF*	Credits	h
1	Electric Actuators and Converters	ING-IND/32	B	5	50
	Integrated Course: Bioelectronics				
1	- Module: Bioelectronics Fundamentals	ING-INF/06	B	5	50
1	- Module: Bioelectronic Interfaces	ING-INF/06	B	5	50
1	Mechanical Bioengineering	ING-IND/14	B	10	100
	Integrated Course: Fundamentals of Clinic and Pathology				
1	- Module: Pathology	MED/08	C	2	20
2	- Module: Internal Medicine	MED/09	C	2	20
2	- Module: Instrumentation and Proesthetic Materials	MED/22	C	2	20
2	- Module: Radiology and Nuclear Medicine	MED/36	C	2	20
	Choose between:				
2	Medical Instrumentation	ING-INF/06	B	5	50
2	Biosensors	ING-INF/06	B	5	50
	One choice among:				
2	Fluid Dynamics	ING-IND/08	C	5	50
2	Fundamentals of Bioinformatics	ING-INF/05	C	5	50
2	Electromagnetic Compatibility	ING-INF/02	C	5	50
2	Power and Electrical Safety in Hospital	ING-IND/33	C	5	50

Additional credits to be acquired

Sem	Activity	SSD*	TAF*	Credits	h
	English Language Test[1]		E	3	
	Elective activities[2]		D	12	
	Other activities		F	4	
	Final Exam		E	6	

TOTAL CREDITS 180

(1) The credits of European language level can be acquired:
- passing the English language test as part of the admission test,
- passing the English language test at B1 European level (CEFR) at Centro Linguistico d'Ateneo,
- showing appropriate certification of B1 European level (CEFR) knowledge.

(2) The elective activities must be consistent with the personal educational plan and they need approval by the Degree Programme Board.

***Abbreviations**

SSD	Scientific Disciplinary Sector
TAF	Type of Educational Activity