

# Master's Degree in Biomedical Engineering



Biomedical engineering is the discipline which makes use of the principles and methods of the engineering for the solution of problems in biology and medicine, and the improvement in prevention methods, diagnosis, treatment and rehabilitation.

This branch of the engineering has experienced a rapid growth in recent years. It is a spreading field which is producing a high demand for professionals who are able to integrate interdisciplinary teams and face new challenges in the development of the healthcare technology.

## Distribution of credits

Compulsory courses	Optional courses	Final Master Thesis	Total ECTS Credits
17.50	22.50	20.00	60.00

## Compulsory Courses

Code	Course Name	Term	Language	ECTS Credits
34358	Quality management and certification of medical products	A	ESP/EN	4.00
34367	Innovation and research in medical technology	A	ESP/EN	4.00
34368	Preclinical and clinical research. Design of experiments	A	ESP/EN	4.00
34369	Predictive analytics in health	A	ESP/EN	4.00
34370	Mechanisms of control and regulation of the body functions	A	ESP/EN	1.50
			<b>Total</b>	<b>17.50</b>

## Optional Courses - It is necessary to choose 22.5 credits (5 courses)

Code	Course Name	Term	Language	ECTS Credit
34371	Neuroengineering	A	ESP	4.50
34372	Design of remote monitoring devices	A	ESP	4.50
34373	Advanced processing of biomedical signals	A	ESP	4.50
34374	Modelling and simulation of bioelectric systems	B	EN	4.50
34375	Nanodiagnostics and nanotherapy	B	EN	4.50
34381	Analysis of genomic data	A	EN	4.50
34382	Data quality and interoperability	A	EN	4.50
34385	Omic platforms in personalized medicine	A	ESP	4.50
34383	Design of communication systems. Internet of things	B	ESP	4.50
34384	Molecular imaging	B	ESP	4.50
34376	Advanced biomechanical technics for the analysis of body functions	A	ESP	4.50
34377	Ergonomics and disability	A	ESP	4.50
34378	Advanced tissue engineering and regenerative therapy	A	EN	4.50
34379	Design and validation of assistive products	B	ESP	4.50
34380	Design and validation of surgical implants	B	ESP	4.50
			<b>Total</b>	<b>22.50</b>

**Master's Thesis** (Compulsory courses)

Code	Course Name	Term	Language	ECTS Credits
33476	Final Master's Thesis	B	ESP/EN	20
		Total		20

## Legend

Code	Language
ESP	Spanish
EN	English