

UNIVERSITY MASTER'S DEGREE IN
**Bioengineering
for Human Health**





Miguel Ángel Mateos Timoneda



Soledad Perez Amodio

The Master in Bioengineering for Human Health at UIC Barcelona is designed to train the next generation of leaders in technological innovation applied to healthcare. With a patient-centered and multidisciplinary approach, the programme integrates advanced knowledge of engineering and health sciences with hands-on training in cutting-edge areas such as biomaterials, nanotechnology, artificial intelligence, and regenerative medicine. Students gain a robust foundation in research and entrepreneurship, empowering them to tackle real-world challenges in hospitals, research centres, and the industry.

This programme is tailored for graduates in Bioengineering, Biomedical Engineering, Industrial Engineering, Materials Engineering, or Chemical Engineering who **aspire to specialise in the application of advanced technologies to healthcare**. It is ideal for those seeking an interdisciplinary and practical education to lead innovative projects in hospitals, research centres, or biomedical companies, with a focus on personalised and sustainable solutions that enhance quality of life.

Choosing this master at UIC Barcelona means **joining a globally recognised, official programme that provides access to doctoral studies**. The curriculum is supported by the Bioengineering Institute of Technology (BIT), offering state-of-the-art resources, a distinguished faculty, and opportunities for international mobility. It prepares students to become professionals in high demand, equipped with the skills to transform healthcare through technology and innovation.

Who Is It For?

This programme is tailored for graduates in Bioengineering, Biomedical Engineering, Industrial Engineering, Materials Engineering or Chemical Engineering who aim to:

- Apply advanced technologies to healthcare challenges.

- Specialise in interdisciplinary and practical innovation projects.

- Lead transformative initiatives in hospitals, research centres, or the biomedical industry.

Why choose this Master's Degree?

Official Programme with International Recognition

This is an officially recognised master's programme, opening the door to doctoral studies and ensuring international acknowledgment.

Patient-Centred Innovation

A unique approach combining advanced engineering techniques with a focus on real-world healthcare applications.

Practical and Research-Driven

The programme includes practical experiences in labs, real-world projects, and collaborations with prestigious international institutions.

Expert Faculty and Cutting-Edge Resources

Learn from leading academics and practitioners in bioengineering, supported by the Bioengineering Institute of Technology (BIT).

MANAGEMENT AND ACADEMIC COORDINATION

Director

Miguel Ángel Mateos Timoneda

Degree in Chemical Sciences and a PhD in Supramolecular Chemistry. Deputy Director of the Department of Bioengineering, Principal Investigator at the Institute of Technological Bioengineering, and Professor at the Universitat Internacional de Catalunya (UIC Barcelona).

Coordinator

Soledad Perez Amodio

Degree in Biochemistry and PhD in Cellular and Molecular Biology. Researcher at the Institute of Technological Bioengineering and teacher at the Universitat Internacional de Catalunya (UIC Barcelona).

Job Opportunities

Graduates of this master's degree will have access to a broad range of career opportunities, including:

Biomedical Device Design and Development

Create advanced prosthetics, precision diagnostic systems, and tailored medical devices.

Innovative Materials and Nanotechnology

Engage in research and production of biomaterials, artificial organs, and antibacterial surfaces.

Hospital Process Optimisation

Implement cutting-edge solutions such as robotics, big data analytics, and advanced sensor systems.

Research and Development

Contribute to breakthroughs in cellular biology, regenerative medicine, and artificial intelligence applications for healthcare.

Regulatory and Technical Consultancy

Provide expertise in compliance with international standards for the healthcare sector.

Entrepreneurship in Bioengineering

Lead startups or develop innovative healthcare technologies, such as wearable devices or 3D-printed implants.

CURRICULUM - 60 ECTS

MODULE 1

Advanced Technologies For Health

- New strategies in Regenerative Medicine and Medical Devices
- Advanced Technologies for Biomaterials Structures Fabrication
- Nanotechnology and Nanomaterials in Medicine
- Bioengineering Strategies against Bacterial Infections
- Biological and Cellular Therapy
- Big Data and Artificial Intelligence
- In Silico Modelling and Design-
- Medical Imaging Processing for Diagnosis

MODULE 2

Methodologies for Research

- Forensic Bioengineering: Fails in Bioengineering
- Forefront Knowledge in Bioengineering
- Advanced Methodologies for Research

MODULE 3

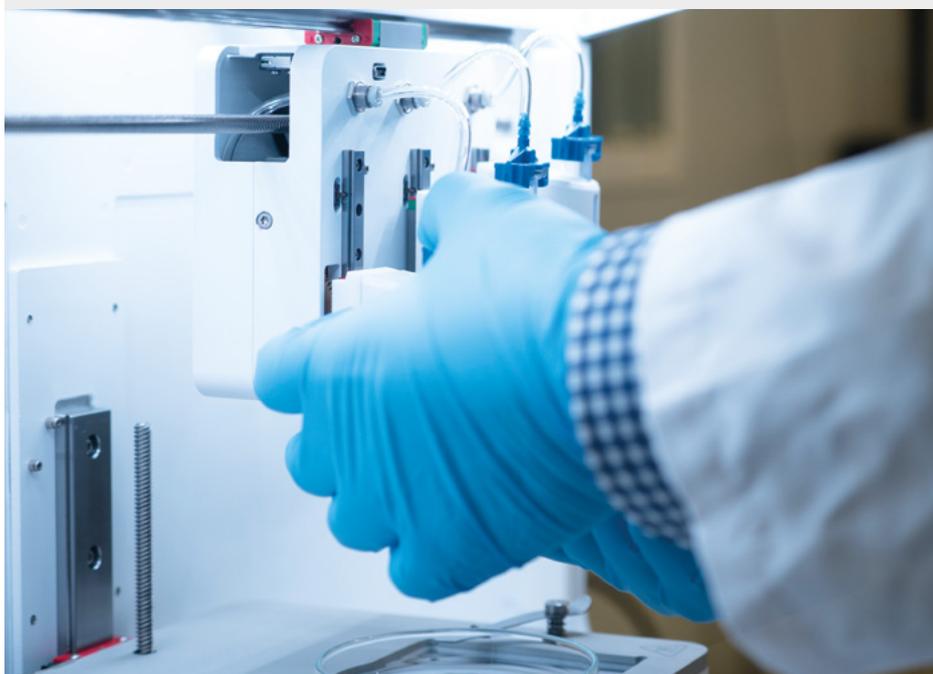
Methodologies for Industries/Hospitals

- Regulatory Aspects of Drugs and medical devices. Clinical Trials
- Business Administration and Health Management
- Entrepreneurship

MODULE 4

Final Master's Degree Project

- Development of an innovative Bioengineering Project
- Applied Research in the medical sector
- Presentation of the project and Panel defense



UNIVERSITY

UIC Barcelona
Sant Cugat Campus

Schedule and timetable

- October to July
- On-campus classes
- Monday to Friday,
every afternoon

Language

English

Get in touch with your advisor



STUDYING IN BARCELONA

Start the most important learning experience of your life in one of the main European cities. Barcelona is a cultural and financial role model and a city where your knowledge can adapt to multiple professional opportunities.



**UIC BARCELONA,
OUR CAMPUSES**

Classes are held on our Barcelona campus and also our Sant Cugat campus, which has a total area of more than 52.000 m². Each Faculty has the best facilities and latest generation equipment for both theoretical and practical classes.

Find out more about the admissions procedure, reserving a place and enrolment here uic.es/masters.

RANKINGS

The main rankings in which the Universitat Internacional de Catalunya has been classified.



Find out here about all our rankings.

 #801-1.000
 #374
 #13

Universitat Internacional
de Catalunya

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