

Part-time teaching position at the Bioengineering Bachelor's Degree

About UIC

UIC Barcelona is currently home to around 8,000 students and offers 16 bachelor's degrees, 30 international double degrees, and a wide range of master's and postgraduate degrees, as well as continuing education courses in various fields of knowledge. Since 1997, we have been teaching students based on a model of academic rigour, a fulfilling university life, and enriching life experiences. The UIC Barcelona team consists of professionals who are qualified not only in their field of teaching but also in research, management, administration, communication, services, and systems. Beyond the professionalism of each individual, at UIC Barcelona, you will be joining a young and dynamic working team.

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About the Bioengineering Bachelor's Degree

Bioengineering is an innovative bachelor's degree that combines science and technology to improve clinical care. The bachelor's degree in Bioengineering applies the principles of engineering to biological systems and strives to improve patients' quality of life through devices and materials that can substitute or regenerate damaged body parts. Bioengineering students will use their knowledge of basic sciences, such as physics, chemistry, and biology to design materials capable of stimulating biological processes in our organism and combine them with concepts of engineering to develop materials that can substitute or regenerate tissue.

What we offer

Applications are invited from qualified candidates for a part-time contract as a lecturer for two courses at the Bioengineering Bachelor's Degree of the Universitat Internacional de Catalunya (UIC) at the Sant Cugat Campus in Barcelona. The selected candidates are expected to fill the position starting in **January 2025**.

The courses to be taught include a first-year introductory subject in the field of biomaterials and biocompatibility, ranging from the classification of biomaterials to their characterisation and production techniques, including examples of metallic, ceramic and polymeric biomaterials, and a second-year subject on materials shaping technologies, ranging from the principles of manufacturing, through the manufacturing processes of metals (casting, machining, ...), polymers (extrusion, injection or moulding, ...), ceramics (sintering, ...), to quality control in the manufacturing process.

The teaching activities for each course will consist of a maximum of 45 teaching hours (4.5 credits). The remuneration will be according to the candidate's profile and professional situation.

What we are looking for

We are currently seeking a part-time lecturer in the field of materials and biomaterials science and engineering.

- The candidates are expected to have a degree (preferably a PhD, but it is not exclusive) in Engineering, Physics, Chemistry, or a related field.
- Should enjoy teaching and have solid previous experience in the same or related course.
- Ability to teach in English

The applicant must be able to teach at least one of the courses which contents are detailed individually in the following information:

Biomaterials and Biocompatibility (1st year, 2nd semester)

1. Definition of biomaterial and biocompatibility.
2. Classification of biomaterials according to the composition, structure, origin and historical development.
3. Extracellular matrix and biological materials. Bones, Ligaments, tendons, muscles and blood vessels.
4. Mechanical and surface biomaterial properties. Techniques for physico-chemical characterization.
5. Biofunctionalisation of biomaterial surfaces.
6. Techniques for characterisation of cell-biomaterial interaction. Determination of biocompatibility and bioactivity in vitro and in vivo.
7. Sterilisation methods.
8. Examples of metallic, ceramic and polymeric biomaterials.
9. Techniques for obtaining from nature and for manufacture biomaterials.

Shaping Technologies of Materials (2nd year, 2nd semester)

1. Introduction to manufacturing processes.
2. Manufacture of prototypes.
3. Manufacture of metallic parts. Casting.
4. Manufacture of polymeric parts. Extrusion, Injection and Moulding.
5. Manufacture of ceramic parts. Sintering.
6. Thermal and surface treatments.
7. Machining, welding and cutting processes.
8. Quality control in manufacturing.

More information about the study curriculum can be found in the following [link](#).

Application

A full CV related the position must be sent by email to Laura Alastruey (lalastruey@uic.es) citing the reference **ParttimeBioing-25** in the message subject.

The deadline for the application is **January 15, 2025**. Selected candidates will be contacted for personal meetings before and after that date.