

Professional Internships

Academic Year: (2023 / 2024)

Review date: 20-12-2023

Department assigned to the subject: Bioengineering Department

Coordinating teacher: LEON CANSECO, CARLOS

Type: Electives ECTS Credits : 12.0

Year : 4 Semester :

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

All subjects in the 1st, 2nd and 3rd academic years.
It is required to have passed 110 ECTS.

SKILLS AND LEARNING OUTCOMES

RA3: Be able to carry out conceptual designs for bioengineering applications according to their level of knowledge and understanding, working in a team. Design encompasses devices, processes, protocols, strategies, objects and specifications broader than strictly technical, including social awareness, health and safety, environmental and commercial considerations.

RA4: Be able to use appropriate methods to carry out studies and solve problems in the biomedical field, commensurate with their level of knowledge. Research involves conducting literature searches, designing and carrying out experimental practices, interpreting data, selecting the best approach and communicating knowledge, ideas and solutions within their field of study. May require consultation of databases, safety standards and procedures.

RA5: Acquire intermediate/advanced knowledge of engineering and biomedical sciences and demonstrate an understanding of the theoretical and practical aspects and methodology of work in their field of study.

RA6: Transversal Skills: To have the necessary skills for the practice of biomedical engineering in today's society.

CB1: Students have demonstrated possession and understanding of knowledge in an area of study that builds on the foundation of general secondary education, and is usually at a level that, while relying on advanced textbooks, also includes some aspects that involve knowledge from the cutting edge of their field of study.

CB2: Students are able to apply their knowledge to their work or vocation in a professional manner and possess the competences usually demonstrated through the development and defence of arguments and problem solving within their field of study.

CB3: Students have the ability to gather and interpret relevant data (usually within their field of study) in order to make judgements which include reflection on relevant social, scientific or ethical issues.

CB4: Students should be able to communicate information, ideas, problems and solutions to both specialist and non-specialist audiences.

CB5: Students will have developed the learning skills necessary to undertake further study with a high degree of autonomy.

CB6: That the student has developed sensitivity to the social and economic impact of the development of his/her profession in accordance with professional ethics..

CG4: Ability to solve problems with initiative, decision-making, creativity, and to communicate and transmit knowledge, skills and abilities, understanding the ethical, social and professional responsibility of the biomedical engineer's activity. Capacity for leadership, innovation and entrepreneurial spirit.

CG5: Adequate knowledge of the field of work of the biomedical engineer in companies, health or biomedical research centres.

CG6: Knowledge of current standards, regulations and legislation and ability to apply them to bioengineering projects. Bioethics applied to biomedical engineering.

ECRT7: To strengthen the student's communication skills, both oral and written. In addition, the aim is for students to appreciate the importance of communication skills in the performance of any professional activity.

ECRT23: Acquisition of basic knowledge of humanistic training. Awareness of different areas of social problems. Understanding of the concepts of Business Ethics and Bioethics. Capacity for business entrepreneurship.

CT1: Ability to communicate knowledge orally and in writing to both specialised and non-specialised

audiences.

CT2: Ability to establish good interpersonal communication and to work in multidisciplinary and international teams.

CT3: Ability to organise and plan their work, making the right decisions based on the information available, gathering and interpreting relevant data in order to make judgements within their area of study.

CT4: Motivation and ability to engage in lifelong autonomous learning, enabling them to adapt to new situations.

OBJECTIVES

- Ability to apply the knowledge acquired during undergraduate studies for solving engineering problems in a professional environment, providing efficient answers to problems that require an interdisciplinary point of view, having to evaluate both technical and economical factors at the same time, being respectful with the current normative and being responsible from the legal and environmental point of view.
- To manage the conditioning factors of a professional environment: competitiveness, innovation, continuous update of knowledge, quality policies, relations with external and internal clients, relationship with suppliers, decision making, time management, etc.
- Capacity to make cooperative work, taking the roles required by the project leader and being a responsible member of a work team, showing initiative at the same time.
- To acquire organization and planning skills.
- Training in decision-making and work under pressure.
- Apply in a real context knowledge acquired, meaning the student to contrast and prove its meaning.
- Improve the knowledge in the real context in which they are functional, and are related to the own field of professional qualifications.
- Learn about the labor market situation in the area of specialization and the next geographical environment.

DESCRIPTION OF CONTENTS: PROGRAMME

All those activities carried out by students in companies, entities and organizations, which aim to provide a practical complement (or academic-practical complement) to academic training provided that such activity is related to their academic training and their possible career opportunities.

In particular, the training objective of the practice will necessarily include the following aspects:

- Tasks to be developed by the student.
- Knowledge that the student will acquire.
- If the student will participate in design, planning or development tasks.
- Within which projects or areas will the practices be framed.
- Tools that will be used.

LEARNING ACTIVITIES AND METHODOLOGY

The student will have a tutor in the company, who will direct, guide and supervise the activities of the practice.

There will also be an academic tutor at Uc3m who will be informed about the progress of the practice and will provide support to the student if necessary. The academic tutor will carry out the tutorials that he or she considers necessary and will also grade the student.

Practical Work: corresponds to 330 hours of internship in the company.

Theoretical Work: 0 hours to write a report of the work done during the internships in the company.

ASSESSMENT SYSTEM

The evaluation system includes the evaluation of the activities carried out during the internship in the company. For this, the following elements will be used:

- Report of the tutor in the company: The academic tutor of the Uc3m will request this report from the tutor of the company.
- Student report: of the work done during the practice. The student will do it according to the instructions published in Aula Global to which he or she will have access once enrolled in the subject.

Both elements will give a 100% rating.

The academic tutor at UC3M, based on the above documents, will assess the work according to the form established for this purpose.

Students who do not present the report will be rated as NOT SUBMITTED. The Tutor must send the assessment record with this grade.

If the student gives up the practice for which the subject has been validated and enrolled without having reached enough number of hours to pass the subject, he or she will be graded as NOT SUBMITTED because will not be able to present the report.