

**COURSE DATA****Data Subject**

Code	33158
Name	External internship
Cycle	Grade
ECTS Credits	12.0
Academic year	2022 - 2023

Study (s)

Degree	Center	Acad. Period	year
1109 - Degree in Biochemistry and Biomedical Sciences	Faculty of Biological Sciences	4	Other cases

Subject-matter

Degree	Subject-matter	Character
1109 - Degree in Biochemistry and Biomedical Sciences	15 - Prácticas externas	External Practice

Coordination

Name	Department
FARIÑA GOMEZ, MARIA ISABEL	21 - Cellular Biology and Parasitology
IGUAL GARCIA, JUAN CARLOS	30 - Biochemistry and Molecular Biology

SUMMARY

Teaching in molecular biosciences promotes the training of professionals for the R & D private and the public sector, since much of the technological development and innovation in the field of biology, biomedicine and biotechnology is based on advances in molecular and cell biology. Thus, we propose "internships" in research centers, biotechnology companies, and hospitals. It is intended that students apply the skills acquired during the professional career to the work in areas of professional activity related to the degree. It also aims at providing students with a working experience in work teams, in particular company and institutional environments, and facilitating the future employability of the graduates.



The general objectives of the external practices are:

- Meet the professional world.
- Apply the skills acquired during the degree to professional activity.
- Group work in a professional environment.
- To facilitate employability of graduates.

PREVIOUS KNOWLEDGE

Relationship to other subjects of the same degree

There are no specified enrollment restrictions with other subjects of the curriculum.

Other requirements

To have passed all mandatory subjects of the first and second years.
Comply with the explicit requirements that determine each work placement.

COMPETENCES (RD 1393/2007) // LEARNING OUTCOMES (RD 822/2021)

1101 - Degree in Biochemistry and Biomedical Sciences

- Have capacity for analysis, synthesis and critical reasoning in the application of the scientific method.
- Capacidad para reconocer y resolver problemas, así como para tomar y ejecutar decisiones.
- Desarrollo de habilidades para la aplicación de los conocimientos adquiridos al mundo profesional.
- Capacidad para el trabajo multidisciplinar en equipo y la cooperación.
- Capacidad de iniciativa y liderazgo.
- Capacidad para el aprendizaje autónomo y organizado y para la adaptación a nuevas situaciones.
- Be able to think in an integrated manner and approach problems from different perspectives.
- Develop an ethical commitment and the capacity to participate in the social debate.
- Reconocimiento, respeto y promoción de los derechos humanos fundamentales, especialmente los de igualdad, de los valores democráticos y de los valores propios de una cultura de paz.
- Know how to design multidisciplinary experimental strategies in the field of molecular biosciences to solve complex biological problems, especially those related to human health.
- Acquire skills to use the methodologies of molecular biosciences and to keep an annotated record of activities.
- Know how to work responsibly and rigorously in the laboratory, considering the safety aspects in experimentation as well as the legal and practical aspects of the handling and disposal of waste.



- Understand the role of the expert in molecular biosciences and biomedicine in the scientific and social context.
- Understand the relationships between science and society and the position of molecular biosciences and biomedicine in the context of current science.
- Saber detectar necesidades y situaciones que requieran la intervención del profesional.
- Saber identificar los recursos útiles que permitan llevar a cabo esa intervención.
- Saber aplicar y desarrollar esa intervención.
- Adquirir aptitudes profesionales idóneas.
- Desarrollar habilidades de cooperación con otros profesionales y capacidad de trabajo en equipo.
- Develop the capacity for organisation and planning.
- Tomar contacto con los aspectos rutinarios y menos atractivos de la profesión.
- Capacidad de resolución de problemas y toma de decisiones.
- Tomar conciencia del componente ético y los principios deontológicos del ejercicio de la profesión.
- Capacidad de adaptación a situaciones nuevas.

LEARNING OUTCOMES (RD 1393/2007) // NO CONTENT (RD 822/2021)

- Initiative and entrepreneurial spirit.
- Ability to work in groups.
- Meet the professional world.
- Apply the skills acquired during the development level of professional activity and work.
- Group work in the professional environment.
- To facilitate employability of graduates.
- Assess the extent to which the training received meets employability.
- Identify needs and situations that require professional intervention.
- Identify useful resources to carry out this intervention.
- Know how to apply and develop this intervention.
- Acquire appropriate skills.
- Develop skills of cooperation with other professionals and teamwork ability.
- Build capacity of organization and planning.



- Make contact with the routine and less attractive aspects of the profession.
- Ability to problem solving and decision making.
- Become aware of the ethical component and the ethical principles of professional practice.

DESCRIPTION OF CONTENTS

1. Internship profile

Structural biology, peptides and proteins, medicinal chemistry. Biology and cell and tissue pathology. Biochemistry and molecular biology, clinical biochemistry, metabolic diseases. Genetic engineering, sequencing. Genetics and cytogenetics, prenatal diagnosis. Developmental biology, transgenesis. Food biotechnology. Cytomics microscopy. Biomedical research, oncology, cardiovascular. Immunology and hematology. Neuroscience. Breeding animals and plants. Genomics, proteomics, metabolomics. Imaging techniques in biomedicine. Microbiology, virology, microbial pathogenesis. Bioinformatics. Gene and cell therapy. Assisted reproduction. Banks of cells and tissues. Diagnostic development. Type Culture Collection Spanish. Research laboratories in hospitals, research institutes or universities. Basic research laboratories and R & D companies. Engineering and consulting services relating to the implementation of biotechnology.

WORKLOAD

ACTIVITY	Hours	% To be attended
Internship		100
Preparation of evaluation activities	20,00	0
TOTAL	20,00	

TEACHING METHODOLOGY

A list of companies/institutions offering positions will be published every year. The student will explicitly apply for external practices following the procedures and deadlines established by the corresponding committee. According to the activities developed in the company / institution an academic tutor of a department related to the area of expertise of the company will be assigned by the committee to mentor the student. University tutors will be responsible for explaining to the students the assessment criteria before the start of practices. The students will have to do 260 hours of work at the company / institution.

EVALUATION



Evaluation of this activity will take into account:

(a) A report of the supervisor in the company / institution, preferably by completing a questionnaire that will be provided by the university and which shall contain:

- Compliance with the estimated times.
- The ability to integrate into the working group.
- The measurement of the activity.

This assessment will represent 50% of the final grade.

(b) A written report submitted by the student and which will be evaluated by the tutor of the University, according to the criteria previously established in the first meeting with the student. In addition, the tutor of the University may conduct an interview with the student or with the external supervisor, or with both if appropriate.