

68457 - Cell and Organism Biotechnology: experimental methodology

Syllabus Information

Academic year: 2024/25

Subject: 68457 - Cell and Organism Biotechnology: experimental methodology

Faculty / School: 100 - Facultad de Ciencias

Degree: 626 - Máster Universitario en Biofísica y Biotecnología Cuantitativa / Master in Biophysics and Quantitative Biotechnology

ECTS: 6.0

Year: 01

Semester: Second semester

Subject type: Optional

Module:

3. Syllabus

The major objective of this course is to learn the use of advanced techniques for the utilization of cells in culture and animal models in biotechnology. Advances with *in silico* and *in vitro* techniques often require at the end experimentation in living beings, either unicellular culture models or experimental animals and, finally, humans. This course will provide the student with the knowledge required for the execution of advanced experiments in cells and organisms related to the utilization of bioactive molecules mainly for therapeutic purposes.

5. Assessment system

A written exam with questions that require short answers or those that require a more extensive explanation of the subject. The former are intended to screen the general knowledge of the student, whereas the latter are intended to evaluate their abilities to express and defend argumentations, as well as critical judgments. The written exam will be based on the programmed learning activities. This will account for 50% of the total qualification.

Practical classes in the laboratory or computer room. The performance of the student during the practical classes will be evaluated: the student should be able to work autonomously following protocols and good laboratory practices. The student must also present a written memory of the experiments performed, which will also be evaluated. This will account for 30% of the total qualification.

Workshops where each student should formulate at least one question to be discussed with teachers. The number of interventions and the interests of questions will be valued. This will account for 10% of the total qualification.

Seminars. The student must prepare, present in public and defend a work related to the subject of the course for up to 15 minutes. The quality of the elaboration, presentation and debate will be evaluated. This will account for 10% of the total qualification.

6. Sustainable Development Goals

3 - Good Health & Well-Being

4 - Quality Education

15 - Life on Land