

66115 - Multidisciplinary Joint Educational Project

Syllabus Information

Academic year: 2023/24

Subject: 66115 - Multidisciplinary Joint Educational Project

Faculty / School: 100 - Facultad de Ciencias

Degree: 539 - Master's in Nanostructured Materials for Nanotechnology Applications

ECTS: 5.0

Year: 1

Semester: Second semester

Subject type: Optional

Module:

1. General information

This course allows students to gain a significant level of specialisation in the topic area chosen and become even more aware that Nanoscience and Nanotechnology are interdisciplinary disciplines that require the collaboration of chemists, physicists, engineers, biochemists, philologists, economists, publicists, marketing managers... to cover the full value-chain. In addition, the students will gain experience in their ability to self-teach; to face different and unknown problems; interaction with other researchers to increase their ability to work in a team; take decisions; increase their ability to communicate their ideas and results via the creation of a scientific report, etc...

These approaches and objectives are aligned with the achievement of SDG 9. Industry, innovation and infrastructures of the Agenda 2030. More specifically, they will create action to enhance research, foster innovation and upgrade industrial technologies.

2. Learning results

Through this highly specialised module, the students will be able to apply their knowledge of the topic to propose new ideas and projects, gaining abilities that will be of service in their immediate professional future.

- Assess the true difficulties that come with the practical pursuit of an idea or concept.
- Perform independent study and autonomous learning that are required to undertake the research or professional activity in the near future.
- Summarize the state of the art and technique on a certain topic and find the hot points of this topic proposing new ideas or concepts to achieve progress beyond the state of the art.
- Develop an original multidisciplinary project with significant levels of independence.
- Oral and written communication, circulating the results and interaction with colleagues and professionals from other disciplines.

3. Syllabus

The project will be proposed and supervised by two doctors with a large experience in the supervision of doctoral theses and scientific projects in different fields dealing with nanoscience and nanotechnology, science education, communication, marketing, business administration...It is mandatory that the two supervisors belong to two different areas of knowledge.

The students will have free access to the UZ library which has powerful databases, specialized books and subscriptions to numerous scientific journals. In addition, the students will have access to the INMA laboratories, as well as other singular facilities and infrastructures available at UZ

4. Academic activities

This is a 5 ECTS course that offer to the students highly personalised guidance which favours an increase in the student's autonomous work and encourages students to propose their own ideas and to participate in all stages of the multidisciplinary project. Frequent open discussions with the supervisors and other colleagues working in the research groups that the students join will also be helpful.

- **Tutorials** will allow students to solve questions, discuss unclear ideas or doubts related to the academic project. It is advisable to come with clear and specific questions to tutorials.
- **Autonomous work.** Students are expected to devote about 125 hours to this course.

5. Assessment system

The student will present a written report with a maximum of 15 pages excluding cover page, index, abstract and references (Times New Roman 12, spacing 1.5) that brings together the multidisciplinary project undertaken. This report should have the previous approval from both supervisors.

The report will be assessed by a committee of three members (score between 1 and 10). In addition to the written report, a public presentation of the work will be made in front of a board of three examiners. The presentation will last a maximum of 15 minutes and will be followed by a debate.

The final mark will take into account the supervisors report, the quality of the written report (70% of the final mark) and its oral presentation and defence (30% of the final mark).