



Máster en Materiales Nanoestructurados para Aplicaciones Nanotecnológicas

66117 - Practical work in a nanotechnology-related company

Course 2015 - 2016

Curso: 1, Semestre: 0, Créditos: 5.0

Basic information

Teachers

No available data.

Recommendations to attend this course

This is an optional module equivalent to 5 ECTS credits or 125 student work hours. The written report of this module will be in English, therefore students must have an upper-intermediate level in the language.

Course Schedule and Deadlines

This is a year-long module although doing it in the second semester when the student has a better knowledge of Nanoscience is advisable.

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Learning outcomes that define this course

The student, in order to pass the course, will have to show her/his competence in the following skills:

- 1:** Are able to develop an experimental project with significant levels of independence and originality
- 2:** Know how to apply the theoretical knowledge to the specific problems they will encounter in their daily work at the company
- 3:** Have good oral and written communication skills

Introduction

Brief presentation of the course

The students will work in a project developed in a nanotechnology related company.

Competences

General aims of the course

The expected results of the course respond to the following general aims

This module allows students to gain a very high level of specialisation in the topic area of the work developed at the company, and students will become aware of the real applications of nanoscience and nanotechnology at an industrial level.

Context/Importance of the course for the master degree

This module represents a practical application of the other modules in the course to a real problem where the student will face his/her daily work in a company. To achieve the above, the student will make use of the theoretical knowledge, attitudes, aptitudes and skills acquired over the six core modules of the course and the other optional module.

After completing the course, the student will be competent in the following skills:

- 1:
Assess the true difficulties that come with application of Nanoscience and Nanotechnology to a market product
- 2:
Face unexpected problems with the right methods
- 3:
Abilities for independent study and self-teaching required to undertake the research or professional activity in the near future
- 4:
Demonstrate oral and written communication skills
- 5:
General abilities for good professional practice

Relevance of the skills acquired in the course

Through this highly specialised module, the students will be able to apply their knowledge of the topic to be developed into a project in the framework of a real application in a Nanotechnology-related company, gaining abilities that will be of service in their immediate professional future.

Evaluation

Assessment tasks

The student will prove that he/she has achieved the expected learning results by means of the following assessment tasks:

- 1:

The student will present a written report with a maximum of 10 pages (Times New Roman 12, spacing 1.5) that brings together the project undertaken. This report should have the previous approval from the student tutor at the company and the academic student tutor. 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. If required by the company these examiners will sign a non-disclosure agreement (NDA). The presentation will last a maximum of 15 minutes and will be followed by a debate. The final mark will take into account the quality of the written report and its presentation together with the report of the company about the student work.

Activities and resources

Course methodology

The learning process that has been designed for this course is based on the following activities:

The project will be directed supervised by an expert at the company and also by an academic tutor.

Outline of the Programme

The programme offered to the students to help them achieve the learning results includes the following activities :

- 1:** Highly personalised tutoring. Favours an increase in the student's autonomous work: encourage students to give their own ideas and to participate in all stages of the project (planning, undertaking experiments, interpretation of results and circulation).

Course planning

Calendar of actual sessions and presentation of works

The precise dates and timetable will be discussed with the student directly by the academic and industrial tutors. The academic tutor will make sure that the calendar in the company is compatible with the rest of the student academic activities involved in this Master.

Bibliographic references of the recommended readings