

## Internship

Academic Year: ( 2022 / 2023 )

Review date: 20-05-2022

Department assigned to the subject: Electronic Technology Department, ENG/Masters interuniversitarios

Coordinating teacher: SANCHEZ MONTERO, DAVID RICARDO

Type: Electives ECTS Credits : 3.0

Year : 1 Semester : 0

## REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

No prerequisites.

## OBJECTIVES

- + Knowledge and understanding that provide a basis or opportunity for originality in developing and / or applying ideas, often in a research context.
- + That the students can apply their knowledge and ability to solve problems in new or unfamiliar in wider or multidisciplinary environments related to their field of study.
- + That the students can integrate their knowledge, as well as handle the complexity of making judgements from an incomplete or limited information, but which could include reflections about the social and ethic responsibilities that could be linked to the application of their judgements and knowledge.
- + That the students know how to communicate their conclusions and knowledge as well as the ultimate reasons that support them to both specialized and non-specialized audiences, in a clear way and avoiding ambiguities.
- + That the students possess learning skills that allow them following their long-life learning in a self-conducted and self-sufficient way.
- + Ability to understand the generalist and multidisciplinary nature of photonics applied to the resolution of problems or applications.
- + Capacity to lead and work in a team integrating multidisciplinary approaches, managing and planning their own work.
- + Capacity to apply the scientific method as a fundamental work tool both in the professional and the research fields, managing the sources of information.
- + Identify and use methods for the search of resources, the economic and administrative management of advanced projects in Photonics Engineering.

## Specific Skills ...

- + Identify the different blocks which are present in a system where photonics plays an essential role, the specificities of its design, possible subsystems to be used, its integration and its final verification.
- + To be aware of the current trends in different applications of photonic technologies and learned experiences from real cases.
- + Capacity of selecting novel photonic components, technologies and subsystems.

As a summary:

To overcome this subject students should be able to identify from a practical point of view what are the main challenges in one or several applications of photonics, as well as their integration and use. Students are expected to have contact with the sectors with the greatest impact and acquire the knowledge of the practical problems that can be found in the development of a photonic system in the business environment. They are also expected to be able to identify technologies and systems with greater innovative potential, as well as enhance interaction with professionals in the sector.

#### DESCRIPTION OF CONTENTS: PROGRAMME

New Trends and Entrepreneurship subject is offered, which includes an optional internship for the development of photonic systems applications. This subject allows to approach the student to practical cases in the professional environment or to the latest research trends. There is also the possibility of developing short international mobility activities.

Specifically the program associated with this subject corresponds to the student develops an internship in a company; this allows the student to have a professional experience.

In the weekly planning section, the names of companies and specific activities of internship are taken by way of example.

#### LEARNING ACTIVITIES AND METHODOLOGY

Knowledge skills and attitudes will be acquired through the insternship in a company or organization for a certain period of time.

The following methodology will be used:

The academic tutor performs specific information sessions and attends the students with the aim of informing about general guidelines and solving their specific doubts.

After selection, the student will be incorporated in a certain company to carry out practices during the number of hours equivalent to a credit load of 3 ECTs.

During the stay in the company, the student will have an academic tutor to know the progress of the practices and provide the necessary support. There will also be a tutor in the company in order to direct, guide and supervise the activity of the student in the company.

Finally, through the documentation made by the student there will be evidences of his/her learning and of the activity associated with the internship that was realized.

#### ASSESSMENT SYSTEM

To assess the knowledge and skills of the student, two reports will be taken into account:

- A report by the tutor in the company where the practice is carried out.
- A written report by the student, to be delivered before the given deadline.

From these two reports, the academic tutor will qualify the subject.

#### BASIC BIBLIOGRAPHY

- Bradman, Marc My Universal Internship (Say "yes"), IEEE potentials, 01.05.2016
- Daukantas, Patricia Finding the right graduate-level internship, Optics and photonics news, 01.12.2010

