28840 - Advanced IT

Información del Plan Docente

Academic Year	2016/17
Academic center	175 - Escuela Universitaria Politécnica de La Almunia
Degree	424 - Bachelor's Degree in Mechatronic Engineering
ECTS	4.0
Course	4
Period	Second semester
Subject Type	Optional
Module	---

1.Basic info

1.1.Recommendations to take this course

1.2.Activities and key dates for the course

2.Initiation

2.1.Learning outcomes that define the subject

2.2.Introduction

3.Context and competences

3.1.Goals

3.2.Context and meaning of the subject in the degree

3.3.Competences

3.4.Importance of learning outcomes

4.Evaluation

5.Activities and resources

5.1.General methodological presentation

The learning process designed for this subject is based on the following:

Strong interaction between the teacher/student. This interaction is brought into being through a division of work and responsibilities between the students and the teacher. Nevertheless, it must be taken into account that, to a certain

degree, students can set their learning pace based on their own needs and availability, following the guidelines set by the teacher.

The organization of teaching will be carried out using the following steps:

- Theory Classes : Theoretical activities carried out mainly through exposition by the teacher, where the theoretical supports of the subject are displayed, highlighting the fundamental, structuring them in topics and or sections, interrelating them.
- Practical Classes : The teacher resolves practical problems or cases for demonstrative purposes. This type of teaching complements the theory shown in the lectures with practical aspects.
- Laboratory Workshop : The lecture group is divided up into various groups, according to the number of registered students, but never with more than 20 students, in order to make up smaller sized groups.
- Individual Tutorials : Those carried out giving individual, personalized attention with a teacher from the department. Said tutorials may be in person or online throught moodle.

5.2.Learning activities

The programme offered to the student to help them achieve their target results is made up of the following activities...

Involves the active participation of the student, in a way that the results achieved in the learning process are developed, not taking away from those already set out, the activities are the following:

- **Face-to-face generic activities** :
- **Theory Classes** : The theoretical concepts of the subject are explained and illustrative examples are developed as support to the theory when necessary.
- **Practical Classes** : Problems and practical cases are carried out, complementary to the theoretical concepts studied.
- **Laboratory Workshop** : This work is tutored by a teacher, in groups of no more than 20 students.
- **Generic non-class activities** :
- Study and understanding of the theory taught in the lectures.
- Understanding and assimilation of the problems and practical cases solved in the practical classes.
- Preparation of laboratory workshops, preparation of summaries and reports.
- Preparation of the written tests for continuous assessment and final exams.

The subject has 4 ECTS credits, which represents 100 hours of student work in the subject during the trimester.

5.3.Program

1 Theoretical contents

- Operating systems
- Object oriented programming
- Introduction to concurrency and real time
- Data bases

2 Practical contents

- Learn to install, configure and use operating systems.
- Learn programming with object oriented languages.
- Learn to install, configure and use complementary software tools, involved in a program creation.

5.4.Planning and scheduling

The dates of the works deadlines will be communicated in class sessions or in moodle platform: http://moodle.unizar.es .

28840 - Advanced IT

The weekly timetable will be published in moodle at the start of semester. The dates of continuous assessment works and the publication dates of califications, will be published in moodle at the start of semester.

The dates of the final exams will be those that are officially published at http://www.eupla.es/secretaria/academica/examenes.html.

In the global evaluation system, the delivery dates of works will be published in moodle, and will be previous to final exams.

5.5.Bibliography and recomended resources

Resources

Making reliable distributed systems in the presence of software errors - [http://www.erlang.org/download/armstrong_thesis_2003.pdf]
sqlite data base - [http://www.sqlite.org]
C++ programming - [https://es.wikibooks.org/wiki/Programaci%C3%B3n_en_C%2B%2B]
The Debian Administrator's Handbook - [https://debian-handbook.info/get/now/]