26904 - Computer Science

Syllabus Information

Academic Year: 2019/20
Subject: 26904 - Computer Science
Faculty / School: 100 -

Degree: 447 - Degree in Physics

ECTS: 6.0
Year: 1
Semester: First semester
Subject Type: Basic Education
Module:

1.General information

1.1.Aims of the course

1.2.Context and importance of this course in the degree

1.3.Recommendations to take this course

2.Learning goals

2.1.Competences

2.2.Learning goals

2.3.Importance of learning goals

3.Assessment (1st and 2nd call)

3.1.Assessment tasks (description of tasks, marking system and assessment criteria)

4.Methodology, learning tasks, syllabus and resources

4.1.Methodological overview

The methodology followed in this course is oriented towards the achievement of the learning objectives. A wide range of teaching and learning tasks are implemented, such as lectures, practice computer sessions, autonomous work, study and assessment tasks.

Students are expected to participate actively in class throughout the semester.

Further information regarding the course will be provided on the first day of class.

4.2.Learning tasks

The 6 ECTS (150 student working hours) course includes the following learning tasks:

1. Lectures. (1.5 ECTS). They are oriented to the conveying of knowledge regarding software design and implementacion. The dates of the lectures will be established by the Faculty.
2. Practice sessions, analysis and implementation of solutions to proposed exercises and problems. (3 ECTS). Such activities will be carried out both on the blackboard (analysis, design and discussion of alternative solutions) and on the computer (in guided practices). They consist in 7 practices and the dates will be communicated in advance.
3. Resolution of problems in teams. (1.5 ECTS). Students will apply the acquired knowledge to the resolution of

mathematical and physical problems, some of which requiring data treatment and graphical representation of the results.

4. Deliverable deadlines: in dates determined and communicated by the teacher.

4.3.Syllabus

The course will address the following topics:

- Basic concepts.
- Elementary sentences.
- Structured sentences: block, conditional and loop.
- Sub-algorithms.
- Data structures: arrays, structs, pointers and files.
- Basic notions on Algorithmics.
- Basic notions on data analysis and graphical representations. Use of specialised packages.

4.4.Course planning and calendar

Further information concerning the timetable, classroom, office hours, assessment dates and other details regarding this course, will be provided on the first day of class or please refer to the Facultad de Ciencias web https://ciencias.unizar.es/grado-en-fisica-0

4.5.Bibliography and recommended resources