

39811 - Programming II

Syllabus Information

Academic Year: 2022/23

Subject: 39811 - Programming II

Faculty / School: 326 - Escuela Universitaria Politécnica de Teruel

Degree: 634 - Joint Programme in Computer Engineering - Business Administration

ECTS: 6.0

Year: 1

Semester: Second semester

Subject Type: Basic Education

Module:

1. General information

2. Learning goals

3. Assessment (1st and 2nd call)

4. Methodology, learning tasks, syllabus and resources

4.1. Methodological overview

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

- students must work on the subject since the beginning of the semester.
- lectures for the presentation of the main concepts and methodologies for the analysis and design of correct and efficient programs. The teacher will make the lectures as interactive as possible so that students should also participate.
- the use of the presented methodologies in practical problem sessions, where students should have a participative attitude. In some of these sessions, the teacher will propose students some optional work to be evaluated, and whose results will be incorporated into the final subject mark.
- the laboratory sessions, where students will learn the necessary technologies for the development of small programming projects.
- some teamwork programming projects, which should be conveniently designed, developed and documented.

4.2. Learning tasks

The subject program proposed to students in order to reach the defined learning objectives includes the following activities:

- lectures for the presentation and discussion of the items proposed in the course syllabus
- problem sessions for the direct application of the concepts worked during the lectures
- laboratory sessions for the implementation of programs requiring the methods and techniques presented in both the lectures and problem sessions.

4.3. Syllabus

The course will address the following topics:

- Formal specification of programs.
- Design of recursive algorithms
- Cost analysis of algorithms
- Correctness verification of iterative and recursive algorithms
- Modular programming
- Development of a programming project

4.4. Course planning and calendar

The students' workload for reaching the aimed learning results is estimated at about 150 hours, organized as follows:

- 60 hours, approx., of face-to-face activities (lectures, problems, and laboratory practice)
- 30 hours, approx., of guided programming work
- 55 hours, approx., of efficient personal study
- 5 hours, approx., of evaluation activities

Calendar of face-to-face sessions and presentation of work:

- The teaching organization of this subject is scheduled as follows:
 - Lectures (2 hours per week)
 - Problem lessons and laboratory sessions (2 hours per week)
 - Presentation of works for evaluation: The specific dates for presenting problems and programming activities will be determined when the teacher proposes these activities.

4.5. Bibliography and recommended resources

<http://psfunizar10.unizar.es/br13/egAsignaturas.php?codigo=30209&Identificador=12495>