

## 30244 - Verification and Validation

### Syllabus Information

**Academic Year:** 2019/20

**Subject:** 30244 - Verification and Validation

**Faculty / School:** 110 - Escuela de Ingeniería y Arquitectura

**Degree:** 439 - Bachelor's Degree in Informatics Engineering

**ECTS:** 6.0

**Year:** 3

**Semester:** Second semester

**Subject Type:** ---

**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:

- The continued work since the first day of class.
- Learning concepts and methodologies for software verification and validation through lectures, in which student participation will be encouraged.
- The application of such knowledge on verification and validation of software in the classes devoted to problems. In these classes, students will play an active role in the discussion of cases and solving problems.
- Classes of laboratory practices where students learn the necessary technology needed for the verification and validation of software, related to concepts and methodologies presented in lectures and problem classes.
- Teamwork, in which each team must establish and implement the test plan of a software project. Each team must submit an electronic document with such a test plan and the documents generated by its application. The details of the software project will be announced in the first weeks of the course.

This course is taught only in Spanish.

#### 4.2.Learning tasks

The course includes the following learning tasks:

- In the classroom, the syllabus of the course will be developed through lectures, case analysis and problem-solving, where concepts and techniques presented in the syllabus will be applied.
- The practice sessions take place in a computer lab. Throughout the different sessions, each student must do, individually or in teams, work directly related to the topics studied in the course.
- In addition, a teamwork project under the supervision of a teacher will be developed. In these projects, each team must establish the test plan of a software project and implement it.

### 4.3.Syllabus

The course will address the following topics:

- Management of the testing process
- Techniques and tools for testing
- Techniques and tools for static evaluation
- Testing and evaluation of human-computer interfaces

### 4.4.Course planning and calendar

#### Schedule and presentation of works

The schedule is as follows:

- Classes in the classroom (lectures and case problems): 3 hours in an ordinary week, according to the academic calendar established by the Faculty Board. In the overall calculation of the course, approximately 2 hours per week will correspond to lectures and approximately one hour to problem solving classes.
- Laboratory classes: one 2-hour session every two weeks, according to the academic calendar established by the Faculty Board. They are working sessions in the use of technologies for verification and validation, supervised by a teacher.
- Supervision of the teamwork.

Teamwork submission:

- The deadline for the submission of the teamwork documentation and software will be the one scheduled by the Faculty Board to hold the written exam. Interim deliveries during the course will be established and announced both in the first day of class and in the Moodle platform.

#### Student Work

The dedication of the student to achieve the learning outcomes in this subject is estimated at 150 hours distributed as follows:

- 60 hours, approximately, of classroom activities: lectures (30), problem solving (15) and laboratory sessions (15)
- 50 hours of team work
- 35 hours of work and actual individual study (study, problem solving, class preparation and practices, program development, etc.)
- 5 hours dedicated to the written exam and the project presentation

### 4.5.Bibliography and recommended resources

<http://psfunizar7.unizar.es/br13/egAsignaturas.php?codigo=30244&Identificador=14709>