

#### Información del Plan Docente

Academic Year 2017/18

Faculty / School 110 - Escuela de Ingeniería y Arquitectura

326 - Escuela Universitaria Politécnica de Teruel

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

443 - Bachelor's Degree in Informatics Engineering

**ECTS** 6.0

Year 3

Semester Half-yearly

Subject Type Compulsory

Module ---

- 1.General information
- 1.1.Introduction
- 1.2. Recommendations to take this course
- 1.3. Context and importance of this course in the degree
- 1.4. Activities and key dates
- 2.Learning goals
- 2.1.Learning goals
- 2.2. Importance of learning goals
- 3. Aims of the course and competences
- 3.1. Aims of the course
- 3.2.Competences
- 4.Assessment (1st and 2nd call)
- 4.1. Assessment tasks (description of tasks, marking system and assessment criteria)
- 5.Methodology, learning tasks, syllabus and resources
- 5.1. Methodological overview

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

- The study and work continued since the first day of class.
- Learning concepts related to the different activities that integrates a software project management and the



regulatory framework for this work, through lectures, in which student participation is encouraged.

- The application of such knowledge to practical cases in the classes of problems. In these classes students will play
  an active role in the discussion and resolution of problems. Some of these problems will be found linked to specific
  project activities to be developed as teamwork that needs to be addressed throughout the semester.
- Practical classes in laboratory where students will learn to use tools that support the developed theoretical knowledge in lectures. In some of the practical sessions they will use of these tools to the specific context of teamwork that has to face throughout the semester.
- Teamwork addressing the development of a project that will include the construction of a computer application of small dimensions which must address all the tasks of software engineering, with special attention to those related to the management and support of different development activities. This work will jointly apply all theoretical aspects developed in the master class and emphasize the development of all skills related to collaborative teamwork.
- Eventually, the involvement of external professionals to show students the reality of the industry, and how the concepts raised in class are applied in this reality.

## 5.2.Learning tasks

The program offered to the student includes the following activities ...

In the School of Engineering and Architecture of Zaragoza:In the classroom the syllabus of the course will be developed.

- In the classroom problems applying the concepts and techniques presented in the course syllabus will be resolved.
- The practice sessions will be developed in seminars and computer labs. In these sessions each student must do, individually or in teams, work directly related to the topics studied in the course and teamwork.
- Additionally, a project developed in groups under the guidance of teachers will be done. This project will address a small size software system.

At the Polytechnic University School of Teruel:

- In the classroom the syllabus of the course will be developed.
- In the classroom problems applying the concepts and techniques presented in the course syllabus will be resolved.
- The practice sessions will take place in a computer lab. In these sessions a project developed in groups under the guidance of teachers will be done. This project will address a small size software system.

#### 5.3.Syllabus

The program of the course consists of four parts:

- Project Management
- Configuration Management
- Introduction to Sofware Quality Management
- Rules and regulations of software development

### 5.4. Course planning and calendar

Calendar of sessions and presentation of works

School of Engineering and Architecture of Zaragoza. Schedule sessions and presentation of works.

The educational organization of the sessions scheduled as follows:

- Lectures, Troubleshooting and cases (2 hours per week)
- Laboratory practice (1 session of 2 hours scheduled on schedule offered by the Centre)

The schedules of all classes and dates of the practice sessions will be announced in advance through the websites of the center.

The proposed projects will be delivered at the end of the term, at such times as may be indicated.



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

- 32 hours, approximately, of classroom activities (sessions in the theoretical and problems in the laboratory and classroom sessions)
- 103 hours of group work
- 10 effective working hours and individual study (study notes and texts, problem solving, class preparation and practices, program development, etc.)
- 5 hours devoted to various evaluation tests

#### Polytechnic School of Teruel. Schedule sessions and presentation of works.

The educational organization of the sessions scheduled on the campus of Teruel is as follows:

Lectures (2 hours per week)

Troubleshooting and cases (1 hour per week)

Laboratory practice (1 hour per week)

Tutorials directed works (1 hour per week, students should make an appointment with the teacher)

The schedules of all classes will be set by the center.

The work done by teams of students must be delivered (and defended) on the date that the center established in the calendar of examinations of the degree.

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

- 60 hours, approximately, of classroom activities (sessions in the theoretical and problems in the laboratory and classroom sessions)
- · 42 hours of group work
- 43 effective working hours and individual study (study notes and texts, problem solving, class preparation and practices, program development, etc.)
- 5 hours devoted to various evaluation tests

### 5.5.Bibliography and recommended resources

[BB: Bibliografía básica / BC: Bibliografía complementaria]

- · Zaragoza:
- [BB] Chrissis, Mary Beth. CMMI for development: guidelines for process integration and product improvement / Mary Beth Chrissis, Mike Konrad, Sandy Shrum. 3rd ed. Upper Saddle River, New Jersey: Addison-Wesley, cop. 2011
- [BB] Humphrey, W.S. Introduction to the Team Software Process / W.S. Humphrey. Addison-Wesley. 1999
- [BB] Pressman, Roger S. Ingeniería del Software : un enfoque práctico / Roger S. Pressman . 7ª ed. México D. F. : McGraw-Hill Interamericana, cop. 2010
- [BB] Sommerville, Ian. Software engineering / Ian Sommerville . 10th ed. Boston [etc.] : Pearson, cop. 2016
- [BC] Brooks, Frederick Phillips, Jr.. The mythical man-month: essays on software engineering / Frederick P. Brooks, Jr. Anniversary ed., [repr. with corr.] Reading, Massachusetts: Addison-Wesley, cop. 1995
- Teruel:
- [BB] Brooks, Frederick Phillips, Jr.. The mythical man-month: essays on software engineering / Frederick P. Brooks, Jr. Anniversary ed., [repr. with corr.] Reading, Massachusetts: Addison-Wesley, cop. 1995
- [BB] Chrissis, Mary Beth. CMMI for development: guidelines for process integration and product improvement / Mary Beth Chrissis, Mike Konrad, Sandy Shrum. 3rd ed. Upper Saddle River, New Jersey: Addison-Wesley, cop. 2011
- [BB] Humphrey, Watts S.. Introduction to the Team Software Process / Watts S. Humphrey.. Reading, Mass. [etc.] :



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- [BB] Pressman, Roger S.. Ingeniería del Software : un enfoque práctico / Roger S. Pressman ; traducción Rafael Ojeda Martín...[et al.] ; coordinación general y revisión técnica, Luis Joyanes Aguilar . 4a. ed. en español Madrid [etc.] : McGraw-Hill, cop. 1998
- [BB] Software engineering guides / [C. Mazza...(et al.)]; edited by Jon Fairclough . [1st. ed.] London [etc.] : Prentice Hall, 1996