Software development methods

Academic Year: (2021 / 2022) **Review date: 26-06-2021**

Department assigned to the subject: Computer Science and Engineering Department

Coordinating teacher: AMESCUA SECO, ANTONIO DE

Type: Electives ECTS Credits : 6.0

Year : Semester :

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

Software Engineering: (Course: 2 / Semester: 1)
Software Development: (Course: 2 / Semester: 2)
User Interfaces: (Course: 3 / Semester: 1)

DESCRIPTION OF CONTENTS: PROGRAMME

1 - Agile Management Principles
2 - Lean Startup
3 - Agile Requirements Management Techniques
4 - Agile project planning techniques
5 - Agile project monitoring techniques and tools
6 - Retrospectives and Showcases

LEARNING ACTIVITIES AND METHODOLOGY

The activities carried out in the course are:

1) Theoretical Classes (1.5 ECTS): The objective of these classes is to achieve the specific competences associated with the knowledge that have been presented for this subject. All theoretical concepts are in a SPOC of the course. The concepts of each week will be presented through mini-videos that the students will have to visualize before the classes. Once viewed, they must answer a multiple choice questionnaire that will verify knowledge of the concepts presented in the minivideos. During the theory classes the test results will be discussed. Subsequently, case studies or readings will be presented that will allow to consolidate the correct understanding of the concepts presented in the minivideos, providing a second level of learning.

2) Practical Classes (1.5 ECTS): In these classes, students will learn the basic notions of the tools, techniques and application guides of the principles and techniques of agile software development. In the scope of the practical classes, each of the teams will present the degree of progress in their resolution of the practice and the steps proposed for its completion in such a way as to allow the exchange of ideas between the different practice teams. Finally, the teacher will provide the necessary feedback for students to correctly complete the current practice.

3) Continuous Evaluation Activities. (2,7 ECTS):
Student Teams will carry out the assigned practices that will allow the application of the techniques learned through the application of the instructions that the teacher will establish in a practice script that will be discussed during the practical classes.

4) Tutorials. (0,1 ECTS)
Individualized assistance (individual tutorials) or in groups (collective tutorials) to students by the teacher.

5) Final Exam. (0,2 ECTS)
Its objective is to influence and complement the development of specific cognitive and procedural capacities.

ASSESSMENT SYSTEM

The total of the grade will be calculated as follows:

CONTINUOUS ASSESSMENT: 70% of the grade

Class Work, Presentations and Exhibitions will be valued. (55%)
As well as, the Work done in the SPOC of the course. (15%)

FINAL EXAM: 30% of the grade
In which the knowledge, skills and abilities acquired throughout the course will be assessed globally.

Minimum mark in practices: 5 (out of 10)
Minimum mark in the exam: 5 (out of 10)

% end-of-term-examination:	30
% of continuous assessment (assigments, laboratory, practicals…):	70

BASIC BIBLIOGRAPHY

- Jeff Patton User Story Mapping, O'Reilly Media, 2014
- Osterwalder, A.; Pigneur, Y.; Bernarda, G.; Smith, P. Value Proposition Design, Wiley Publishing, 2014
- Rubin, Kenneth S., Essential Scrum: a practical guide to the most popular agile process, Pearson Education, Inc., 2013

ADDITIONAL BIBLIOGRAPHY

- Cockburn, Alistair Agile Software Development, Addison-Wesley, 2001
- Highsmith, Jim Agile Software Development Ecosystems, Addison-Wesley, 2002
- Schwaber, Ken et al. Agile Software Development With SCRUM, Prentice Hall, 2001

BASIC ELECTRONIC RESOURCES

- Agile Alliance . Agile Alliance: http://www.agilealliance.org