

Academic Year: ( 2023 / 2024 )

Review date: 26-04-2023

Department assigned to the subject: Computer Science and Engineering Department

Coordinating teacher: ZARRAONANDIA AYO, TELMO AGUSTIN

Type: Electives ECTS Credits : 6.0

Year : 4 Semester :

**REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)**

- Programming (Course: 1 / Semester: 1)
- User Interfaces (Course: 3 / Semester: 1)

**OBJECTIVES**

The objective of the course is to provide the student with basic knowledge on the development of Web applications. This include the implementation using software components and following a microservices approach.

**DESCRIPTION OF CONTENTS: PROGRAMME**

- 1- Development of distributed components
- 2- Web programming
- 3- Web application design patterns
- 4- Techniques for asynchronous communications with servers
- 5- MVC architectures (Vista-Controller Model)
- 6- Persistence engines
- 7- Web development for specific platforms
- 8- Practical example for information systems

**LEARNING ACTIVITIES AND METHODOLOGY**

- \* Theoretical lectures: 1.5 ECTS. To achieve the specific cognitive competences of the course. Besides, to develop transversal competences as capacity to analysis and abstraction.
- \* Practical lectures: 1 ECTS. To develop the specific instrumental competences. Besides, to develop transversal competences as problem solving and knowledge application.
- \* Continuous assessment exercises: 1,5 ECTS. Initiated during the practical sessions and finished out of them. Their objective is to complete the development of the specific instrumental competences and to initiate the developemnt of the actitudinals specific competences as well as the transversal competences on problem solving and knowledge application.
- \* Practice: 2 ECTS. Carried out without the presence of the teacher. Their objective is to complete and integrate the development of the specific competences and transversal competences by means of practice cases in which the problem, solving method, criteria for selecting the solving method, the results and their interpretation are well documented.
- \* Tutorships: Teacher assistance
- \* Exercises and examination: 0,5 ECTS. To complete the development of specific cognitive and procedimental capacities

**ASSESSMENT SYSTEM**

Projects + mid Term exams: 100%

<b>% end-of-term-examination:</b>	30
<b>% of continuous assessment (assigments, laboratory, practicals...):</b>	70

**BASIC BIBLIOGRAPHY**

- Allamaraju, Subrahmanyam Programación Java Server con J2EE, Edición1.3, Anaya..
- Bruce W. Perry Java Servlet & JSP Cookbook, O`Reilly UK.

- Elizabeth Castro XML for the World Wide Web, Peachpit Press.
- Hugh E. Williams, David Lane Web Database Applications with PHP and MySQL, O'Reilly UK..
- Sam Newman Building Microservices, O'Reilly Media, 2015