

Academic Year: ( 2018 / 2019 )

Review date: 10-05-2018

Department assigned to the subject: Computer Science and Engineering Department

Coordinating teacher: GARCIA BLAS, FRANCISCO JAVIER

Type: Compulsory ECTS Credits : 6.0

Year : 3 Semester : 1

## OBJECTIVES

CB2: Students know how to apply their knowledge to their work or vocation in a professional way and have the necessary skills that are usually demonstrated through the elaboration and defense of arguments and the resolution of problems within their area of study.

CB3: Students have the ability to gather and interpret relevant data (normally within their area of study) to make judgments that include a reflection on relevant issues of social, scientific or ethical nature.

CB5: Students have developed the necessary learning skills to undertake further studies with a high degree of autonomy.

CE10: Ability to use the main technologies used for processing large amounts of data.

CE18: Ability to acquire basic and fundamental knowledge of network architectures.

CE21: Ability to use modern optimization tools to solve practical problems in an efficient manner.

## DESCRIPTION OF CONTENTS: PROGRAMME

1. Architecture of computing platforms
2. Processing utilities in the system
3. Massive Storage Systems
4. Massive computing platforms for Big Data
5. Paradigms for Data Massive Computing
6. Frameworks for data-intensive computing
7. Use cases in the companies

## LEARNING ACTIVITIES AND METHODOLOGY

AF1: THEORETICAL-PRACTICAL CLASSES. They will present the knowledge that should be acquired. They will receive the class notes and will have basic texts of reference to facilitate the follow-up of the classes and the development of the subsequent work. Exercises, practical problems on the part of the student will be solved and workshops and evaluation test will be held to acquire the necessary skills.

AF2: Updated to allegation

AF3: INDIVIDUAL OR GROUP WORK OF THE STUDENT.

AF9: FINAL EXAM. In which the knowledge, skills and abilities acquired throughout the course will be assessed globally.

MD1: THEORETICAL LESSONS. Exhibitions in class with both support of computer and audiovisual media, in which the main concepts of the subject are developed and the materials and bibliography are provided to complement the students' learning.

MD2: ASSIGNMENTS. Resolution of practical use cases, problems, etc. raised by the teacher, individually or in groups.

MD3: TUTORIALS. Individualized assistance (individual tutorials) or group (collective tutorials) to students by the teacher.

## ASSESSMENT SYSTEM

SE1: FINAL EXAM. In which the knowledge, skills, and abilities acquired throughout the course will be assessed globally.

SE2: CONTINUOUS EVALUATION. In it, work, presentations, debates, exhibitions in class, exercises, assignments, and work in the workshops throughout the course will be evaluated.

<b>% end-of-term-examination:</b>	60
<b>% of continuous assessment (assignments, laboratory, practicals...):</b>	40

#### BASIC BIBLIOGRAPHY

- Holden Karau, Andy Konwinski, Patrick Wendell & Matei Zaharia Programming in Scala, Artima.
- White, T. Hadoop: The Definitive Guide, O'Reilly, 2015