

Big Data

Academic Year: (2023 / 2024)

Review date: 29-05-2023

Department assigned to the subject: Computer Science and Engineering Department

Coordinating teacher: CARBO RUBIERA, JAVIER IGNACIO

Type: Electives ECTS Credits : 6.0

Year : 4 Semester :

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

Programming (Python)

OBJECTIVES

- Analysis and synthesis skills
- Planning and organization skills
- Problem solving skills
- Team work skills
- Capacity to apply theoretical concepts
- Critical Reasoning skills

- Cognitive (acquired knowledge)
 1. Knowledge about main Artificial Intelligence (AI) techniques and concepts.
 2. Knowledge about the application of the different AI techniques in different areas, such as business, banking or finance.
 3. Knowledge about the complexity in implementing intelligent solutions in real environments.

- Instrumental (know how)
 1. Designing intelligent systems to solve practical problems.
 2. Critical analysis of real-life problems.
 3. Using specific tools to develop intelligent systems.

- Attitude
 1. Creativity.
 2. Quality aspects.
 3. Motivation.
 4. Seeking solutions to new problems.

DESCRIPTION OF CONTENTS: PROGRAMME

- 1.- Introduction to Big Data
- 2.- Biga Data Methodology
- 3.- Big Data Classic Techniques
- 4.- Supervised Learning and Classifiers
- 5.- Regression trees and neural networks.
- 6.- Other approaches

LEARNING ACTIVITIES AND METHODOLOGY

Practical activities will include Python programming and the use of a public dataset.

ASSESSMENT SYSTEM

The theory is weighted with the 40%.

The practical works carried out along the semester are weighted with the 60%.

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

ADDITIONAL BIBLIOGRAPHY

- Sebastian Raschka, Vahid Mirjalili Python Machine Learning, Packt Publishing, 2017