

Academic Year: ( 2023 / 2024 )

Review date: 22-04-2023

Department assigned to the subject: Telematic Engineering Department

Coordinating teacher: SANCHEZ FERNANDEZ, LUIS

Type: Compulsory ECTS Credits : 3.0

Year : 1 Semester : 2

## OBJECTIVES

### Basic Competences

That the students can apply the acquired knowledge and ability to solve problems in new or unfamiliar environments within broader contexts related to their field of study

That students are able to integrate knowledge and handle complexity of formulating judgments

That the students can communicate their conclusions and the knowledge and rationale underpinning to specialists and non-specialists in a clear and unambiguous way.

That students have the learning skills that enable them to continue studying in a way that will be largely self-directed or autonomous.

### Specific Competences

Identify opportunities that data processing techniques may offer to improve the activity in companies and organizations

Apply advanced methods of data processing in problems of special relevance for societies

## DESCRIPTION OF CONTENTS: PROGRAMME

- Introduction to hypertext and Web protocols
  - HTTP
  - HTTPS
  - HTML
  - Dynamically generated Web pages
- Web site usage analytics
  - Introduction
  - Web technologies for Web site monitoring
  - Basic Web analytics terms
  - Architecture of a Web usage mining application
  - Association rules
- Link mining
  - Motivation
  - HITS
  - PageRank
- Social network analysis
  - Structure of a social network
  - Centrality and influence
  - Comunidades en redes sociales
- Linked data
  - Overview
  - RDF, RDF Schema
  - SPARQL

## LEARNING ACTIVITIES AND METHODOLOGY

### Learning activities

Lectures

Lab sessions

### Methodology

Presentations made by the Professor with the aid of audiovisual and computer media, in which the main concepts of the subject are explained.

Reading of bibliography by the student

Development of assignments in the labs.

## ASSESSMENT SYSTEM

Lab assignments  
Final exam

<b>% end-of-term-examination:</b>	50
<b>% of continuous assessment (assignments, laboratory, practicals...):</b>	50

## BASIC BIBLIOGRAPHY

- Easley, D., & Kleinberg, J. Networks, crowds, and markets: Reasoning about a highly connected world, Cambridge University Press, 2010
- Liu, B. Web data mining: exploring hyperlinks, contents, and usage data, Springer Science & Business Media, 2011
- Peterson, E. T. Web analytics demystified: a marketer's guide to understanding how your web site affects your business, Ingram, 2004
- Shelley Powers Practical RDF, O'Reilly Media, Inc., 2003