# uc3m Universidad Carlos III de Madrid

# Computing

Academic Year: (2022 / 2023) Review date: 12/02/2021 12:44:59

Department assigned to the subject: Computer Science and Engineering Department

Coordinating teacher:

Type: Compulsory ECTS Credits: 6.0

Year: 1 Semester: 2

Branch of knowledge: Engineering and Architecture

# **OBJECTIVES**

# Knowledge Skills

- To know fundamentals of Computer Science
- To know the information and representation in computing systems
- To know the information systems
- To know the relational databases

# Comprehension Skills

- To understand the concept of operative system and to know how the most important operating systems
- To understand the information system
- To understand the different elements involved in the use and design of databases
- To understand the importance of communications, mainly through Internet

# **Application Skills**

- Skill of using an operative system and some applications related to the work environment
- Ability to create documents and reports with different tools
- Skill of using several tools for working in Internet and the design and creation of web pages

# Criticism and evaluation Skills

- Evaluation of appropriate techniques for each problem
- Ability to analyze and evaluate different reports generated by office tools

#### **DESCRIPTION OF CONTENTS: PROGRAMME**

## Theoretical contents:

- Computing fundamentals
- Information structures and its representation in computing
- Operative Systems: an introduction
- Software tools
- Databases
- Programming: an introduction

### Practical contents:

Manage of applications related to the studied environments: spreadsheets, databases, documents, internet, web pages and programming.

## LEARNING ACTIVITIES AND METHODOLOGY

The teaching will be developed focused on the student in order to let him acquire the competences on working efficiently with the most common computing applications.

During the term several test will be done in order to evaluate the theoretical concepts. In addition, several practices are needed to evaluate the complete material.

Therefore, the 6 ETCS credits are distributed in the following manner:

- 1. Theoretical lectures: 1.2 ETCS credits
- 2. Practice lectures: 1.2 ETCS credits
- Evaluation tests: 0.5 ETCS credits 3.
- Individual work: 3.1 ETCS credits 4.

# ASSESSMENT SYSTEM

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

The evaluation is based in three parts:

- An evaluation of the practices
- A final test 3.

The tests and the evaluation of the practices means a percentage of the final test.

# **BASIC BIBLIOGRAPHY**

- BEEKMAN, George Introducción a la informática, Pearson Educación, 6ª ed. 2005
- RAYA CABRERA, J.L y MARTÍN MARTINEZ F. J. Informática Básica, RA-MA, 2004

# BASIC ELECTRONIC RESOURCES

- W3SCHOOLS.COM . HTML Tutorial: http://www.w3schools.com/html/html\_examples.asp
- w3schools . HTML, HTML5, XML, XSLT Tutorials: http://www.w3schools.com/html/default.asp