uc3m Universidad Carlos III de Madrid

Cybersecurity and Privacy

Academic Year: (2023 / 2024) Review date: 28-04-2023

Department assigned to the subject: Computer Science and Engineering Department

Coordinating teacher: PERIS LOPEZ, PEDRO Type: Compulsory ECTS Credits: 3.0

Year: 1 Semester: 1

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

We recommend that the student has previously studied a subject related to cybersecurity in information and communication technologies.

OBJECTIVES

The student acquires the ability to model and evaluate distributed and parallel systems.

The student acquires the ability to design distributed and parallel applications.

The student acquires knowledge of the main design aspects of a distributed and parallel system.

The student learns and applies simulation techniques to simulate distributed and parallel systems.

The student acquires the ability to analyse a technical document or scientific publication critically.

The student can transmit the results of scientific research.

DESCRIPTION OF CONTENTS: PROGRAMME

Introduction to cybersecurity.

State of the art of privacy.

Cryptography: capabilities and limitations.

Data collection and analysis: personal data and privacy.

Anonymisation and de-anonymisation.

Privacy technologies.

LEARNING ACTIVITIES AND METHODOLOGY

AF1: Theoretical and practical classes

AF3: Tutorials

AF5: Individual work

AF4: Teamwork

AF6: Assessment tests (exam)

ASSESSMENT SYSTEM

Individual or group work carried out during the course (80%).

Final exam (20%).

% end-of-term-examination: 20

% of continuous assessment (assignments, laboratory, practicals...): 80

BASIC BIBLIOGRAPHY

- David Wright, Paul De Hert Enforcing Privacy, Springer, 2016
- Denny Cherry The Basics of Digital Privacy, Syngress, 2013
- Safeguarding Privacy, Liberty and Security Privacy-Invading Technologies and Privacy by Design, Springer, 2014
- Sophie Stalla-Bourdillon Joshua Phillips Mark D. Ryan Privacy vs. Security, Springer-Verlag London, 2014