# uc3m Universidad Carlos III de Madrid

## Technologies for 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: Electives ECTS Credits: 3.0

Year: 4 Semester:

## REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

Cryptography and Computer Security (course 3 / semester 1).

Computer Networks (course 3 / semester 1).

Security Engineering applied to computer engineering / to information systems (course 3 / semester 2).

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

- 1. Introduction to Cybersecurity.
- 2. Principles of privacy.
- 3. Introduction to advanced cryptography.
- 4. Privacy protection in Big Data.
- 5. Regulations.

#### LEARNING ACTIVITIES AND METHODOLOGY

AF1. THEORETICAL-PRACTICAL CLASSES. They will present the knowledge that students should acquire. They will receive the class notes and will have basic reference documents to facilitate the follow-up of the classes and the development of the subsequent work. Exercises and problems that students may have, will be solved and workshops and evaluation tests will be carried out to develope the necessary skills.

AF2. TUTORIALS. Individualized (individual tutorials) or group (collective tutorials) assistance to students will be provided by the teacher.

AF3. INDIVIDUAL OR GROUP STUDENT WORK.

AF8: WORKSHOPS AND LABORATORIES AF9: FINAL EXAM. In which the knowledge, skills and abilities acquired throughout the course will be assessed globally.

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

MD2: PRACTICES. Resolution of practical 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.

MD6: LABORATORY PRACTICES. Applied / experimental teaching to workshops and laboratories under the supervision of a tutor.

#### ASSESSMENT SYSTEM

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

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

% end-of-term-examination: 60

% of continuous assessment (assignments, laboratory, practicals...): 40

# BASIC BIBLIOGRAPHY

- Torra Vicenç Data Privacy: Foundations, New Developments and the Big Data Challenge, Springer, 2017