

Academic Year: ( 2023 / 2024 )

Review date: 27-04-2023

Department assigned to the subject: Computer Science and Engineering Department

Coordinating teacher: MORENO LOPEZ, LOURDES

Type: Electives ECTS Credits : 3.0

Year : 4 Semester :

## SKILLS AND LEARNING OUTCOMES

Complement the basic, transversal and compulsory knowledge of the Degree according to the student's preferences.

## OBJECTIVES

- Capacity to analyze and synthesize
  - Capacity to organize and plan the work
  - Capacity to manage resources in an efficient way.
  - Capacity to put in practice theoretical concepts in different use cases.
  - Oral and written skills
  - Working as a team
- a. Cognitive (to know).
- Knowledge in Design for all, accessibility and users affected by the digital divide in Information and Communication systems.
  - Knowledge of legislation and national and international standards in relation to accessibility and design for all in information systems.
  - Knowledge of methods and tools to support software process activities in information systems with a user-centred Design that allow integrating accessibility requirements as well as Design for all.
  - Knowledge about how to include Design for all and accessibility policies in organizations
  - Knowledge about accessibility quality
- b. Procedural/instrumental (to be able to do).
- To be able to identify requirements about user needs concerning functional diversity and accessibility barriers in information systems.
  - To be able to identify requirements about user needs in assistive technologies for design for all information technologies compatible with information systems.
  - Ability to integrate solutions in a case study in an organization devoted to software development with an interest in accessibility and Design for all.
  - Ability to apply mandatory laws inaccessibility and Design for all issues in the software development process.
  - Ability of modelling considering accessibility requirements in the software development process.
  - Ability to use methodological frameworks following a Design for all approach in developing accessible information systems.
  - Ability to use evaluation frameworks for accessibility
  - Ability to use assistive technologies and developing and evaluate tools concerning accessibility.
  - Ability to design and evaluating accessible information systems in web environments following standards.
  - Ability to include mechanisms in organizational strategy with the objective of seizing opportunities to market demand as well as to enhance corporate social responsibility policy.
- c. Attitude (Being)
- Ability to work as a multidisciplinary team together with final users.
  - Analyse, evaluate and conclude with the different accessible solutions for a given use case.
  - Personal development in Design for all and accessibility matters.
  - Capability of autonomous learning for the professional future in the area of design for all and accessibility.
  - To keep in mind always accessibility and diversity of users and final devices in information systems.
  - To have an interest in government e-inclusion policies as well as of different international

organizations.

#### DESCRIPTION OF CONTENTS: PROGRAMME

- Accessibility and Design for all. Universal Design. People with disabilities, diversity in society and technologies
- Accessibility requirements. Regulations and standards
- User-Centred Design. Interactive systems design
- Accessible design and development methods. Sustainability of accessibility in the life cycle.
- Accessibility in the organization: policies and strategies

#### LEARNING ACTIVITIES AND METHODOLOGY

Seminars and lectures supported by computer and audiovisual aids.  
Practical learning based on cases and problems, and exercise resolution.  
Individual and group or cooperative work with the option of oral or written presentation.  
Individual and group tutorials to resolve doubts and queries about the subject.  
Internships and directed laboratory activities.

#### ASSESSMENT SYSTEM

Homework and exams in addition to serving as a training activity to encourage and improve learning serve the dual purpose of being measured for the assessment system. The assessment system includes the evaluation of academic activities in accordance with the following weighting:

- Exam: 40%
- Supervised academic activities. Practical classes: 35%
- Not supervised academic Activities. Final work: 25%

**% end-of-term-examination:** 40

**% of continuous assessment (assignments, laboratory, practicals...):** 60

#### BASIC BIBLIOGRAPHY

- Henry, S. L. Just ask: integrating accessibility throughout design., Lulu. com, 2007
- Yesilada, Y., & Harper, S. Web Accessibility: A Foundation for Research., Springer, 2019

#### BASIC ELECTRONIC RESOURCES

- ETSI . EN 301 549 V3.2.1 (2021-03): Accessibility requirements for ICT products and services:  
[https://www.etsi.org/deliver/etsi\\_en/301500\\_301599/301549/03.02.01\\_60/en\\_301549v030201p.pdf](https://www.etsi.org/deliver/etsi_en/301500_301599/301549/03.02.01_60/en_301549v030201p.pdf)
- W3C-WAI . Making the Web Accessible: <https://www.w3.org/WAI/>