

Academic Year: (2020 / 2021)

Review date: 10-07-2020

Department assigned to the subject: Department of Computer Science and Engineering

Coordinating teacher: MORENO LOPEZ, LOURDES

Type: Electives ECTS Credits : 3.0

Year : 1 Semester : 2

COMPETENCES AND SKILLS THAT WILL BE ACQUIRED AND LEARNING RESULTS.

Generic/Transversal Competences:

- Capacity to analyze and synthesize (PO e)
- Capacity to organize and plan the work (PO d)
- Capacity to manage resources in an efficient way. (PO c e)
- Capacity to put in practice theoretical concepts in different uses cases. (PO c e k)
- Oral and written skills (PO g)
- Working as a team (PO d)

Specific Competences.

1. Cognitive (to know). (PO a, h, j, k)

- Knowledge in Accessibility to technologies.
- Knowledge of accessibility barriers by people with disabilities.
- Knowledge of the accessibility standards
- Knowledge on the accessible user interface design and inclusive design
- Knowledge of accessibility to user interfaces according to the type of interaction

2. Procedural/instrumental (to be able to do). (PO b c e g k)

- Ability to apply accessibility standards. Accessibility evaluation method.
- Ability to integrate strategies for the design and development of accessible user interfaces.
- Ability to incorporate strategies for web design interfaces to improve reliability and understandability.
- Ability to develop a prototype with the knowledge acquired.
- Ability to study and analyze research articles.
- Capacity to write research papers.

3. Attitude (Being)

- The ability to work as a multidisciplinary team. (PO d)
- Analyse, evaluate and conclude with the different accessible solutions for a given use case. (PO e h j k)
- The capability of autonomous learning for the professional future in the area. (PO i h k)

DESCRIPTION OF CONTENTS: PROGRAMME

- Introduction of accessibility to technologies. Universal Design
- Access to technologies by people with disabilities
- Content accessibility standards. WCAG 2.1. Guidelines and evaluation method
- Design of user interfaces according to the disability group and special needs
- User-centred design. Development of accessible user interfaces.
- European standard EN 301 549 ¿Accessibility requirements for ICT products and services'
- Accessibility in different contexts. Research challenges
 - * Mobile, tablet
 - * Natural user interfaces
 - * Video games
 - * Virtual assistants, chatbots

LEARNING ACTIVITIES AND METHODOLOGY

The methodology followed is theoretical and practical:

- * The teacher will inform (through the "Aula Global" platform) of the learning plan (learning activities like papers to read, activities, etc..) to do in each session.
- * Each session will have a different format (master class teacher or collaborative group work...) according to the most appropriate learning method.
- * The teacher will provide reference articles about the topic of the next session. Students will have to read them prior to the session in order to: make a group discussion, write an extended abstract, make a presentation about the article, etc.
- * The purpose of paper reading is to review and analyze it, through the student question himself:
 - What problem is solved? Which are the strengths and limitations of the approach?
 - Is the evaluation correct? Are validated the objectives? Why or why not?
 - What approaches used in the research work can be applied to other domains?
 - The initial assumptions on which this research is based are valid?
 - The article provides a sufficiently detailed description of the proposed methods so you can replicate it? If not, where I can find additional information?
- Additionally, to guide the final work:
 - Conduct theoretical and practical activities:
- * The final work will be done under the supervision of teachers.

ASSESSMENT SYSTEM

SE1: CONTINUOUS ASSESSMENT. Activities, presentations and final project will be valued

- Continuous evaluation (100%)
- * Activities (30%)
- * Project (70%)

% end-of-term-examination:	0
% of continuous assessment (assignments, laboratory, practicals...):	100

BASIC BIBLIOGRAPHY

- Kraft, Christian User experience innovation: user centered design that works, Safari, 2012
- Lazar, Jonathan; Feng, Jinjuan Heidi; Hochheiser Harry Research methods in human-computer interaction, John Wiley & sons, 2010
- Shneiderman, Ben; Plaisant, Catherine Designing the user interface: strategies for effective human-computer interaction, Addison-Wesley, 2010

ADDITIONAL BIBLIOGRAPHY

- Tractinsky, Noam; Hassenzahl, Marc User experience - a research agenda, Behaviour & Information Technology, , 2006