

Academic Year: ( 2022 / 2023 )

Review date: 20-05-2022

Department assigned to the subject: Computer Science and Engineering Department

Coordinating teacher: MARQUEZ SEGURA, ELENA

Type: Compulsory ECTS Credits : 6.0

Year : 3 Semester : 2

**DESCRIPTION OF CONTENTS: PROGRAMME**

1. Human centered informatics
2. Paradigms, styles and principles of interaction
  - 2.1. Ubiquitous computing and IoT; Social computing; embodied interaction; Virtual, augmented, and mixed reality; CSCW (computer supported collaborative work)
3. Design approaches
  - 3.1. User-centered design (UCD) and participatory design (PD)
  - 3.2. Usability and User Experience (UX)
  - 3.3. Design thinking
4. Designing and prototyping of interactive ecosystems
  - 4.1. Classical and innovative design and prototyping techniques
  - 4.2. Problem framing, divergent, and convergent design
5. Evaluation
  - 5.1. Evaluation kinds: internal and external, with and without users, formative and summative.

**LEARNING ACTIVITIES AND METHODOLOGY**

Theoretical/practical classes. 2 ECTS. Classroom presentations by the teacher with IT and audiovisual support in which the subject's main concepts are developed, while providing material and bibliography to complement student learning. Resolution of practical cases and problem, posed by the teacher, and carried out individually or in a group

Individual or group work. 3 ECTS. Necessary work to learn the course content and apply this knowledge to the understanding, analysis, critical reflexion, and design of interactive systems and their impact in the physical and sociotechnical ecology where it will be used.

Final Exam. 1 ECTS. Necessary work to prepare for the final exam

Tutoring sessions. Individual or group follow up sessions to clarify theoretical or practical questions.

**ASSESSMENT SYSTEM**

FINAL EXAM. 20%. Assessing knowledge, skills, and capacities learned and practiced during the course.

CONTINUOUS EVALUATION 80%. Assessing deliverables, presentations, engagement in debates and class presentations, exercises, practical exercises and work in workshops during the course.

<b>% end-of-term-examination:</b>	20
<b>% of continuous assessment (assignments, laboratory, practicals...):</b>	80

**BASIC BIBLIOGRAPHY**

- Helen Sharp, Jennifer Preece, & Yvonne Rogers Interaction Design: Beyond Human-Computer Interaction, John Wiley & Sons. , 2019.
- Kim Goodwin and Alan Cooper Designing for the digital Age, Wiley, 2009

**ADDITIONAL BIBLIOGRAPHY**

- Amy J. Ko Design methods, Creative Commons License (<https://faculty.washington.edu/ajko/books/design-methods/>), 2018

- Bill Buxton Sketching User Experiences: Getting the Design Right and the Right Design, Morgan Kaufmann, 2007
- Bill Moggridge Designing Interactions, MIT Press, 2007
- Don Norman The Design of Everyday Things, Basic Books, 2013
- Eric von Hippel Democratizing Innovation, MIT Press, 2005
- Lars-Erik Janlert and Erik Stolterman Things that keep us busy, MIT Press, 2017