

Academic Year/course: 2021/22

30258 - "User-Centred Design; Design for Multimedia"

Syllabus Information

Academic Year: 2021/22

Subject: 30258 - "User-Centred Design; Design for Multimedia"

Faculty / School: 110 - Escuela de Ingeniería y Arquitectura
326 - Escuela Universitaria Politécnica de Teruel

Degree: 439 - Bachelor's Degree in Informatics Engineering
443 - Bachelor's Degree in Informatics Engineering

ECTS: 6.0

Year: 4

Semester: Second semester

Subject Type:

Module:

1. General information

1.1. Aims of the course

After having taken a first basic subject in Human-Computer Interaction (30217) in which the basis for the design and development of interfaces for small applications are taught, in this subject the student will learn the technologies related to user-centered design (UCD) and user experience (UX), including those that require accessible interfaces. The student will also be able to integrate different types of information and multimedia elements in the interfaces he/she designs.

The subject has an applied character. The student will learn the necessary concepts already mentioned and, above all, will learn to apply them in the design of problems in different areas and platforms.

These approaches and objectives are aligned with some of the Sustainable Development Goals, SDG, of the 2030 Agenda (<https://www.un.org/sustainabledevelopment/>) and certain specific goals, in such a way that the acquisition of the learning results of this subject provides training and competence to the student to contribute to a certain extent to its achievement:

- Goal 5: Gender Equality.
 - Target 5.b: Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women.
- Goal 10: Reduced Inequalities.
 - Target 10.2: By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status.

1.2. Context and importance of this course in the degree

In the School of Engineering and Architecture (EINA), the subject is compulsory semester within the Specific Technology: "Information Technologies". It is offered as an elective for students of the rest of Specific Technologies of the Computer Engineering Degree: Computing, Information Systems, Computer Engineering and Software Engineering.

In the E.U. Polytechnic of Teruel, the subject is one of those of the Specific Technology "Information Technologies", and will also be taken as an elective by the students of the Specific Technology of Information Systems.

2. Learning goals

3. Assessment (1st and 2nd call)

4. Methodology, learning tasks, syllabus and resources

4.1. Methodological overview

The methodology followed in this course is oriented towards the achievement of the learning objectives. A wide range of teaching and learning tasks are implemented such as:

- Continuous study and work, starting from the first day.
- The learning of concepts and methodologies for the analysis and design of user interfaces during the lectures, in which the students' participation will be fostered.
- In the practical classes, the student will review use cases and will learn the technologies needed to develop user interfaces in different platforms.
- Group work will be carried out by developing a project proposed by the teachers.

4.2. Learning tasks

The course includes the following learning tasks:

- In lectures, the program of the subject will be developed.
- The practical sessions will be carried out in a computer laboratory. In each session, the student will have to put into practice the activities previously programmed.
- Students will complete assignments, problems and exercises related to concepts seen in practical sessions and lectures.

4.3. Syllabus

The course will address the following topics:

- Definition and basis of User-Centered Design (UCD).
- Elements for the development of user interfaces for websites and multimedia applications. Compression, quality, and formats for multimedia and web.
- Management of projects of web systems and multimedia development following the principles of UCD.
- Techniques of analysis for UCD.
- Principles of design for the development of user-centered solutions.
- User-centered evaluation methods.
- Usability and accessibility: Guidelines and rules.
- Advanced interfaces: ubiquitous, tangible, natural, sensorial and multimodal interfaces.
- Applications.

4.4. Course planning and calendar

The planning of classroom teaching and the presentation of works will be adjusted to the general schedule established by the University of Zaragoza and the corresponding centers.

4.5. Bibliography and recommended resources

- Zaragoza:

<http://psfunizar10.unizar.es/br13/egAsignaturas.php?codigo=30258&Identificador=14722>

- Teruel:

<http://psfunizar10.unizar.es/br13/egAsignaturas.php?codigo=30258&Identificador=13630>