30217 - Person-Computer Interaction

Syllabus Information

Academic Year: 2019/20

Subject: 30217 - Person-Computer Interaction

Faculty / School: 110 - Escuela de Ingeniería y Arquitectura

326 - Escuela Universitaria Politécnica de Teruel

Degree: 330 - Complementos de formación Máster/Doctorado

   443 - Bachelor's Degree in Informatics Engineering

   439 - Bachelor's Degree in Informatics Engineering

ECTS: 6.0

Year: XX

Semester: 330 - Second semester

439 - Second semester

439 - Second semester

443 - Second semester

443 - Second semester

Subject Type: 443 - Compulsory

330 - ENG/Complementos de Formación

439 - Compulsory

Module: ---

1.General information

1.1.Aims of the course

After having followed a first course in which we have learned to design small programs, in this course the student will learn the technology and methodologies to be applied to design interfaces.

The subject has an applied character. The student will learn necessary concepts of specification, design and evaluation of interfaces and, above all, learn to apply them in the design of problems in different fields and platforms.

1.2.Context and importance of this course in the degree

1.3.Recommendations to take this course

The course covers one of the five pillars in the study of information technologies. The subject is mandatory within the module of common training and common subject of Software Engineering and information systems.

2.Learning goals

2.1.Competences

Design and evaluation of human computer interfaces that will ensure accessibility and usability to the systems, services and applications (CGC17)

Design, development, selection and evaluation of applications and computer systems, ensuring their reliability , safety and quality, in accordance with ethical principles and laws and regulations in force (CGC1)

Knowledge and application of tools for storage, processing and access to information systems, including those based on web (CE13)

Knowledge and applications of principles, methodologies and life cycles of software engineering (CGC16)

Knowledge about the rules and the regulations of Informatics at national, European and international (within the scope of the subject) levels (CGC18)

2.2.Learning goals

The student, to overcome this subject, shall demonstrate the following results:

Meet the human factors associated with the Interfaces of interactive systems.

Discover the relationship between the computer and the interaction and peripherals for the interaction.

Know models, paradigms and techniques for prototyping of interfaces, techniques of design and evaluation in HCI: heuristics, standards and guides.

Know techniques of interface implementation.

2.3.Importance of learning goals

The course covers one of the five pillars in the study of Information Technologies.

The subject is mandatory within the module of common training and common subject of Software Engineering and information systems.

3.Assessment (1st and 2nd call)

3.1.Assessment tasks (description of tasks, marking system and assessment criteria)

The student must demonstrate that it has reached the results of learning provided by the following evaluation activities.

In the EINA (Zaragoza):

The subject does not have continuous assessment.

The global assessment of the subject has two parts: theoretical examination and practical knowledge examination:

- Knowledge in theoretical examination test will focus on general knowledge of the subject exposed in theoretical classes and, in its case on external sources (chapters of books, web files,...) that have been proposed in classes and publicized. Weight to the global note: 60%. Realization in the date, time and place determined by the global evaluation of the EINA calendar.
- Proficiency in practical examination test will be held on the same date and time and location than the theoretical exam It will consist of the delivery of all materials produced as a result of practical classes for the course. Teachers can ask questions or appropriate tests that assure the originality and quality of the delivered materials. The delivery schedule shall be fixed according to the timetable set by the EINA. A timetable for gradual and voluntary delivery of these materials during the course will be scheduled in advance. These tests are part of the overall evaluation of the subject system and contribute to the gradual overcoming of it. Weight to the global note: 40%. Typical activities proposed in practical classes: resolution of problems or cases, observation of good practices, practical project, etc.

To pass the subject a mark of 5/10 should be obtained in both parts. In case of not getting the mark required in both parts, qualification in the subject will be the minimum between the weighted average of both tests and 4.0. In the event that a student does not exceed the evaluation of the subject in first call and it has passed one of the two tests, the qualification obtained in this will be retained exclusively for the second call.

In the Polytechnic University School of the Campus of Teruel:

The subject does not have continuous assessment.

The global assessment of the subject has two parts: theoretical examination and practical examination knowledge knowledge.

- Knowledge in theoretical examination test will focus on general knowledge of the subject exposed in theoretical classes and, where appropriate, on external sources (chapters of books, web files,...) that have been proposed in classes and publicized so which are accessible by any student weight to the global note: 50%.Realization in the date, time and place determined by the calendar of global evaluation of the EUPT.
- Proficiency in practical examination test will be held on the same date and time and location, which will be announced in the corresponding official announcement and will consist of the delivery of all materials produced as a result of practical classes for the course. Teachers can ask questions or appropriate tests that assure the originality and quality of the delivered materials. The delivery schedule shall be fixed according to the timetable set by the EUPT. A timetable for gradual and voluntary delivery of these materials during the course will be scheduled in advance. These tests are part of the overall evaluation of the subject system and contribute to the gradual overcoming of it. Weight to the global note: 50%.Typical activities proposed in practical classes: resolution of problems or cases observation of good practice practical project, etc.
- To pass each a 5 has to be obtained in ecah of the parts.

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.

- The application of such knowledge in the classes of problem-solving. In these classes, students will have an active role in the analysis of use cases, good practices and practical examples.
- In the laboratory practical classes, the student will review use cases and will learn the technologies required to develop user interfaces in different platforms.
- Group work will be carried out by developing a project of an application user interface proposed by the teachers. This work will be considered for the evaluation mark in the terms expressed in that section.

4.2.Learning tasks

The program offered to the student in order to help him/her to achieve the expected results include the following activities:
- In master classes, the program of the subject will be developed.
- In problem solving classes, cases of good practices will be analyzed and problems about the application of the concepts and techniques will be solved.
- 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.

4.3.Syllabus

The program of the subject is the following:

? Introduction to human-computer interaction: usability, accessibility, user-centered design.

? Human factors and its relationship with the interactive systems interfaces.

? Process model. Design of the interface in Software engineering.

? Analysis of requirements. Ethnographic analysis. Study of the audience. Study of competitors. Application goals. Usability goals. Interaction devices.

? Designing interfaces. Prototyping techniques. Tasks analysis. Metaphors. Rules and basic design principles. Mobile design. Web design. Style guides.

? Evaluation techniques: evaluation with experts and users. Norms and standards.

? Accessibility. Web and mobile accessibility. Evaluation of accessibility.

? Interaction paradigms. Interaction styles. Design considerations.

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