Universidad Zaragoza

25886 - User Interaction

Información del Plan Docente

Academic Year	2018/19
Subject	25886 - User Interaction
Faculty / School	110 - Escuela de Ingeniería y Arquitectura
Degree	558 - Bachelor's Degree in Industrial Design and Product Development Engineering
ECTS	6.0
Year	3
Semester	Second semester
Subject Type	Compulsory
Module	---

1.General information

1.1.Aims of the course

The course and its expected results respond to the following approaches and objectives:

The planting and the objectives of the course are, on the one hand, to become aware of the importance of the design of the interface in any design project, and on the other to live an experience of implementation of this importance with the realization of a team work .

1.2.Context and importance of this course in the degree

The course is essential for all future graduates who want to dedicate themselves to the design and development of products.

It is an instrumental course that will facilitate the development of all those projects of generalist courses, such as design methodology or ergonomics.

1.3.Recommendations to take this course

This course is indicated for all those students who are interested in the design of products, both physical and digital.

Every product has an interface. For the user the product does not exist, what exists is the interface, so knowing the techniques and tools for the optimization of its design are very useful for any designer.

2.Learning goals

2.1.Competences

Upon passing the course, the student will be more competent to...

25886 - User Interaction

GENERAL AND BASIC COMPETENCES

CG03 - Ability to conceive and develop design projects, in aspects related to the nature of products and services, its relationship with the market, the environments of use and the user, and attending to its manufacture, selection of materials and processes more appropriate in each case considering relevant facets such as quality and product improvement.

CG04 - Ability to organize time effectively and coordinate activities, quickly acquire new knowledge and to yield under pressure.

CG05 - Ability to obtain, manage, analyze and synthesize information from various sources for development of design projects and product development. Use this documentation to obtain conclusions oriented to solve problems and make decisions with initiative, creativity and critical reasoning generating new product concepts, new ideas and solutions.

CG06 - Ability to generate the necessary documentation for the adequate transmission of ideas through representations graphics, reports and technical documents, models and prototypes, verbal or other presentations in Spanish and other languages.

CG07 - Ability to use and master techniques, skills, computer tools, information technologies and communication and tools of the Design Engineering necessary for the practice of the same.

CG08 - Ability to learn continuously and develop autonomous learning strategies, and work in groups multidisciplinary, with motivation and responsibility for work to achieve goals.

CG01 - Acquire basic knowledge of the professional activity of industrial design, to combine knowledge generalists and specialized companies with which to generate innovative and competitive proposals.

CB1 - That students have demonstrated to possess and understand knowledge in an area of ​​study that starts from the base of the general secondary education, and is usually found at a level that, while supported by advanced textbooks, also includes some aspects that imply knowledge coming from the vanguard of its field of study.

CB2 - That students know how to apply their knowledge to their work or vocation in a professional manner and possess the competencies that are usually demonstrated through the elaboration and defense of arguments and the resolution of problems within your area of ​​study.

CB3 - That students have the ability to gather and interpret relevant data (usually within their area of ​​study) to make judgments that include a reflection on relevant issues of a social, scientific or ethical nature.

CB4 - That students can transmit information, ideas, problems and solutions to a specialized and non-specialized public specialized.

CB5 - That the students have developed those learning skills necessary to undertake further studies with a high degree of autonomy.

SPECIFIC COMPETENCES

25886 - User Interaction

CE24 - Ability to take into account all ergonomic, interaction and usability aspects in the design or evaluation of a product task or space.

2.2.Learning goals

The student, in order to pass this course, must demonstrate the following results ...

1. Understand the different characteristics of users.
2. Analyze in depth the environment of use of a product.
3. Design an interface taking into account the above.
4. Perform a user test to verify the adequacy of the design.

2.3.Importance of learning goals

The results obtained with the completion of this course will provide a very necessary complement for future graduates.

Being able to correctly design an interface means that users will have positive experiences with its use. Currently, concepts such as usability are decisive factors when buying a product.

Designing an interface correctly is not a matter of luck, but a process perfectly planned for its achievement. This process ends when we can verify that the design has met the usability objectives previously defined, and this can only be done by conducting tests with real users. But conducting tests with users means having interactive prototypes with which users can interact. All these results will be achieved with the completion of the course.

3.Assessment (1st and 2nd call)

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

The student must demonstrate that he/she has achieved the anticipated learning outcomes through the following assessment activities:

Option 1

This option is aimed at those students who can regularly follow the activities of the course and can participate in the realization of the practical work that will be entrusted to them. In this case, the evaluation will consist of the following tests.

* **Individual test.** It is intended to evaluate if the student has understood the basic concepts of the course, master the terminology and is able to apply these concepts to the understanding of small exercises or problems. The test will be 25% of the student's grade.

* **Practical work.** Throughout the course two practical works will be carried out. The quality of the documentation presented by the work team as well as the defense thereof will be valued.

1. Project documentation. The reports submitted by the students will be evaluated, in which the work developed during the course will be documented (analysis and design or redesign of a product interface). This part will be 70% of the final grade of the student.
2. Defense of group work. The weight of this test will be 5% of the student's final grade.

For the evaluation of the practical works the professors will be able to propose systems of evaluation by peers, in which the own students will evaluate the performance of their teammates during the accomplishment of the works and / or practical cases and that will serve to determine the qualification of each student in the practical part.

In order to pass the course it is necessary that the student has obtained a grade equal to or higher than 5.0 both in the individual test and in group work (documentation and defense). In case of not meeting this condition, the final grade will be that of suspense 4.0, unless the result of the average between the individual test and the evaluation of the practical work is less than 4.0, in which case the final grade will correspond to that value .

Option 2.

In those cases in which the student can not participate in the practical group work, there will be the possibility of taking a global test in the exam band that will consist of a theoretical exam and the resolution of one or more practical cases. The theoretical exam will represent 30% of the final grade and the remaining 70% will correspond to the practical cases.

To overcome this global test it is necessary that the student has obtained a grade equal to or higher than 5.0 both in the exam and in the resolution of cases. In case of not meeting this condition, the final grade will be that of suspense 4.0, unless the result of the average between the theoretical exam and the evaluation of the practical work is less than 4.0, in which case the final grade will correspond to that value.

Note: According the regulations of the University of Zaragoza in this regard, in the courses that have continuous or gradual assessment systems, a global assessment test will also be scheduled for those students who decide to opt for this second system.

4.Methodology, learning tasks, syllabus and resources

4.1.Methodological overview

The learning process that has been designed for this course is based on the following:

The general approach of the course is to learn by doing, using the methodology of the PBL (Project Based Learning) and experiential learning. The whole course will revolve around the development of a team project, in which the students will have to design an interface for a product, make an interactive prototype of it and carry out its evaluation with real users.

4.2.Learning tasks

The program offered to the student to help him/her achieve the expected results includes the following activities ...

Master classes (30h face-to-face)

Weekly sessions of two hours.

Resolution of problems and cases (15h face-to-face)

Students will complete a series of problem and case study sessions throughout the course.

Personal tutor-student tutelage. (15h face-to-face)

The work teams will carry out a one-hour session of tutoring and follow-up of the practical work each week. The sessions will be focused so that the students solve doubts and can develop the work entrusted to them.

Realization of practical application or research works (60h non-contact).

The realization of works and / or practical cases in equipment is considered the fundamental teaching activity where the student will acquire most of the competences and the learning results of this subject.

The teams will be formed by a variable number of students between 3 and 8 and will be periodically monitored by a teacher-tutor who will act as a facilitator of learning.

Effective personal study (approximately 25 hours non-contact)

Referred to the estimated average time necessary for the theory exam preparation

Evaluation test (5h face-to-face)

The expected duration for the theoretical evaluation test is 1.5 hours. Additionally, the students will defend their work and will attend the work defenses of the rest of their classmates, to whom they will dedicate approximately 3.5 hours.

In the event that the global test is chosen, in which case, the total duration of the test (most practical theory) will be 5h.

4.3.Syllabus

The contents of the course will focus on the following topics:

1. The interaction process.
2. The context of use.
3. Principles of interface design.
4. Mechanisms of user perception.
5. User tests.

4.4.Course planning and calendar

At the beginning of the course and taking into account the calendar and times determined by the center, students will receive detailed planning of all activities.

The most important activities to take into account in this subject are:

1. Group formation

2. Selection of works

3. Oral defense of work

4. Theoretical exam - Band of exams

Please go to the website of the school https://eina.unizar.es/ to obtain information about:

- Academic calendar (period of classes and non-class periods, festivities, exam period).
- Schedules and classrooms.
- Dates in which the exams of the official calls of the subject will take place.
- Schedules of teacher tutoring.

4.5.Bibliography and recommended resources

[BB: Basic bibliography / AB: Additional bibliography]

- [BB] Cooper, A. (2004). The inmates are running the asylum: Why high-tech products drive us crazy and how to restore the sanity. Indianapolis: Sams.

- [AB] Garrett, J. J. (2011). The elements of user experience: User-centered design for the web. New Riders.

- [AB] Johnson, J. (2012). Conceptual models: Core to good design. Morgan & Claypool.

- [BB] Krug, S. (2000). Don't make me think! A common sense approach to Web usability. Pearson Education India.

- [AB] Linderman, M. (2004). Defensive design for the web: How to improve error messages, help, forms, and other crisis points. New Riders.

- [AB] Nielsen, J. (1999). Designing web usability: The practice of simplicity. New Riders Publishing.

- [BB] Norman, D. A. (2005). El diseño emocional: por qué nos gustan (o no) los objetos cotidianos (Vol. 58). Grupo Planeta (GBS).

- [BB] Norman, D. A. (1998). La psicología de los objetos cotidianos (Vol. 6). Editorial Nerea.

- [BB] Saffer, D. (2010). Designing for interaction: creating innovative applications and devices. New Riders.

- [AB] Scott, B. (2009). Designing web interfaces. O'Reilly.

- [AB] Tidwell, J. (2011). Designing interfaces. O'Reilly.

25886 - User Interaction

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- [AB] Wroblewski, L. (2011). Mobile first. A book apart.