



Universitat de Lleida

DEGREE CURRICULUM **INTERACTION AND USABILITY**

Coordination: ALBERTOS MARCO, FÉLIX

Academic year 2020-21

Subject's general information

| | | | | |
|---|---|--------|-----------|------------------|
| Subject name | INTERACTION AND USABILITY | | | |
| Code | 102371 | | | |
| Semester | 2nd Q(SEMESTER) CONTINUED EVALUATION | | | |
| Typology | Degree | Course | Character | Modality |
| | Bachelor's degree in Digital Interaction and Computing Techniques | 1 | COMMON | Attendance-based |
| Course number of credits (ECTS) | 6 | | | |
| Type of activity, credits, and groups | Activity type | PRALAB | TEORIA | |
| | Number of credits | 3 | 3 | |
| | Number of groups | 1 | 1 | |
| Coordination | ALBERTOS MARCO, FÉLIX | | | |
| Department | COMPUTER SCIENCE AND INDUSTRIAL ENGINEERING | | | |
| Teaching load distribution between lectures and independent student work | 40% lectures / 60% independent student work | | | |
| Important information on data processing | Consult this link for more information. | | | |
| Language | Castellano | | | |

| Teaching staff | E-mail addresses | Credits taught by teacher | Office and hour of attention |
|-----------------------|------------------------|---------------------------|------------------------------|
| ALBERTOS MARCO, FÉLIX | felix.albertos@udl.cat | 6 | |

Subject's extra information

Subject to be held during the second semester in the first course of the Degree in Digital Interaction and Computing Techniques.

It belongs to the Computer Science area, inside the "Basic Training" module.

Learning objectives

- Know the basic concepts related to the Human-Computer Interaction.
- Understand the importance of creating usable interfaces.
- Learn methodologies for the development of user-centred interactive applications.
- Establish the relationship with Software Engineering.
- Ability to identify and analyze the aspects related to the user experience in real examples.
- Be able to design the interfaces of an interactive system based on users' needs and the context of use.
- Know the main aspects of accessibility in ICT.

Significant competences

Basic competences:

B01. That students have demonstrated to possess and understand knowledge in an area of study that starts from the base of general secondary education, and is usually found at a level that, although supported by advanced textbooks, also includes some aspects that imply knowledge coming from the vanguard of his/her field of study.

Transversal competences:

CT3. Acquire training in the use of new technologies and information and communication technologies.

CT5. Acquire essential notions of scientific thought.

General competences:

CG2. Design, develop, evaluate and guarantee the accessibility, ergonomics, usability and security of computer systems.

CG3. Use adequate hardware and software platforms to develop and execute interactive digital applications.

CG5. Know the basic subject areas and technologies needed to learn and develop new methods and technologies,

and those that help to adapt to new situations.

CG7. Solve problems through initiative, determination, independence and creativity.

CG8. Capacity for abstraction and critical, logical and mathematical reasoning.

Specific competences:

CE16. Capacity to design and evaluate person-computer interfaces that guarantee the usability of systems, services and computer applications.

CE17. Capacity to apply knowledge on design to propose and defend a design concept for an interactive system and use proper creative technologies to develop each project.

CE24. Capacity to understand the human factors involved in any interactive process between humans and technology, as well as being able to adequately apply them in the design of interactive products and services, and their interfaces.

Subject contents

- Introduction to the discipline of Human-Computer Interaction.
- Usability, Accessibility and User Experience.
- User-Centred Design Methodologies.
- Usability Engineering.
- Prototyping of user interfaces.
- Evaluation of the accessibility of user interfaces.

Methodology

The course is developed as follows:

- A theory group (aula) and one group for practices (praula) are established.
- In the theory group the contents are presented. Each session deals with a specific subject, with a maximum of 2 sessions.
- During the course assignments will be proposed.
- Two weeks are established for a professional and an international talks.
- In the praula group, a project is proposed to work with the contents presented in the aula group.

Development plan

| Week | Aula | Praula |
|------|-------------|--------|
| 1 | A0+A1 | P0+P1 |
| 2 | A2 | P1 |
| 3 | A3 | P1+P2 |
| 4 | A4 | P2 |
| 5 | A5 | P3 |
| 6 | Web Seminar | P3 |

| | | |
|----|---------------|----|
| 7 | A6-1 | P3 |
| 8 | A6-2 | P3 |
| 9 | Partial eval. | |
| 10 | A7-1 | P3 |
| 11 | A7-2 | P4 |
| 12 | CI | P4 |
| 13 | A8-1 | P5 |
| 14 | A8-2 | P5 |
| 15 | CP | P6 |
| 16 | Partial eval. | |

Aula

| | |
|-----|--|
| A0 | Introduction |
| A1 | Basics: Usability, Accessibility and User Experience |
| A2 | Prototyping |
| A3 | Interaction styles and paradigms |
| A4 | User interface design |
| A5 | User centred design |
| A6 | Usability |
| A7 | Accessibility |
| A8 | The human factor |
| CI* | International talk |
| CP* | Professional talk |

Praula

| | |
|----|--------------------------------------|
| P0 | Project and groups |
| P1 | Requirements analysis / Ethnographic |
| P2 | Paper prototyping |
| P3 | Wireframe |
| P4 | Usability evaluation |
| P5 | Accessibility evaluation |
| P6 | Presentations |

* Dates subject to changes

Evaluation

| | | | | Mandatory | Mini. Cal. | Recoverable |
|----------|-----|-----|----|-----------|------------|-------------|
| Par.ev.1 | 10% | | | SI | 5 | SI (75%) |
| Par.ev.2 | 10% | | | SI | 5 | SI (75%) |
| | | 20% | P1 | SI | 5 | SI (75%) |
| Group | 60% | 20% | P2 | SI | 5 | SI (75%) |

| | | | | | | |
|------------|-----|-----|----|----|---|----------|
| | | 40% | P3 | SI | 5 | SI (75%) |
| | | 20% | P6 | SI | 5 | SI (75%) |
| Individual | 20% | 50% | P4 | SI | 4 | SI (75%) |
| | | 50% | P5 | SI | 4 | SI (75%) |

EvaluationMark= Par.ev.1*0.10 + Par.ev.2*0.10 + GroupCal*0.5 + IndividualCal*0.3

Final mark (if minimums are met) = EvaluationMark

Final mark (if minimums are not met) = EvaluationMark (if EvaluationMark is less than 5) or 4.5 (if EvaluationMark is greater than or equal to 5).

Bibliography

- Alan Dix, Janet Finlay, Gregory D. Abowd, Russell Beale. Human-Computer Interaction, Prentice Hall, ISBN-13: 978-0-13-046109-4 (2004)
- Nielsen Norman group. <https://www.nngroup.com/>
- The World Wide Web. <http://www.w3.org/>