



Universitat de Lleida

# **DEGREE CURRICULUM EVALUATION TECHNIQUES AND USABILITY TESTING**

Academic year 2013-14

## Subject's general information

<b>Subject name</b>	Evaluation Techniques and Usability Testing
<b>Code</b>	103055
<b>Semester</b>	1r Quadrimestre 2N Cicle Informàtica i Màster
<b>Typology</b>	Obligatòria
<b>ECTS credits</b>	6
<b>Theoretical credits</b>	0
<b>Practical credits</b>	0
<b>Department</b>	Informàtica i Enginyeria Industrial
<b>Important information on data processing</b>	Consult <a href="#">this link</a> for more information.
<b>Language</b>	Anglès 60% Català 40%

## Subject's extra information

This subject requires some concepts from the Human-Computer Interaction (HCI) discipline. In particular, some concepts such as usability, interface, User Centred Design methodology (UCD), etc. are considered as previous concepts. For those students who have not studied any related subject, some introductory material will be provided.

Subject located in the first term of the first course of the Master. It will be taught in a semi-presential format. Semi-presencial format.

## Learning objectives

see competences

## Competences

### University of Lleida strategic competences

- Master a foreign language.

#### Goals

- Get familiar with the user manuals available for the software installed in the usability lab.
- Knowing and understanding all the complementary material facilitated

### Degree-specific competences

- Capacity to conceptualize, design, develop and evaluate human-machine interaction of computer products, systems, applications and services

#### Goals

- Extracting the main conclusions for the evaluation activities carried out, in the line of improving the usability of the interactive system
- Understanding the importance of the evaluation of interactive systems
- Knowing and distinguishing the evaluation techniques for interactive systems most used in the UCD context
- Knowing when to use the different techniques of evaluation along the life cycle and which of them are the most appropriate in each case
- Being able of developing the role of evaluator of a interactive system
- Knowing the procedure to be carried out in a usability test
- Knowing the current tools for the collection and data analysis

### Degree-transversal competences

- Capacity to transmit information, ideas, problems and solutions to both specialized and non-specialized audience

#### Goals

- Defending upon a public the reports previously elaborated
- Developing sample reports resulting from the evaluation techniques application, in a working group manner

## Subject contents

### Theme I

- Introduction to the Evaluation of the Usability

- What is the evaluation in the HCI scope?
- Objectives of the evaluation and aspects to consider
- Taxonomy in evaluation methods
- The most extended classification according to typology
- Integration of the evaluation techniques to the development life cycle
- Presentation of the CIF standard
- Conclusions

### Theme II

- Usability Testing

- Introduction
- Usability Test Plan design and development
- Roles in the execution of a usability test
- Putting in practice
- Preparing questionnaires and other documents
- Metrics and data collecting
- Basic notions in statistic analysis
- Final report development and results presentation
- Conclusions

### Theme III (Seminar)

- Equipment of a concrete usability laboratory

- Eyetracking
  - Introduction to the eyetracking technique
  - Hardware and Software in the eyetracker equipment
- Morae: support software for usability testing

### Theme IV

- Study of the Techniques of Inspection and Inquiry

- The Focus Group technique
- The Cognitive Walkthrough technique
- The Heuristic Evaluation technique

### Theme V

- Putting in practice the evaluation plan

- Comparative between methods
- Other selection criteria for the evaluation methods
- The usability cost
- Conclusions

## Methodology

without translate-

**PARTE TEORICA**

- Presentar una visión de conjunto de la esta parte de la disciplina IPO
- Presentación de conceptos y de las técnicas de evaluación más utilizadas con incidencia especial en los aspectos diferenciadores
- Presentación de formularios tipo a utilizar, siguiendo el estándar más utilizado

**PARTE PRACTICA**

- Basadas en determinados casos prácticos, de los que se dispone de material (prototipos, documentos de partida, vídeos, etc.)
- Aplicación práctica en fases de planificación (casa), ejecución (clase/laboratorio), análisis posterior (laboratorio), y defensa ante la clase
- Oportunidad para practicar el papel de evaluador y también el trabajo en grupo

**Sesiones Presenciales (4,5 crèdits)**

- **Clases de Teoría**
  - Clases soportadas con transparencias
  - Otro tipo de soporte: Material audiovisual, informes finales ya elaborados asociados con casos prácticos
- **Sesiones de aplicación práctica de las técnicas**
  - Puesta en práctica de conocimientos a través de la aplicación de dos de las técnicas estudiadas. Parte importante de la nota
  - Defensa oral de los informes de resultados o documentos elaborados
  - A desarrollar en grupo ante la clase
- **Seminario de introducción al equipamiento de UsabiliLab**
  - Presentación de las herramientas y demostración
  - Sesión individualizada de puesta en práctica del Plan de Test

**Sesiones NO Presenciales (1,5 crèdits)**

- **Teoría**
  - Destinada a profundizar acerca de las técnicas presentadas a través del material proporcionado
  - Elaboración trabajo sobre temática concreta. A escoger entre:
    - Aportaciones de la última versión del estándar CIF
    - Descripción del Código ético en la práctica del test de usabilidad
- **Práctica (uso del Laboratorio)**
  - El alumno experimenta por cuenta propia con el hardware y el software presentado, disponible en el UsabiliLab
    - Morae y Tobii Studio Software
  - Consulta de los Manuales y Tutoriales facilitados

**Development plan**

	Dies festius
	Classes Teoria
	Classes Seminari
	Pràctica de Laboratori

	Pràctica de Aula
	Dates Iliurament (aprox.)

## Evaluation

### Theoretical 10%

Development Theoretical Work ( std. CIF / Ethical Code )

### Practical part 90 %

Practical application of the studied techniques

To be developed in groups of 3 to 5 people

It consists of:

**Classroom activities: 30 %**

**Planning and reporting application techniques : 60 %**

So, no written exam !

### DETAILS

#### **Classroom activities: 30 %**

##### Usability Testing

Test Plan defense: 5 %

Implementation: 10%

Oral presentation of results : 5 %

##### EH

Implementation of the Heuristic Evaluation Technique : 10%

#### **Planning and reporting application techniques : 60 %**

##### Usability Testing

Test Plan : 20 %

Performance Report : 15 %

##### EH

EH planning Document : 15 %

EH Conclusive report : 10%

### Requirements

- Minimum of 5 on the overall score of each technique
- What if a technique is not exceeded ?
  - recovery exam
    - 19th Weeks
    - Content to evaluate and weight: Part corresponding
      - Topic II , if suspense TU ( 35 % )
      - Theme III , if I hold EH (25 % )
- **Pass = Final Note > = 5**

## Bibliography

Recommended bibliography

### EVALUATION TECHNIQUES

- Alan Dix, Janet Finlay, Gregory D. Abowd, R. Beale

Human-Computer Interaction

Pearson Prentice Hall – 3<sup>a</sup> edición (2004)

Capítulo 9

- Tom Brinck, Scott D. Wood

Usability for the Web. Designing web sites that work

Morgan Kaufmann (2001)

Capítulo 12

- Toni Granollers, Jesús Lorés, José J. Cañas

Diseño de sistemas interactivos centrados en el usuario

Editorial UOC (2005)

Capítulo 5

### USABILITY TESTING

- Barnum C.M.

Usability Testing and Research

Longman (2002)

- Rubin J.

Handbook of Usability Testing. How to plan, design and conduct effective tests

John Wiley & Sons, Inc. (1994)

- Mitchell P.P.

A Step-by-Step guide to Usability Testing

iUniverse, Inc. (2007)

- J.S. Dumas, J.C. Redish

A practical guide to usability testing

Revised edition. Intellect (1999)