Universitat de Lleida

DEGREE CURRICULUM

DESIGN AND CREATIVITY IN INTERACTIVE ENVIRONMENTS

Coordination: SAYAGO BARRANTES, SERGIO

Academic year 2022-23

Subject's general information

Subject name	DESIGN AND CREATIVITY IN INTERACTIVE ENVIRONMENTS
Code	102367
Semester	1st Q(SEMESTER) CONTINUED EVALUATION
Typology	

Degree	Course	Character	Modality
Bachelor's degree in Digital Interaction and Computing Techniques	1	COMMON/CORE	Attendance-based

Course number of credits (ECTS)	6
Type of activity, credits, and groups	Query has returned no results
Coordination	SAYAGO BARRANTES, SERGIO
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	Spanish and Catalan

Teaching staff	E-mail addresses	Credits taught by teacher	Office and hour of attention
SAYAGO BARRANTES, SERGIO	sergio.sayago@udl.cat	0	Make an appointment via e-mail (sergio.sayago@udl.cat) Office 12

Subject's extra information

Subject to be held during the first 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

- Understand that in any system, a high percentage of effects are caused by a low percentage of variables.
- Know that exists a tendency to perceive a set of individual elements as a single, recognizable pattern, rather than multiple, individual elements.
- Know the main design principles.
- Learn how to seek consistency among attitudes, thoughts, and beliefs.
- Understand that the utility of a system is improved when similar parts are expressed in similar ways.
- Explain the phenomenon of memory in which information that is analyzed deeply is better recalled than information that is analyzed superficially.
- Know that beauty in design results from purity of function.
- See that exists a tendency to interpret ambiguous images as simple and complete, versus complex and incomplete.

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.

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

Block I - Interactive Systems Design: Fundamentals

T1 Interaction Design: Basic Concepts

1.1 Introduction

1.2 Interaction Paradigms

1.3 The Design Process

1.4 Fundamental Principles

1.5 Essential Aspects

T2. Human behavior

2.1 Processing of the Actions

2.2 Human Thought

T3 Interaction Platforms

3.1 Desktop Applications Design

3.2 Mobile Applications Design

3.3 Web Applications Design

Block II - Principles of Design

PD1. Influence perceived design

PD2. Help learn from design

PD3. Improve the usability of a design

PD4. Make design more attractive

PD5. Improve decision making in design

Methodology

The subject is offered as exam only.

Development plan

The subject is offered as exam only

Evaluation

- **Final Grade** = (0.5 * Theory) + (0.5 * Labs) >= 5
- **Theory** = ((0.5* First exam) + (0.5 * Second exam)) >= 5
    - First exam (50%) - Block I
    - Second exam (50%) - Block II
- **Labs** = 50%
    - A project will be conducted and defined alongside the students

Re-takes

- If Theory < 5 = max. 7.5
    - Exam (Block I & II)
- If Labs < 5 = max. 7.5
    - Re-submission of the project by addressing the comments made by the lecturers.

Bibliography

- Alan Dix, Janet Finlay, Gregory D. Abowd, Russell Beale. Human-Computer Interaction, Prentice Hall, ISBN-13: 978-0-13-046109-4 (2004)

- Don Normal. The Design of Everyday Things, Basic Books, ISBN 978-0-465-00394-5 (2013)

- Alan Cooper, Robert Reimann, David Cronin, Christopher Noessel, About Face: The Essentials of Interaction Design, Wiley, ISBN: 978-1-118-76657-6 (2014)

- David Benyon. Designing Interactive Systems, Pearson, ISBN: 978-0-321-43533-0 (2010)

- William Lidwell (Author), Kritina Holden (Author), Jill Butler (Author). Universal Principles of Design, Rockport, ISBN-13: 978-1592535873 (2010)