



# Course guide

## 804235 - IDI - Interfaces Design and Interaction

**Last modified:** 14/07/2022

**Unit in charge:** Image Processing and Multimedia Technology Centre  
**Teaching unit:** 804 - CITM - Image Processing and Multimedia Technology Centre.

**Degree:** BACHELOR'S DEGREE IN VIDEO GAME DESIGN AND DEVELOPMENT (Syllabus 2014). (Compulsory subject).

**Academic year:** 2022    **ECTS Credits:** 6.0    **Languages:** Catalan, English

### LECTURER

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**Coordinating lecturer:** Adrián Dorado

**Others:** Adrián Dorado

### DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

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**Specific:**

CEVJ 3. Apply graphic interface design methodologies in an interactive application based on usability and accessibility criteria, taking the various platforms to which it can be directed into account.

**Transversal:**

04 COE. EFFICIENT ORAL AND WRITTEN COMMUNICATION. Communicating verbally and in writing about learning outcomes, thought-building and decision-making. Taking part in debates about issues related to the own field of specialization.

CT3. TEAMWORK: Being able to work in an interdisciplinary team, whether as a member or as a leader, with the aim of contributing to projects pragmatically and responsibly and making commitments in view of the resources that are available.

CT4. EFFECTIVE USE OF INFORMATION RESOURCES: Managing the acquisition, structuring, analysis and display of data and information in the chosen area of specialisation and critically assessing the results obtained.

07 AAT. SELF-DIRECTED LEARNING. Detecting gaps in one's knowledge and overcoming them through critical self-appraisal. Choosing the best path for broadening one's knowledge.

### TEACHING METHODOLOGY

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The theoretical contents are introduced by the teacher in classes of a participatory and dynamic nature. Students intervene by carrying out activities, searching for information, and raising doubts about the contents studied.

The theoretical contents are consolidated by carrying out three practical tasks, called challenges, which have a great weight within the subject. These are done during classes and, especially, autonomously from the guidance provided by the teacher. The face-to-face classes are used as a coworking space where work teams receive feedback from both the teacher and the rest of their colleagues.

## LEARNING OBJECTIVES OF THE SUBJECT

- Show understanding, knowledge, and capacity for application of the concepts, procedures, techniques, technologies, and computer programs in the creation of the graphical user interface
- Show ability to design, evaluate, and test the usability, accessibility, and playability of graphic video game interfaces
- Show knowledge of standards and regulations related to computer applications and systems, usability, accessibility, playability, and the player-user-centered design method
- Show understanding of the concept "human factor", of the mechanisms and psychological processes involved and be able to apply this knowledge in the decision-making process in video game design
- Show understanding and mastery of the "User-Centered Design Method" and the procedures, techniques, and technologies involved and being able to apply it in the process of design and development of video games
- Show understanding and acceptance of the social commitment of the guidelines and guides, especially those related to accessibility, and the ability to apply them properly to each type of interactive application or video game in the process of creating it

## STUDY LOAD

Type	Hours	Percentage
Self study	90,0	60.00
Hours medium group	30,0	20.00
Hours large group	18,0	12.00
Guided activities	12,0	8.00

**Total learning time:** 150 h

## CONTENTS

### Theme 1: Introduction to IDI

**Description:**

- Introductions
- Present the contents of the course
- Describe course activities, final project and evaluation
- Setting the scene for the course, a comparative timeline of the modern history of psychology, computer science and video games
- Behaviorism, classical conditioning, operant conditioning
- Priming and persuasive design

**Full-or-part-time:** 20h

Theory classes: 8h

Self study : 12h

### Theme 2. The 70s: Memory, Perception, Attention, Language

**Description:**

- Habit-forming experiences
- Perception and the brain
- Sight and attention focus
- Types of memory and implications for video-games
- Other senses, sound design, haptics, colors and culture

**Full-or-part-time:** 10h

Theory classes: 6h

Self study : 4h



### Theme 3. The 80s: Cognitive development, Sociocultural theory of human learning

**Description:**

- Gestalt School, Piaget, Vygotsky, Freud
- The rise of computer games, early online games, the home console recovery
- Cognitive science
- Cognitive biases (confirmation bias, anchoring, anchoring, social proof)

**Full-or-part-time:** 10h

Theory classes: 6h

Self study : 4h

### Theme 4. The 90's: Emotion and decision-making

**Description:**

- The 90's Affective neuroscience, emotion and decision-making, mirror neurons (Pankseep, Damasio, Rizzolati, LeBon)
- Habit forming products. Hooks
- Videogames: 3D graphics, resurgence and decline or arcades

**Full-or-part-time:** 10h

Theory classes: 4h

Self study : 6h

### Theme 5. The 00s: Thinking fast and thinking slow

**Description:**

- (Kahneman)
- MMOs, esports and online services
- Browser, casual and social games
- Mobile gaming
- Indie games

**Full-or-part-time:** 10h

Theory classes: 4h

Self study : 6h

### Theme 6. Learning and perception

**Description:**

- Aprendizaje implícito y explícito
- Aprendizaje social
- Percepción y el cerebro
- UX y los principios de Gestalt
- Affordance
- Relación con los tutoriales de videojuegos

**Full-or-part-time:** 10h

Theory classes: 4h

Self study : 6h

### Theme 7. Motivation and Engagement in video games

**Description:**

- Motivation
- Types of engagement, flow theory
- Immersion
- Presence
- Gamification

**Full-or-part-time:** 10h

Theory classes: 4h

Self study : 6h

### Theme 8. Accessibility and ethics

**Description:**

- Inclusive design
- Usability, Accessibility, Playability
- Ethics in design

**Full-or-part-time:** 10h

Theory classes: 4h

Self study : 6h

### Theme 9. Intro to research methods

**Description:**

Research Methods

- Qualitative
- Quantitative
- Mixed Research
- Basic statistics

**Full-or-part-time:** 10h

Theory classes: 4h

Self study : 6h

### Theme 10. How to plan and pitch a creative concept

**Description:**

- Information architecture
- Levels and gamification
- Element priority in UI
- User Centric Design, Gestalt principles of design

**Full-or-part-time:** 10h

Theory classes: 4h

Self study : 6h



### Theme 11. How to prepare a visual prototype

**Description:**

- From wireframes to a complex UI
- Figma, etc (design system, Atomic Design, design tokens, collaborative design)
- Photoshop - complex UI

**Full-or-part-time:** 10h

Theory classes: 4h

Self study : 6h

### Theme 12. How to plan development work in a project

**Description:**

- Agile, Scrum, Kanban methodology
- Trello, Clubhouse

**Full-or-part-time:** 10h

Theory classes: 4h

Self study : 6h

### Theme 13. Types of usability tests and the best for your product

**Description:**

- Usability testing
- Why test?
- Types of tests and how to choose the best for your game
- How to plan and organize a test
- Workshop/Hackathon

**Full-or-part-time:** 10h

Theory classes: 4h

Self study : 6h

### Theme 14. The business side of game design

**Description:**

- Business models for video games
- KPIs

**Full-or-part-time:** 10h

Theory classes: 4h

Self study : 6h



## ACTIVITIES

### Activity 1 - Theme reflection

**Description:**

In pairs, students will reflect on a topic discussed in class and present:  
Why they think the topic is relevant how they think the topic related to their work  
Share 3 questions they had after class and the answer they found through research  
(group work)

**Full-or-part-time:** 3h  
Practical classes: 1h 30m  
Self study: 1h 30m

### Activity 2 - The job interview (exam)

**Description:**

Students will participate in a mock job interview/test in which they will have to show understanding of concepts in human factors  
(individual work)

**Full-or-part-time:** 2h  
Theory classes: 2h

### Activity 3 - Concept pitch

**Description:**

Students will individually think of serious games creative concepts and explain it to the class in under 1 minute. Based on this individual pitch, teams will be form organically by students to work in the next activities  
(individual work)

**Full-or-part-time:** 12h  
Theory classes: 6h  
Self study: 6h

### Activity 4 - Deliver a concept for a serious game following the requirements described during the course

**Description:**

Students will work in pairs to submit a creative concept for a serious game.  
(individual work)

**Full-or-part-time:** 5h  
Theory classes: 5h

### Activity 5 - Prototype pitch

**Description:**

Students will work in pairs to submit a final prototype for a serious game  
(individual work)

**Full-or-part-time:** 20h  
Theory classes: 20h

## GRADING SYSTEM

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### Assignments

- Ideation (5%)
- Concept pitch (10%)
- Concept delivery (20%)

### Midterm exam

- The job interview, with a weighting of 15% of the final grade for the subject.

### Final assignment

- Pitch prototype (40%)

### Participation and learning attitude (10%)

Students who fail will have the chance to take the reevaluation exam. The mark of this exam will replace the mark of the partial exam and, in case of passing the course, the maximum final mark will be 5.

## EXAMINATION RULES.

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Part of the practical exercises can be done during the face-to-face classes. Students will also have to dedicate time for autonomous work (outside class hours), to carry out these exercises.

The evaluation of the exercises does not only involve the resolution of the same, but also the presentation of their results in class when is required and the completion and delivery of the corresponding documents that will have to be deposited in the virtual campus.

The documents must be completed following the instructions given therein, especially regarding the labeling of the file names and the structure of the content. In no case will the layout of the document be modified or saved in a format or version other than the one indicated. The correct management of the documentation provided is an aspect related to the competencies to be acquired and is, therefore, subject to evaluation.

## BIBLIOGRAPHY

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- Deci, E. L., Ryan, R. M., & Guay, F. Self-determination theory and actualization of human potential. IAP Information Age Publishing, 2013.

## RESOURCES

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### Other resources:

Optional bibliography:

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