



## **ACADEMIC PROGRAM**

### **GAME DESIGN (I)**

## **B.F.A. IN INTERACTIVE PRODUCT DESIGN**

***MODALITY: ON CAMPUS***

***ACADEMIC YEAR: 2023-2024***

<b>Name of the course:</b>	<b>Game Design (I)</b>
Degree :	Interactive Product Design
Location:	Centro Universitario de Tecnología y Arte Digital
Modulo:	Ideation and Concept Design
Area:	Human-machine interaction
Year:	2º
Teaching period:	1º
Type:	OB
ECTS credits:	6
Teaching modality:	On campus
Language:	English
Lecturer / Email	David Rodríguez-Osorio/david.rodriguez@u-tad.com
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## SUBJECT DESCRIPTION

### Area description

This subject belongs to the module of Conceptual Design and Ideation and, within this, to the area of Human-Machine Interaction.

This area refers to the study and practice of the set of techniques necessary for the creation of all those applications in which an interrelation between a machine, device, application and the human being is necessary.

### Subject description

This subject has links with the other subjects of the degree as one of the objectives of this degree is the development of interactive projects and one of the most fertile areas is gamification. Knowing the theoretical bases of game mechanics is the basis on which possible developments are based.

Game Design I provides the necessary knowledge to understand the structure of a game and gamification, as well as the parts that make it up. For those who want to develop their career in the field of interactive products. It provides critical knowledge to be able to develop their work projects. In addition, attention to

theory is a pending subject for companies and other training cycles, so its acquisition can be an advantage when it comes to differentiating oneself from other possible candidates for a job.

## COMPETENCIES AND LEARNING OUTCOMES

### Competencies

#### BASIC AND GENERAL

GC8 - Demonstrate the ability to work in a team.

GC12 - Express a critical and self-critical sense and the ability to analyse in order to evaluate different alternatives.

GC17 - Demonstrate the ability to analyse, synthesise and gather information from different sources.

GC18 - Manage information appropriately.

GC2 - Knowing how to adapt to change and new situations with flexibility and versatility.

GC6 - Demonstrate motivation for quality.

CB1 - That students have demonstrated possession and understanding of knowledge in an area of study that builds on the foundation of general secondary education, and is usually at a level that, while relying on advanced textbooks, also includes some aspects that involve knowledge from the cutting edge of their field of study.

CB2 - Students are able to apply their knowledge to their work or vocation in a professional manner and possess the competences usually demonstrated through the development and defence of arguments and problem solving within their field of study.

CB3 - Students have the ability to gather and interpret relevant data (usually within their field of study) in order to make judgements that include reflection on relevant social, scientific or ethical issues.

CB4 - Students are able to communicate information, ideas, problems and solutions to both specialist and non-specialist audiences.

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

#### SPECIFIC

SC1 - Know the language necessary to communicate and structure a coherent discourse in the field of sociology, philosophy and psychology in relation to the design of interactive products.

SC3 - Analyse the social and cultural aspects that favour the usability of interactive products.

SC7 - Knowing the practical fundamentals of the use and programming of computers and interactive product development tools.

SC8 - Evaluate the ethical, technical and creative implications of technology in the design of interactive products.

SC12 - Knowing the elements involved in the design of an interactive work in relation to the user.

SC13 - Applying basic knowledge of human-machine interaction to an interactive digital product.

SC14 - Apply the fundamentals of narrative to the development of interactive products.

SC15 - Analysing the characteristics and needs of users in the humanistic environment as a fundamental element in the design of interactive products.

SC19 Understand the design principles that enable the use, accessibility and usability of interactive products and their philosophical implications.

### **Learning outcomes**

Incorporate the psychological fundamentals into the game design.

Build a system in which players' actions make sense in the context of the game

Define a game rule structure to produce a satisfying game experience

Recognize the special needs of players with disabilities

Evaluate the usability components in a game

Designing a testing system for a game

### **CONTENTS**

- Definition and development of game mechanics
- Challenges and collective behaviour
- Game goals: definition and types
- Developments of progressive difficulty in the design
- Reinforcements and punishments
- Genres and mechanics
- Mechanical Hybridization
- Moral Implications in the Design of Video Games and Interactive Products
- Construction of videogames through mechanics
- Mechanical design process

### **SUBJECT SYLLABUS**

Theme 0. Elements of the video game and design documents

- 0.1. Introduction
- 0.2. Basic elements of game design
- 0.3. Design documents

#### Theme 1. Game concept and playability

- 1.1. State of concentration (flow)
- 1.2. Dynamic difficulty setting
- 1.3. Rule systems
- 1.4. Game space
- 1.5. Interface

#### Theme 2. Game experience and immersive systems

- 2.1. Ambient immersive systems
- 2.2. Mechanical immersive systems

#### Theme 3. Game loops

- 3.1. Game loop
- 3.2. Core loop
- 3.3. Compulsion loop
- 3.4. Feedback loops
- 3.5. Operant conditioning

#### Theme 4. Genres and mechanics

- 4.1. Beat'em ups
- 4.2. Puzzle games
- 4.3. Graphic adventures

## TRAINING ACTIVITIES AND TEACHING METHODOLOGIES

### TRAINING ACTIVITIES

LEARNING ACTIVITIES	Total hours	Hours of presence
<i>Theoretical classes</i>	44,44	44,44
<i>Seminars and workshops</i>	0,00	0,00
<i>Practical classes</i>	35,56	35,56
<i>Tutorials</i>	4,22	4,22
<i>Evaluation Activities</i>	8,89	8,89

<i>Group work and study</i>	23,56	1,18
<i>Autonomous and individual study and work</i>	33,33	0,00
<b>TOTAL</b>	150	94

### Teaching methodologies

Expository method/Master lecture

Case studies

Exercise and problem solving

Problem-based learning

### TEMPORAL DEVELOPMENT

Theme 0. Elements of the video game and design documents: 3 weeks

Theme 1. Game concept and playability: 3 weeks

Theme 2. Game experience and immersive systems: 2 weeks

Theme 3. Game loops: 3 weeks

Theme 4. Genres and mechanics: 4 weeks

### EVALUATION SYSTEM

ASSESSMENT SYSTEM	MINIMUM SCORE RESPECT TO THE FINAL ASSESSMENT (%)	MAXIMUM SCORE RESPECT TO THE FINAL ASSESSMENT (%)
<i>Assessment of participation in class, exercises or projects of the course</i>	10	30
<i>Assessment of assignments, projects, reports, memos</i>	35	70
<i>Objective test</i>	30	60

## GRADING CRITERIA

ASSESSMENT SYSTEM	ORDINARY EVALUATION	EXTRAORDINARY EVALUATION
<i>Assessment of participation in class, exercises or projects of the course</i>	20	20
<i>Assessment of assignments, projects, reports, memos</i>	40	40
<i>Objective test</i>	40	40

### General comments on the evaluations/assessments

- Any detection of plagiarism, copying or use of malpractice (such as the use of AIs) in a paper or exam will result in the failure of that paper with a zero, a report to the faculty and academic coordinator and the application of the current regulations, which can lead to very serious penalties for the student.
- SmartWatches or cell phones are not allowed to be used during exams. These devices must be locked away and out of the student's sight during the exam.
- The use of cell phones is not allowed during classes.
- Activities: It is necessary to present all the activities and obtain a mark of 5 or higher in each one in order to attend the ordinary call. The approved works will be kept for the extraordinary call
- Examination: It is necessary to obtain a grade of 5 or higher to pass the course.
- In the extraordinary call, all practices not approved or not delivered must be handed in, in addition to the final delivery. The evaluation percentage for the extraordinary call will be 20% class grade, 40% practical, 40% final exam.
- The grade for class work will be kept for Extraordinary. In the case of not having done class work or deliveries during the course, the grade will be 0. The grade for papers, projects and reports will also be kept for Extraordinary.
- Spelling mistakes in the writing of documents are reduced by 0.5 points per mistake.
- Late work is not allowed. If a student is late, the work will be penalized as follows:
  - < 1 hour late: -0.5 points
  - 1-4 hours late: -1 point
  - 4-8 hours late: -2 points
  - 24 hours late: failure.

## LIST OF REFERENCES (BOOKS, PUBLICATIONS, WEBSITES):

### Key references

SCHELL, J. (2008). The Art of Game Design, A Deck of Lenses. ISBN: 978-0615218281.

### Recommended references

ROGERS, S. (2010). Level Up! The Guide to Great Video Game Design. ISBN: 978- 0470688670.

SWINK, S. (2008). Game Feel: A Game Designer's Guide to Virtual Sensation. ISBN: 978- 0123743282.

## REQUIRED MATERIALS, SOFTWARE AND TOOLS

### Type of classroom

Projection equipment and whiteboard

### Materials:

Laptop computer

### Software:

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