Course guide
804234 - DISVJ1 - Video Game Design I

Last modified: 22/09/2026

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: 2026 **ECTS Credits:** 6.0 **Languages:** Catalan, English

LECTURER

Coordinating lecturer: Fernández, Marta

Others: Fernández, Marta
Blanch, Noemí

PRIOR SKILLS

Creative and communicative abilities.

REQUIREMENTS

Games and videogames culture, videogames industry.

TEACHING METHODOLOGY

1. Descriptive part, in which the teacher explains new content, describes work materials, and answers questions from students.
2. Participatory part, in which students work, explain and discuss the exercises.

LEARNING OBJECTIVES OF THE SUBJECT

- Define the concepts involved in the design of video games and gamified processes: video game design, gamification, human factor and user-centered design.

- Evaluate the direct and indirect consequences they have on safety, health, social justice and the gender perspective, products and services related to their professional field.

- Implement the mechanics, rules, structure and levels, the script and the artistic concept of a game or gamified process, following the criteria of gameplay and balancing to offer the best possible user experience.

- Design video games and playful processes aimed at both playful environments and areas that go beyond entertainment.

- Collaborate effectively and responsibly as a member or leader of a team, in interdisciplinary contexts or not, considering the available resources.

STUDY LOAD

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

Total learning time: 150 h

CONTENTS

Introduction to game design

Description:
Definition of game design
The job of game designer
What is Magic Circle?
What does fun mean?
What does meaningful decisions mean?
Game and culture (Homo Ludens)

Related activities:
Own definition of what a game is, what is game design, which means fun?

Full-or-part-time: 15h
Theory classes: 6h
Self study : 9h

Brainstorming and early ideas

Description:
Brainstorming
Sources of inspiration (Inner & Outer world)
Filter ideas
The Pitch - Sales Sheet
Copy and modify
References

Related activities:
Collaborated chaining design.
Moodboard & Sale sheet of a game, identifying the important elements

Full-or-part-time: 25h
Theory classes: 10h
Self study : 15h

Foundations and approaches to game design

Description:
Space & Time
Handling of information
The actions (Introduction to the mechanics)
Uncertainty & probability
Emergency
Approaches to game design
* Game centric
* Player centric
* Narrative centric
* License centric (franchised games)
* Data centric

Related activities:
Taxonomy of mechanics, generics, platforms, etc.
Game Wireframe

Full-or-part-time: 25h
Theory classes: 10h
Self study : 15h

Player psychology, documentation and design frameworks

Description:
Player psychology
* Models
* Get to know the player
* Intrinsic and extrinsic motivation
* Maslow Needs Hierarchy
Flow learning curve
User types Hexad, PENS, Big Five model, Bartle & Kahneman
Documentation
* GVD - Game vision statement
* GDD - Game design document
* After GDD?
Core Mechanics
* Mechanics and emerging narrative
* Mechanics of the Puzzles
Framework of the MDA

Full-or-part-time: 25h
Theory classes: 10h
Self study : 15h

Pacing, rewarding systems and game theory

Description:
Pacing
* Organic tutorial
* Impetus of the movement
Threat, tension and time
Front loaded vs. Slow burn
Targets
Rewards
* Contingencies
* Triangularity
* Rewards planning (Schedules)
* Uncertainty for rewards
Game Theory
* Competition vs. cooperation

Full-or-part-time: 30h
Theory classes: 9h
Self study : 21h

Playtesting and analysis of technologies

Description:
Technology
* History
* Foundational vs. decorational
* Hype cycle
* Innovator's dilemma
Design for VR & Design for AR
Design for switch & mobiles
Physical prototyping
* Write the rules of the game
Playtesting prototypes
Iterate & improve

Full-or-part-time: 25h
Theory classes: 10h
Self study : 15h

Mecanics and documentation

Description:
- Game vision document
- Game design document
- Groundbreaking mecanics
- Emergent mecanics

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

ACTIVITIES

2 physicall prototypes

Description:
Out of 3 concepts, we choose 2 and we do 2 physical prototypes.

Material:
1 single pdf and 2 physical prototypes

Delivery:
Classroom sessions

Full-or-part-time: 4h
Theory classes: 4h

1 single final prototype

Description:
Of the two physical prototypes, we choose one and perform a minimum of three iterations of improvement, well documented.

Material:
1 single pdf and 1 physical prototype

Delivery:
Classroom sessions

Full-or-part-time: 4h
Theory classes: 4h

GRADING SYSTEM

Any academic fraud, plagiarism or use or possession of unauthorised means in an assessment activity leads to a mark of zero (0) for the affected test or assignment. Furthermore, in accordance with the University's regulations, if disciplinary proceedings are initiated the subject is recorded as "Pending Assessment" until a decision is reached. These incidents are managed in accordance with the **Action Framework for Academic Integrity in Assessment at the UPC**.

1. First delivery: 30% of the final grade.
2. Partial exam: 20% of the final grade (this is the only part that can be recovered in the recovery exam).
3. Second and last delivery: 30% of the final grade.
4. Design diary: 10% of the final grade.
5. The evaluation of the student's participation in the formative activities of the subject and the learning attitude will be evaluated by means of a follow-up of his interventions, voluntary presentations and voluntary tasks. This evaluation corresponds to 10% of the final grade.

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.

Irregular actions that may lead to a significant variation of the grade of one or more students constitute a fraudulent performance of an evaluation act. This action entails the descriptive grade of failure and a numerical grade of 0 for the ordinary global evaluation of the course, without the right to re-evaluation.

If the lecturers have indications of the use of AI tools not allowed in the evaluation tests, they may summon the students concerned to an oral test or a meeting to verify the authorship.

EXAMINATION RULES.

The exercises, once completed, must be returned to the Virtual Campus in the corresponding delivery and date thereof.
The evaluation of the exercises involves not only the judgment of the case, also it means the defense made of the results and the realization of relevant documents.
Any incidents that do not help solve the exercise in the indicated time must be previously communicated to the teacher. Following this communication and depending on the causes for failure to submit the exercise, if justified, alternatives were found to complete the assessment. Also they consider justified reasons for non-submission of the exercises communicated to management studies
The documents must be completed following the instructions, especially regarding file names. Proper management of the documentation is an aspect of desirable skills and part of the evaluation.

BIBLIOGRAPHY

Basic:
- Fullerton, Tracy. Game design workshop: a playcentric approach to creating innovative games. CRC Press, 2008.
- Salen, Katie; Zimmerman, Eric. Rules of Play: Game Design Fundamentals. MIT Press, 2003.
- Schell, Jesse. The art of game design: a book of lenses. CRC Press, 2008.
- Juul, Jesper. Half-real: video games between real rules and fictional worlds. MIT Press, 2007.
- Koster, R. A theory of fun for game design. 2nd ed. Sebastopol, USA: O'Reilly Media, 2013. ISBN 9781449363215.

Complementary:
- Sicart, Miguel. Play Matters. MIT Press, 2014.
- Fernández-Vara, Clara. Introduction to Game Analysis. Routledge, 2014.
- Schreiber, I.. Game balance. CRC Press, 2021. ISBN 1498799574.
- Selinker, M. The Kobold guide to board game design. Kirkland, WA: Open Design LLC, 2012. ISBN 9781936781041.
- Tinsman, B. Game inventor's guidebook: how to invent and sell board games, card games, role-playing games, and everything in between!. Garden City, NY: Morgan James Pub, 2008. ISBN 9781600374470.
- Woods, S. Eurogames: the design, culture and play of modern european board games. Jefferson, North Carolina and London: McFarland & Company, 2012. ISBN 9780786467976.