Course guide
804267 - DDN - Level Design

Last modified: 27/02/2026

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: 2025   **ECTS Credits:** 6.0   **Languages:** Catalan, English

LECTURER

Coordinating lecturer:	Cuadrado, Daniel
Others:	Cuadrado, Daniel Cohen, Samuel

TEACHING METHODOLOGY

Class sessions are divided into two areas of activity:
1. Descriptive part, in which the professor explains new contents, describes work materials, and solves doubts of the students.
2. Participatory part, in which the students work, explain and comment on the exercises proposed

LEARNING OBJECTIVES OF THE SUBJECT

- To 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.

- To apply the user-centred design methodology, following criteria and standards of usability and accessibility, taking into account the different technologies, platforms and devices of use.

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

- To remember the latest levels creation techniques, procedural, manual, based on architecture, theme park design, etc.

STUDY LOAD

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

Total learning time: 150 h

CONTENTS

Level Design I

Description:
Introduction
Level Design and Level Designers
Historical Context
Preproduction
Puzzles
Feedback

Related activities:
Level Development I: Puzzles
1. Introduction to level design in puzzle games
2. Documentation and basic operation of the game editor
3. Development of a level in the game editor

Full-or-part-time: 36h 30m
Theory classes: 2h
Practical classes: 12h
Self study : 22h 30m

Level Design II

Description:
Casual Games (Mobile)
Pacing
Research
Tutorials

Related activities:
Level Development II: Level Pre-production
1. Moodboard
2. Flowchart
3. Pacing Graph

Full-or-part-time: 38h 30m
Theory classes: 2h
Practical classes: 14h
Self study : 22h 30m

Level Design III

Description:
Technical Analysis of a Level
3Cs
User Experience (UX)
Composition
Introduction to Unreal Engine I

Related activities:
Level Development III: Blockout
1. Documentation and basic use of Unreal Engine
2. Level development with constraints

Full-or-part-time: 37h 30m
Theory classes: 2h
Practical classes: 13h
Self study : 22h 30m

Level Design IV

Description:
Introduction to Unreal Engine II
Industry, Career and Future

Related activities:
Level Development IV: Free Level in Unreal Engine
1. Pre-production
2. Level development
3. Playtesting and feedback implementation

Full-or-part-time: 37h 30m
Practical classes: 15h
Self study : 22h 30m

GRADING SYSTEM

1. First assignment: 3 levels made from level editors. 20% of the final grade (by groups).
2. Second assignment: Moodboard, flowchart, and pacing graph of a level. 10% of the final grade (by groups).
3. Partial exam: 20% of the final grade.
4. Third assignment: Level composition in a 3D environment. 15% of the final grade (individual).
5. Fourth and final assignment: Free level made with Unreal Engine. 25% of the final grade (by groups).
6. The evaluation of the student's participation in the training activities of the subject and the learning attitude will be evaluated by monitoring their interventions, voluntary presentations and optional tasks. 10% of the final grade.

Students who fail the course will have the option of taking the re-evaluation exam. The grade of this exam will replace the grade of the partial exam and, in case of passing the subject, the maximum final grade 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 practice exercises begin during the class hours in the band assigned to this and are completed outside the class schedule hours following the instructions given in the corresponding Practice Sheet document and the indications that to such effect have been given in the part of the corresponding class.

The resolution of the practical exercises will be delivered using the virtual campus with the delivery space enabled for each practice, following the instructions described in the corresponding Practice Sheet document, in the indicated periods. At the end of the practice, the files that are required will be delivered. The correct management of the documentation provided is an aspect related to the competencies to acquire and is, therefore, an object of evaluation.

The evaluation of the practices does not only involve the resolution of the exercises proposed, but also the defense of the results when the student is required to do so at the beginning of the classes.

Any incident that does not allow to solve the practice within the indicated period will be communicated to the corresponding professor by means of a message by the Virtual Campus; After this communication, the relevance or not of any cause that motivates the non-presentation of the exercise will be resolved and the alternatives will be established to complete the evaluation if the causes are justified. The reasons for non-presentation of exercises that are communicated to the faculty by the Head of Studies will also be considered justified.

BIBLIOGRAPHY

Basic:
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- Koster, R.. A theory of fun for game design. O'Reilly,
- Bartle, Richard A. Designing virtual worlds. Indianapolis: New Riders, 2004. ISBN 9780131018167.
- Trullenque Viudas, R. Game design & development (GDD) [on line]. Barcelona: Universitat Politècnica de Catalunya, 2013 [Consultation: 12/04/2022]. Available on: http://hdl.handle.net/2099.1/20515.
- Fullerton, Tracy; Swain, Christopher; Hoffman, Steven. Game design workshop [Recurs electrònic] : a playcentric approach to creating innovative games . 2nd ed. Amsterdam ; Boston : Elsevier Morgan Kaufmann, 2008. ISBN 9780240809748.
- Bjork, Staffan; Holopainen, Jussi. Patterns in game design . Hingham : Charles River Media, cop. 2005. ISBN 1584503548.
- Rouse, Richard; Ogden, Steve; Falstein, Noah. Game design: theory & practice . 2nd ed. Plano, Texas : Wordware, cop. 2005. ISBN 1556229127.
- Meigs, Tom. Ultimate game design : building game worlds . New York : McGraw-Hill/Osborne, 2003. ISBN 0072228997.

Complementary:
- Fernández-Vara, Clara. Introduction to Game Analysis. Taylor and Francis, 2014.
- Co, Phil. Level Design for Game Creating Compelling Game Experience. New Riders Games, 2006.
- Montola, M. and Jaakko, S.. Playground Worlds. Creating and Evaluating Experiences of Role-Playing Games. Ropecon ry,
- Torner, E., White, W.J. and Waggoner, Z.. Immersive Gameplay: Essays on Participatory Media Role-Playing. McFarland and amp., 2012.
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- Gibbons, Andrew S.. An Architectural Approach to Instructional Design. 2013.
- Clayton, A.. Introduction to Level Design por PC Games. Charles River Media, 2003.
- Kremers, Rudolf. Level Design: Concept, Theory and Practice. A. K. Peters, 2009.
- Totten, CW.. Level Design: Processes and Experiences. 2017.
- Rounds, levels and waves: The early evolution of gameplay segmentation. Games and Culture, 3(2), 175-198 [on line]. Available on: https://doi.org/10.1177/1555412008314129.

RESOURCES

Other resources:
Level Design Bibliography
https://docs.google.com/spreadsheets/d/1vRNDpFOXmguAJRa9G6t8gcQvd1DlK2QWnNcYraENWNk/