Course guide
804250 - P3VJ - Project III

Last modified: 06/02/2025

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: 2024 **ECTS Credits:** 6.0 **Languages:** Catalan, English

LECTURER

Coordinating lecturer: Martín, Mónica

Others: Martín, Mónica
Ripoll, Marc
Cuadrado, Daniel
Garrigó, Marc
Stoyanov, Simon

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
CEVJ 2. Schematically and visually represent complex concepts, ideas and/or data based on personal skills and external references, in order to convey attractiveness, originality and creativity.
CEVJ 1. Design the mechanics, rules, structure, script and artistic concept of a video game, maximising immersion and criteria of playability and balance to provide the best possible user experience.
CEVJ 5. Use programming languages, algorithmic patterns, data structures, visual programming tools, game engines and libraries for the development and prototyping of video games, in any genre and for any platform and mobile device.
CEVJ 6. Analyse, decide upon and apply graphic programming techniques, physics, artificial intelligence, interaction, augmented reality and networks to a video game project.
CEVJ 8. Design, model, texturise and animate 2D and 3D objects, characters and scenes for inclusion in digital projects, audiovisual sequences and video games.
CEVJ 13. Undertake and manage video game design and development projects, including planning, direction, execution and evaluation.

TEACHING METHODOLOGY

The teacher will take the role of a studio owner and will ask for an idea to be developed. The students, working as a production team, will split into departments and work in the lines of a realistic game studio.

Following the SCRUM methodology, the teacher will evaluate every sprint individually.

LEARNING OBJECTIVES OF THE SUBJECT

- Show understanding of the concepts and procedures involved in the management of video game creation projects and be able to plan and manage a project using project management tools as a support.

- Be able to design and develop different 3D video game projects.

- Show knowledge of the appropriate personal and social competences for teamwork in the development of video game creation projects and master them at the level corresponding to the project in progress.

- Contribute to consolidating the team by planning objectives, working efficiently and favouring communication, task distribution and cohesion.

STUDY LOAD

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

Total learning time: 150 h

CONTENTS

Concept Discovery

Description:
First iteration on the technical documentation
Getting the technology required ready
First pass on the GDD

Full-or-part-time: 10h
Theory classes: 4h
Self study : 6h

Vertical Slice

Description:
First playable demo that test the basic technology needed.
Gameplay test and GDD iteration.
Testing the technology with biggest risks.

Full-or-part-time: 30h
Theory classes: 12h
Self study : 18h

Production Planning

Description:
Generation of all needed tasks for the development (backlog).
Estimation of all the tasks.
Risk management.

Full-or-part-time: 11h
Theory classes: 5h
Self study : 6h

Alpha 1

Description:
Creation of the first level of the game:
- Iteration in gameplay code / technology / UI
- Environment art / characters / animations
- Iteration in level design and player progression.

Full-or-part-time: 22h
Theory classes: 10h
Self study : 12h

Alpha 2

Description:
Repeating the same process from Alpha 1 to create the second level of the game:
- Retrospective and process improvement.
- Backlog review.

Full-or-part-time: 22h
Theory classes: 10h
Self study : 12h

Alpha 3

Description:
Repeating the same process from Alpha 1 to create the second level of the game:
- Retrospective and process improvement.
- Backlog review.
- Content creation for game last level.

Full-or-part-time: 22h
Theory classes: 10h
Self study : 12h

Polish

Description:
Last improvement to the game:
- Art polish.
- Code optimizations.
- Tide up documentation.

Full-or-part-time: 17h
Theory classes: 5h
Self study : 12h

Beta

Description:
Follow a strict beta process:
- Stabilization rounds.
- Bug distribution.
- Continuos integration.

Full-or-part-time: 16h
Theory classes: 4h
Self study : 12h

GRADING SYSTEM

The subject is purely practical and will use an individualized evaluation per milestone:
Concept Discovery 5%
Vertical Slice 1 10%
Vertical Slice 2 10%
Alpha 1 10%
Alpha 2 10%
Alpha 3 10%
Beta 5%
Gold 30%
Actitud i Participació 10%

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.

BIBLIOGRAPHY

Basic:
- Keith, C. Agile game development with Scrum. Upper Saddle River: Addison-Wesley, 2010. ISBN 9780321618528.