Course guide
804223 - FDD - Fundamentals of Design

Last modified: 18/05/2026

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: Eguía Gómez, José Luís

Others: Oliver Montroig, Maria

TEACHING METHODOLOGY

The class sessions are divided into two blocks:

1. Descriptive part, where the teacher introduces the contents and describes the materials (work plan, grades, presentations, links and statements of exercises, etc.) to work on during the following week. (80% of the activity).

2. Participatory part, with activities such as:
a. Resolution of questions about the contents studied or exercises proposed.
b. Explanation and defense of solved exercises.
c. Debates about the content discussed in the previous class.
d. Knowledge test on the theoretical content taught in the previous classes or the exercises in development.

LEARNING OBJECTIVES OF THE SUBJECT

- To identify the graphic representation techniques applied to the design and development of video games.

- To recognize the graphic and illustration style of each video game.

- To use computer-aided design and illustration applications for the implementation of graphic representation techniques.

- To create graphic and illustration styles for the video game being developed.

STUDY LOAD

Type	Hours	Percentage
Hours medium group	16,0	10.67
Guided activities	20,0	13.33
Hours large group	24,0	16.00
Self study	90,0	60.00

Total learning time: 150 h

CONTENTS

Week 1: Design Basics

Description:
1. Design definition
2. Design objectives
3. Design purpose
4. Art and design
5. Design workflow

Rasterized image software
· Vector based vs bitmap based
· Working interface
a. New document
b. Color options (RGB and CMYK)
c. Preferences
d. Saving formats
· Painting and editing tools
· Brush and pencil
· Keyboard fluidity
· Customize brushes
· Customize patterns
· Gradients
· History

Related activities:
P01 practice.

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

Week 2: Semiotics: its application to design.

Description:
1. Basics and constitutive elements.
2. The design process as a semiotic system of sense and communication.
3. Poethics and retoric of design.

Rasterized image software.
· Working with selections and new layers.
· Square selection.
· Lasso selection.
· Magic wand.
· Quick selection.
· Enhance selection.
· Customized selections.
· Selection Masks.

Related activities:
Practice P02.

Full-or-part-time: 10h
Theory classes: 1h
Guided activities: 3h
Self study : 6h

Week 3: Posters and composition meanings.

Description:
Rasterized image software.
· Layers.
· Changing layer options.
· Create new layer.
· Overlay of layers.
· Layer selection.
· Layer Groups.
· Layer alignment.
· Layer filters.
· Channels.

Related activities:
Practice P3.

Full-or-part-time: 10h
Theory classes: 2h
Guided activities: 2h
Self study : 6h

Week 4: The shape

Description:
1. Tension and balance.
2. The rythm concept.
3. Contrast.
4. Size, weight scale and proportion.

Rasterized image software.
· 3D objects.
· Interface 3D.
· 3D materials.
· 3D mesh.
· Rotate, move and scale.
· Lighting.
· Actions window.
· Customize actions.

Related activities:
Practice P4.

Full-or-part-time: 10h
Theory classes: 1h
Guided activities: 3h
Self study : 6h

Week 5: Graphic space structure and composition hierarchies

Description:
1. Visual composition: Weight and direction.
2. Hierarchy.
3. Grid.
4. Formal artistic tendencies.
a. Bauhaus
c. De Stilj

Rasterized image software.
· Synthetic images.

Related activities:
Practice P5.

Full-or-part-time: 10h
Theory classes: 2h
Guided activities: 2h
Self study : 6h

Week 6: Typography

Description:
1. Characters.
2. Typography anatomy.
3. Families and styles.
4. Differences.

Vector image based software.
· Introduction to vector based illustration software.
· Vector image vs rasterized image.
· Working interface.
· New document.
· Color configuration.
· Preferences.
· Document size.
· Page size.
· Selection tools.
· Basic shapes.
· Options toolbar.
· Combine objects.

Related activities:
Practice P6.

Full-or-part-time: 10h
Theory classes: 2h
Guided activities: 2h
Self study : 6h

Week 7: Historic evolution of typography.

Description:
1. Families and properties.
2. Most significant differentiating features of the types.
3. Text and character as artistic resources.

Vector based illustration software.
· Group shapes.
· Objects selection inside a group.
· Basic transformations through toolbar and deformation tool.

Related activities:
Practice P7.

Full-or-part-time: 10h
Theory classes: 2h
Guided activities: 2h
Self study : 6h

Week 8: Color perception

Description:
1. Color language.
2. Technics issues of the color.
3. Historic evolution of the color perception.
4. Color abstract symbolism.

Vector based illustration software.
Text block format
· Format and alignment.
· Tabs usage.
· Styles, text block and character.
· Text stroke.

Related activities:
Practice P8.

Full-or-part-time: 10h
Theory classes: 2h
Guided activities: 2h
Self study : 6h

Week 9: Historic evolution of the visual composition

Description:
1. Fit the typography to the role of the graphic project.
2. Readability.
3. Composition basics.

· Art Decó.
· Sweden design and International typography.
· Design Plus.
· Designers Republic.

Vector based illustration software.
Text placement.
· Text box connection.
· Text column distribution.
· Bring shape to text.
· Path alignment.

Related activities:
Practice P9.

Full-or-part-time: 10h
Theory classes: 2h
Guided activities: 2h
Self study : 6h

Week 10: Branding and positioning

Description:
1. Design purpose
2. Product personality.
3. Seduction in design.

Vector based illustration software.
Color pallete options.
· Add custom colors.
· Modify existing color palletes.
· Using default gradients.
· 2 colors gradient.
· Gradients save.

Related activities:
Practice P10.

Full-or-part-time: 10h
Theory classes: 2h
Guided activities: 2h
Self study : 6h

Week 11: Visual identity

Description:
1. Visual identity.
2. Identity and image.
3. Sign icon and brand.
4. Brand logo symbolism and color.
5. Subjects and strategies.
6. Principles and effects.
7. Basic construction of visual identity.

Vector based illustration software.
1. Pattern brushes.
2. Calligraphic brush strokes.
3. Spread brushes.
4. Artistic brushes.
5. Share custom brushes.
6. Smart guides.
7. Objects group.
8. Align.
9. Guides and rules alignment.
10. Points adjustment.
11. Align palette.
12. Object position in the canvas.

Related activities:
Practice P11.

Full-or-part-time: 10h
Theory classes: 2h
Guided activities: 2h
Self study : 6h

Week 12: Design and society

Description:
1. Social and environmental responsibilities.
2. Translation of global design into local design.
3. How to rate the success of a design.
4. Cases of study of design in politics.
5. Design based innovation.

Vector based illustration software.
· Import and insert.
· Bitmaps.
· Working with different bitmap formats.
· Bitmap preparation.
· Effects on bitmaps.
· Cutmask.
· Cutmask text.
· Bitmap cutmask.

Related activities:
Practice P12.

Full-or-part-time: 10h
Theory classes: 2h
Guided activities: 2h
Self study : 6h

Week 13: Trends

Description:
1. Trends and authors of contemporary design.
2. Trends on persuasive communication.
3. Trends on informative communication.
4. Trends on identity communication.

Vector based illustration software.
· Web use preparation.
· New vector options for web use.
· Links handling on illustration.
· Image map creation.
· Safe colors on web.

Related activities:
Practice P13.

Full-or-part-time: 30h
Theory classes: 6h
Guided activities: 6h
Self study : 18h

ACTIVITIES

Practice P01: Design basics

Description:
Research and analyses.

Specific objectives:
· Research and analyze the designer's profession from a professional work perspective.
· Understand different approaches to graphic design in video games.

Material:
Guió de practiques P01.doc

Full-or-part-time: 2h
Self study: 2h

Practice P02: Semiotics

Description:
Building and application icon or an application logo.

Specific objectives:
. Right handling of the symbolic language.

Material:
Guió de practiques P02.doc

Full-or-part-time: 4h
Self study: 4h

Practice P3: Visual communication

Description:
Creation of iconic shapes based on famous video games characters.

Specific objectives:
. Develope abstraction habilities.

Material:
Guió de practiques P03.doc

Full-or-part-time: 4h
Self study: 4h

Practice P4 & P5: Structure of the Graphic Space and Hierarchies of Composition

Description:
Analyse the shape principies aplying to the creation of an strategy game board.

Specific objectives:
Develop the communication capacities of geometries and compositions.

Material:
Guió de practiques P05.doc

Full-or-part-time: 6h
Self study: 6h

Practice P6 & P7: Typography

Description:
Application of the typography knowledge to the gaming board of the practice P5.

Specific objectives:
Apply the right typography to the theme of the visual message.

Material:
Guió de practiques P6.doc

Full-or-part-time: 4h
Self study: 4h

Practice P8 & P9: COLOR

Description:
Color application in a card game representing in a right way all the powers involved: energy usage, attack, defense and legend.

Specific objectives:
Analysis of the principles related to color.

Material:
Guió de practiques P8.doc

Full-or-part-time: 6h
Self study: 6h

Practice P10, P11, P12: Visual identity

Description:
Create a visual identity brand guide.

Specific objectives:
Practical application of graphic principles in a case study. Work on the readability and adaptation of the typography to the project specifications.

Material:
Guió de practiques P10.doc

Full-or-part-time: 6h
Self study: 6h

Practice P13: Design and society

Description:
Create a graphic message to share a specific subject following a defined study resources.

Specific objectives:
To have influence on observer's perception using visual communication basics.

Material:
Guió de practiques P13.doc

Full-or-part-time: 6h
Self study: 6h

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**.

- Exercises (total: 30%).

- 2 Partial Exams, 15% each (total: 30%).

- Final Exam (total: 30%).

- Participation and attitude towards learning (total: 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 and final exams and, in case of passing the course, the maximum final mark will be a 5.

* The revisions and / or claims in relation to the exams will take place exclusively in the dates and schedules established in the academic calendar, previous request of the student to the professor.

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.

Exercises
Some exercises can be done during classes with the teacher. Students will also have to dedicate time to work independently (autonomous work hours), to perform the exercises. To do so, follow the instructions given in the working document.

Once completed, the exercise will be uploaded to the Virtual Campus on the corresponding date. Only those exercises delivered before 12:00 p.m. on the deadline will be taken into account for evaluation.

The evaluation of the exercises does not only imply their resolution, it also implies the defense of the results and the preparation of relevant documents.

Any incident that does not allow the exercise to be resolved within the indicated period will have to be previously communicated to the lecturer. After this communication and depending on the causes that motivate the non-submission of the exercise, if justified, alternatives will be found to complete the evaluation. The causes for non-submission of the exercises communicated by the study management will also be considered justified.

The documents must be completed, following the instructions, especially regarding file names. The correct management of the documentation provided is an aspect of the skills to be acquired and part of the evaluation.

Students who do not pass this subject may take the re-evaluation test.

BIBLIOGRAPHY

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Complementary:
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RESOURCES

Other resources:
http://www.fontspace.com />http://www.urbanfonts.com />http://www.1001freefonts.com />https://kuler.adobe.com />http://www.experimenta.es