Curso 2023-24

Istituto Europeo di Design
Centro privado autorizado

GUÍA DOCENTE DE

Digital Technology. Communication

Título de Grado en
Enseñanzas Artísticas Superiores de Diseño

Especialidad de Diseño de Interiores

Fecha de actualización: 1 de septiembre de 2026

Dirección General de Universidades y
Enseñanzas Artísticas Superiores
CONSEJERÍA DE CIENCIA, UNIVERSIDADES
E INNOVACIÓN

Título de grado en Enseñanzas Artísticas Superiores de Diseño.
Subject:Digital Technology. Communication (Tecnología digital. Comunicación)

1. COURSE IDENTIFICATION

Type	Compulsory Specialisation Pathway Course	
Nature	Theory and Practice	
Specialisation / Pathway / Style / Instrument	Interior Design	
Subject Area	Materials and Technology Applied to Interior Design	
Teaching Period	5th Semester	
Number of Credits	4 ECTS	
Number of Hours	Total: 120h	In-person: 72h
Minimum Number of Students Required for the Course to Run	-	
Department	Interior Design Department	
Prerequisites	None	
Language(s) of Instruction	English	

2. COURSE COORDINATOR

Surname and Name	Email Address
Gámez Miguelez, Elena	campus IED

3. TEACHING STAFF AND GROUPS

Surname and Name	Email Address	Groups
Gámez Miguelez, Elena	campus IED	All

4. COMPETENCES

Transversal Competences
- CTD1, Organise and plan work efficiently and effectively, fostering motivation.

- CTD2, Gather relevant information, analyse and synthesise it, and manage it appropriately.
- CTD3, Solve problems and make decisions in accordance with the objectives of the work being carried out.
- CETD4, Use information and communication technologies efficiently.
- CTD5, Understand and use at least one foreign language within the context of professional practice.
- CTD6, Critically assess one's own professional and interpersonal performance.
- CTD13, Pursue excellence and quality in professional practice.
- CTD15, Work autonomously and recognise the importance of initiative and entrepreneurship in professional practice.

General Competences
- CGD2, Master the languages and expressive resources of representation and communication.
- CGD4, Develop a scientific understanding of the perception and behaviour of form, matter, space, movement and colour.
- CGD11, Communicate ideas and projects to clients, present reasoned arguments, evaluate proposals and facilitate dialogue.
- CGD17, Propose, evaluate and develop learning strategies appropriate to the achievement of personal and professional goals.
- CGD18, Optimise the use of the resources required to achieve the intended objectives.

Specific Competences
CEI1 Generate and materialise functional, formal and technical solutions that enable the optimal use of interior spaces.
CEI4 Analyse, interpret, adapt and produce information relating to the materialisation of projects.
CEI10 Understand technological communication resources and their applications to interior design.
CEI11 Master the specific digital technology associated with the development and execution of interior design projects.

5. LEARNING OUTCOMES

- Apply digital technology to the development of Interior Design projects.
- Use assessment and design-development tools to address the technical aspects of design.
- Research and experiment with design-specific methods applied to real cases.
- Master techniques for the graphic communication of the project throughout its different phases.
- Develop infographics for the visual representation of interior spaces.
- Acquire advanced knowledge of specialised software for computer-generated imagery.
- Develop a complete professional spatial design project, addressing its presentation, communication and development through digital tools.

6. CONTENT

Thematic Block (if applicable)	Topic / Content
I. 3D Modelling Tools: Rhinoceros	Course Presentation + Introduction to Rhinoceros Initial commands, navigation and workspace configuration.
	Advanced Modelling with Rhinoceros Complex operations, Boolean operations and precision modelling. Progressive practical exercises.
II. Rendering Tools: Blender	Blender Review General introduction, interface and basic workflows.
	Rendering Models with Blender Importing geometry from Rhinoceros. Camera, lighting, material and environment setup.
	Advanced Image Production Final rendering of project views. Optimisation for post-production.

III. Production and Post-Production of Graphic Documents	Post-Production with Adobe Photoshop + Adobe Firefly Editing and enhancement of renders and architectural images. Application of generative AI tools.
	Panel Layout with Adobe InDesign Graphic composition, visual hierarchy and typography. Integration of images, text and technical documentation.

IV. Development, Monitoring and Submission of the Final Project	Tutorial and In-Class Work Sessions Review and development of final panels. Individual guidance for the final submission.
	Final Submission and Examination Graphic presentation of the complete project. Technical, visual and communication assessment.

7. STUDENT WORKLOAD PLANNING

Type of Activity	Total Hours
Theoretical Activities	6.5 hours
Practical Activities	14 hours
Other Compulsory Training Activities (workshops, seminars, etc.)	32 hours
Assessment Activities	19.5 hours
Student Independent Study	10 hours
Preparation of Practical Work	20 hours
Assessment Activities	18 hours
Total Student Workload	**120 hours**

8. METHODOLOGY

Theoretical Activities	The main teaching method used is the lecture, in which course content is presented and explained by the lecturer, supported by the use of Information and Communication Technologies (ICT). During these sessions, questions may be raised, doubts clarified, guidance provided on information research, and individual or group discussions encouraged. These sessions cover the course content through a three-way exchange of information (lecturer-student-student group), which is then developed into tangible exercises designed to form part of the practical activities. At the end of these sessions, a series of assignments or tasks are proposed for students, individually or in groups, to develop during the practical activities.
Practical Activities	Advanced learning in 3D modelling, photorealistic rendering, computer-generated imagery and post-production is directly linked to the use of digital tools that generate these resources for the development and communication of an interior design project. Practical sessions are therefore devoted to the applied learning of specific software. During this activity, students complete practical exercises focused on specific weekly problem-based learning: an educational approach in which students individually learn to find the information needed to understand problems and develop solutions. In this case, the work focuses on 3D modelling, advanced rendering, computer-generated imagery, post-production and their application to project communication, all under the lecturer's supervision.
Other Compulsory Training Activities (workshops, seminars, etc.)	Design Workshop: a tutorial period aimed at reviewing and discussing the materials and topics presented in class. These sessions support the work proposed for the course, allowing students to clarify questions and explore in greater depth the content covered in theoretical and/or practical activities.

9. ASSESSMENT AND GRADING CRITERIA AND METHODS

9.1. ASSESSMENT METHODS

Theoretical Activities	Students will be expected to participate in discussions held during theoretical sessions.
Practical Activities	Students will complete deliverables (practical problem-solving assignments), individually or in groups, related to the course content. Specific submission requirements will be established for each deliverable.
Other Training Activities de carácter obligatorio(jornadas, seminarios, etc.)	Attendance and participation in the Design Workshop will be required.

9.2. ASSESSMENT CRITERIA
The following will be assessed:

- Apply digital technology to the development of Interior Design projects.
- Use assessment and design-development tools to address the technical aspects of design.
- Research and experiment with design-specific methods applied to real cases.
- Master techniques for the graphic communication of the project throughout its different phases.
- Develop infographics for the visual representation of interior spaces.
- Acquire advanced knowledge of specialised software for computer-generated imagery.
- Develop a complete professional spatial design project, addressing its presentation, communication and development through digital tools.

Assessment must be designed and planned in such a way that it is integrated into teaching and learning activities.
Student assessment should be continuous, personalised and comprehensive:

- Continuous, as it is embedded within the teaching and learning process and is therefore not limited to specific dates or assessment situations.
- Personalised, as it must take into account each student's abilities, skills and attitudes. Particular attention will be paid to the student's participation in group work.
- Comprehensive, as it requires consideration of the general competences established for the programme through the objectives of the different thematic units and subject areas.

Students' learning will be assessed in relation to the achievement of the educational objectives established in the curriculum and associated with the general and specific objectives, taking the assessment criteria established for the subject area as the primary reference.

In order to assess the students' learning process, it is necessary to:

- Assess their curricular competence (abilities and aptitudes).
- Assess the factors that hinder or facilitate effective learning.
- Encourage student self-assessment and peer assessment as a means of analysing and critically reviewing results, allowing students to adjust their attitudes and approaches in order to improve.
- Assess the learning context in which the student develops their knowledge and skills.

Theoretical Activities	Participation in discussions held during the sessions.
Practical Activities	Completion, presentation and submission by the established deadline of the proposed practical problem-solving exercises related to the course content: ● Assessment of the practical work carried out ● Assessment of the conclusions or work presented
Other Compulsory Training Activities (workshops, seminars, etc.)	Attendance and participation in the Design Workshop will be required.

9.3. GRADING CRITERIA

1. The assessment system used in this course follows a continuous assessment model.
2. Under the continuous assessment system, class attendance is compulsory, and students must attend at least 80% of the activities conducted in the presence of the lecturer.
3. Students who do not meet the requirements for continuous assessment must complete a specific submission for assessment without continuous assessment. This may include any components deemed appropriate, with their corresponding weightings specified in the relevant section of this course guide.
4. In all cases, students will have access to an extraordinary assessment opportunity, the structure, assessment methods and grading criteria of which are specified in this course guide.
5. To be eligible for continuous assessment, students must submit each and every practical assignment by the established deadline.

9.3.1. Weighting of Assessment Components for Continu**ous Assessment**

Assessment Components	**Weighting**
Final Submission + Interim Submissions: completion, presentation and submission of practical exercises and class notes.	90%
Class Attendance	10%
Total	100%

9.3.2. Weighting of Assessment Components for Assessment without Continuous Assessment

Reasons why a student may lose the right to continuous assessment: failure to meet the compulsory class attendance requirement, set at a minimum of 80% of activities conducted in the presence of the lecturer.

Assessment Components	**Weighting**
Completion, presentation and submission of course practical exercises	60%

Completion of a Specific Assessment for Students Who Have Lost the Right to Continuous Assessment	40%
Total	100%

9.3.3. Weighting of Assessment Components for the Extraordinary Assessment

Assessment Components	Weighting
Completion, presentation and submission of course practical exercises	60%
Completion of a Specific Assessment for the Extraordinary Assessment	40%
Total	100%

9.3.4. Weighting for the Assessment of Students with Disabilities

Adaptations to assessment methods must take into account the different types of disability.

Assessment Components	Weighting
To be determined according to the student's specific needs.	
Total	**100%**

10. SCHEDULE OF CONTENT, TEACHING METHODOLOGY AND ASSESSMENT

Session	CONTENT, ASSOCIATED TEACHING METHODOLOGY AND ASSESSMENT METHODS		Total In-Person Hours	Total Independent Study Hours
Session 01	**BLOCK I: Introduction to the 3D Modelling Tool: Rhinoceros**			
	Theoretical Activities	General course presentation. Introduction to Rhinoceros: interface, navigation and basic drawing tools.	1 hours	1 hour

	Practical Activities	Review and basic exercises with Rhinoceros. Workspace configuration.	1.5 hours	2 hours
	Other Training Activities	Design Workshop.	2 hours	

Session 02	**BLOCK I: 3D Modelling Tools: Rhinoceros**			
	Theoretical Activities	Advanced modelling: editing tools, Boolean operations and complex curves.	0.5 hours	1 hour
	Practical Activities	Advanced modelling exercise in Rhino. Review of applied examples.	1.5 hours	2 hours
	Other Training Activities	Design Workshop.	2 hours	
	Assessment	Project Review Workshop	0.5 hours	

Session 03	**BLOCK I: 3D Modelling Tools: Rhinoceros**			
	Theoretical Activities	Continuation of advanced modelling: details, adjustments and complex operations.	1 hour	1 hour
	Practical Activities	Advanced modelling project (second part). Adjustments to students' own models.	1 hour	2 hours
	Other Training Activities	Design Workshop.	2 hours	
	Assessment	Project Review Workshop	0.5 hours	

Session 04	**PRACTICAL ASSESSMENT**			
	Theoretical Activities	General modelling review. Questions and clarification.	0.5 hours	1 hour
	Practical Activities	Practical modelling assessment.	1.5 hours	2 hours

	Other Training Activities	Design Workshop.	3 hours	
	Assessment	Submission of assessment and feedback.	0.5 hours	

Session 05	**BLOCK II: Image Production with Blender**			
	Theoretical Activities	General review of Blender as a rendering tool.	0.5 hours	1 hour
	Practical Activities	Camera, lighting and material setup, and export from Rhinoceros.	1.5 hours	2 hours
	Other Training Activities	Design Workshop.	2 hours	
	Assessment	Project Review Workshop.	0.5 hours	

Session 06	**BLOCK II: Image Production with Blender**			
	Theoretical Activities	Review of scenes for final rendering. Workflow preparation.	1 hour	1 hour
	Practical Activities	Rendering of individual scenes. Optimisation for post-production.	1 hour	2 hours
	Other Training Activities	Design Workshop.	2 hours	
	Assessment	Project Review Workshop.	0.5 hours	

Session 07	**BLOCK II: Image Production with Blender**			
	Theoretical Activities	Review of scenes for final rendering. Workflow preparation.	0.5 hours	1 hour

	Practical Activities	Rendering of individual scenes. Optimisation for post-production.	1.5 hours	2 hours
	Other Training Activities	Design Workshop.	2 hours	
	Assessment	Project Review Workshop.	0.5 hours	

Session 08	**PRACTICAL ASSESSMENT**			
	Theoretical Activities	General rendering review. Questions and clarification.	0.5 hours	1 hour
	Practical Activities	Practical rendering assessment.	1.5 hours	2 hours
	Other Training Activities	Design Workshop.	3 hours	
	Assessment	Submission of assessment and feedback.	0.5 hours	

Session 09	**BLOCK III: Production and Post-Production of Graphic Documents**			
	Theoretical Activities	Advanced image production: retouching, adjustments, format and resolution.	0.5 hours	1 hour
	Practical Activities	Post-production in Photoshop. Application of generative AI tools (Firefly).	1.5 hours	2 hours
	Other Training Activities	Design Workshop.	2 hours	
	Assessment	Project Review Workshop.	0.5 hours	

Session 10	**BLOCK III: Production and Post-Production of Graphic Documents**			
	Theoretical Activities	Review of layout tools for competition panels.	0.5 hours	1 hour
	Practical Activities	Practical Work / Project	1.5 hours	2 hours
	Other Training Activities	Design Workshop.	2 hours	
	Assessment	Project Review Workshop.	0.5 hours	2 hours

Session 11	**Tutorial Session**			
	Other Training Activities	Design Workshop.	2 hours	
	Assessment	Project Review Workshop.	2.5 hours	2.5 hours

Session 12	**Tutorial Session**			
	Other Training Activities	Design Workshop.	2 hours	
	Assessment	Project Review Workshop.	2.5 hours	2.5 hours

Session 13	**Tutorial Session**			
	Other Training Activities	Design Workshop.	2 hours	
	Assessment	Project Review Workshop.	2.5 hours	2.5 hours

Session 14	**PRE-SUBMISSION + Tutorial Session**			
	Other Training Activities	Design Workshop.	2 hours	
	Assessment	Project Review Workshop.	2.5 hours	2.5 hours

Session 15	**FINAL SUBMISSION**			
	Other Training Activities	Design Workshop.	2 hours	
	Assessment	CONTINUOUS ASSESSMENT. Final project presentation. ASSESSMENT WITHOUT CONTINUOUS ASSESSMENT: Presentation of the course project and completion of the specific assessment for this assessment opportunity.	2.5 hours	6 hours

Session 16	**Grade Release and Assessment without Continuous Assessment**			
	Assessment	Release of grades, review and assessment of students.	2.5 hours	

11. TEACHING RESOURCES AND MATERIALS

Teaching resources and materials available on the virtual campus for each thematic block:

- PDF Files
- Explanatory Videos
- Screen-recorded videos captured from the lecturer's computer during selected sessions

In addition, the classroom computers will provide the following specific software:

- AutoCAD. Computer-Aided Design
- Rhino: Project Modelling
- Blender: 3D Rendering
    - Unreal Engine
- Photoshop: Post-Production

11.1. General Bibliography

Title	Virtual Art
Author	Oliver Grau
Publisher	MIT press

Title	From Technological to Virtual Art
Author	Frank Popper
Publisher	MIT press

11.2. Supplementary Bibliography

Title	La digitalización toma el mando
Author	Lluís Ortega
Publisher	Gustavo Gili

11.3. Other Teaching Materials and Resources

Rhino	Project Modelling
Blender	Rendering
Photoshop	Post-Production
Unreal Engine	Video