3D COMPUTER AIDED DESIGN

Degree in Graphical Design

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Code: 11830

Main Scientific Area: Audiovisuais

Lecturer: José Manuel da Conceição Raimundo

Language of Instruction: Portuguese

Regime: S2

Contact Hours: 90h Total Workload: 70h

ECTS: 6,0

Objectives

Computational Design 3D introduces students to learning technological three-dimensional tool's representation (3D), through practical exercises, providing a wide range of solutions imagery related to this kind of visual dynamics intrinsic to the field of communication design and audiovisual.

Learning Outcomes

Provide students with technical and creative skills in the field of 3D modeling and animation, preparing them to master an area of knowledge that, in contemporary design extends to design and visual communication. Managing the creative component and understand the limits placed in production intrinsic to the creation of this audiovisual language.

Course Contents

1. Theoretical concepts. Resorting to three-dimensional representation as a means of artistic expression and communication, in the context of communication design, fostering new aesthetic and conceptual choices.

2. Practical concepts. Provide students with technical and creative skills that support the computer aided design as a tool with high potential creative in design communication, serving on the one hand, to stimulate the creation of tangible threedimensional models, and on the other, enhancing communication annexed areas as audiovisual and multimedia.

2.1 Graphical interface and 3D concepts
2.2 Modeling objects
2.3 Light and Cameras
2.4 Materials
2.5 Textures
2.6 "Render"
2.7 Introduction to Animation
2.8 3D Graphical composition

Recommended Bibliography

The Essencial Blender: Guide to 3D Creation with the Open Source Suite Blender, Taylor Francis (Roland Hess)
Mastering Blender, Blender Foundation SYBEX (Tony Mullen)

Learning and Teaching Methods

The presented syllabusaims to provide skills and knowledge of tools at this specialized area of 3D modeling and animation, presenting concepts and methodologies employed in the design of this proposed framework.

Assessment Methods

OPERATIONAL REGIME
Students should consult the Academic Regulation (RA) of the IPCA and the Regulation of Assessment of Knowledge and Competencies (RACC) of the ESD.

LEARNING ASSESSMENT

Continuous evaluation
The assessment regime in this curricular unit is based on continuous assessment (according to point 1 of article 3 of the ESD RACC). Continuous assessment integrates the following elements of learning assessment with weighting:

Student attendance and participation = 10%
Weekly exercises, individual, practical, laboratory and homework assignments = 20%
Evaluation proposal 1 = 35%
Evaluation proposal 2 = 35%

IMPORTANT NOTE: Continuous assessment is about monitoring of the proposed exercises on time throughout the semester, as otherwise it is not possible to assess the students' evolution. That said, works that overall are not accompanied presentially in classes throughout the semester will not be evaluated.

The student must attend a minimum of 75% of the classes taught, to obtain classification in the period of continuous assessment.In the case of students covered by special attendance regimes (section 1, article 135.2 of the Academic Regulations of the IPCA), attendance and participation in the classroom may be replaced by alternative contact time with the teacher, during office hours or other schedule combine, as long as ensuring full compliance with the objectives defined in the curricular unit, as well as equal treatment between students.

Evaluation during exams (from the 1st or 2nd semesters):
This curricular unit does not allow the exam period of the 1st or 2nd semester (according to point 4 of article 4 of the RACC of the ESD)

Special season evaluation
Only students who are in a special frequency regime have access to this period (as described in section I, article 135.º and in point 5, article 209.º, of the Academic Regulation of the IPCA).

The student must inform the teacher about his intention to enroll in a special season. The expected date for the "exam" corresponds to the day of delivery of the project prepared by the student. Thus, the statement must be provided to the student at least 30 days in advance of the day of the "exam". Student and teacher must combine the means of contact, during office hours or other hours to be agreed, to guarantee the mandatory monitoring of the project and the full fulfillment of the objectives defined in the curricular unit.

Assessment in this special season integrates the following elements of learning assessment with weighting:
Monitoring, interest = 30%
Animated Character = 70%

Grade improvement
In this curricular unit, grade improvement works by continuous assessment (according to point 2 of article 6 of the ESD RACC).The assessment integrates the following elements of learning assessment with weighting:

Student attendance and participation = 10%

Weekly exercises, individual, practical, laboratory and homework assignments = 20%
Evaluation proposal 1 = 35%
Evaluation proposal 2 = 35%