

POLI ESCOLA SUPERIOR EDUCAÇÃO COMUNICAÇÃO DESPORTO TÉCNICO GUARDA	SUBJECT DESCRIPTION	MODELO PED.012.03
----------------------------------------------------------------------------------------------------------	----------------------------	-----------------------------

<i>Course</i>	Multimedia Communication					
<i>Subject</i>	3D Modeling and Animation					
<i>Academic year</i>	2023-2024	<i>Curricular year</i>	3	<i>Study period</i>	1st semester	
<i>Type of subject</i>	Compulsory	<i>Student workload (H)</i>	Total: 162	Contact: 67.5	<i>ECTS</i>	6
<i>Professor(s)</i>	Filipe Ramiro Tavares Moreira Maria de Fátima Bartolomeu da Cruz Gonçalves					
<input checked="" type="checkbox"/> <i>Area Coordinator</i> <input type="checkbox"/> <i>Head of Department</i>		Carlos Francisco Lopes Canelas				

PLANNED SUBJECT DESCRIPTION

1. LEARNING OBJECTIVES

Understand the basic elements of 3D modeling in communication design.

To apprehend conceptual, strategic and technical knowledge oriented to multimedia infographics in the world of 3D modeling.

Develop reflective, strategic and methodological skills in the creation of 3D multimedia animation projects.

Apply 3D models in the execution of multimedia infographics of the narrative, instructive, exploratory and simulative type.

Proceed with the planning and technical design of 3D multimedia animation projects, with a view to developing information and communication solutions.

2. PROGRAMME

1. Introduction to 3D modulation

1.1 Basic structure of a three-dimensional model

1.2 Descriptive geometry and 3D object analysis

1.3 Basic notions of computer graphics

1.3.1 Theories, methods, techniques and calculations for the representation and visualization of digital graphics

1.3.2 Three-dimensional modeling project and respective phases of development

1.4 Different types of visualization and animation of 3D models

1.5 Characteristics of formats suitable for different media

2. 3D multimedia animation project

2.1 3D multimedia infographics of the narrative, instructive, exploratory and simulative type

3. COHERENCE BETWEEN PROGRAMME AND OBJECTIVES

In order to comply with the objectives of the course, the syllabus is divided into two themes. In a first phase, directed towards the introduction to 3D modeling oriented towards audiovisuals and production for the media and in a second phase oriented towards the planning and production of 3D multimedia infographics. The contents presented address the characteristics of 3D multimedia animation projects, contextualizing the concept of 3D multimedia infographics in its practical application. It is intended to promote a critical sense and self-reflection on the use of 3D multimedia infographics in the various media. In the end, the student should be able to articulate the knowledge acquired in the solution of concrete problems.

<p>POLI ESCOLA SUPERIOR EDUCAÇÃO COMUNICAÇÃO DESPORTO TÉCNICO GUARDA</p>	<p>SUBJECT DESCRIPTION</p>	<p>MODELO PED.012.03</p>
--------------------------------------------------------------------------------------------------	-----------------------------------	-------------------------------------

4. MAIN BIBLIOGRAPHY

- Bastos, P. (2011) Produção 3D com Blender de Personagens Bípedes. Lisboa: FCA, Editora de Informática.
- Blain, J. M. (2021). The Complete Guide to Blender Graphics: Computer Modeling & Animation. Boca Raton: Taylor & Francis Group.
- Cellary, W. e Walczak, K. (ed.) (2012). Interactive 3D Multimedia Content. Models for Creation, Management, Search and Presentation. London: Springer.
- Gumster, J. (2020) Blender for Dummies. Hoboken: John Wiley & Sons, Inc.
- Moreira, J. (2018). Manual de Infografia de Imprensa. Lisboa: Aranha-céus.
- Pereira, João; Brisson, J.; Coelho, A.; Ferreira, A. e Gomes, M. (2018). Introdução à Computação Gráfica. Lisboa: FCA, Editora de Informática.
- Ribeiro, N. (2012). Multimédia e Tecnologias Interativas. Lisboa: FCA
- Villar, O. (2021). Learning Blender. A Hands-On Guide to Creating 3D Animated Characters. Boston: Pearson Education, Inc.

5. TEACHING METHODOLOGIES (INCLUDING EVALUATION)

The curricular unit will be developed according to a theoretical-practical model that will alternate theoretical-practical classes with classes dedicated to the development of exercises and projects. The exercises will aim at the exploration and consolidation of the knowledge acquired through the resolution of specific problems. We will seek to develop the critical capacity of students through the analysis and collective discussion of the exercises developed in class. The continuous evaluation results from the sum of the classification to be attributed to the portfolio (30%) with the classification of the project (50%) and with the classification of the mini-test (20%).

Regarding the exam periods (Normal and Resource) students must present the curricular unit project, which will count 50% of the final grade, on one of the two days prior to the evaluation date (Exam or Appeal Exam). The remaining 50% will be related to a theoretical-practical test lasting two hours on the exam date.

6. COHERENCE BETWEEN TEACHING METHODOLOGIES AND OBJECTIVES

The teaching methodology of the course allows the student to apply throughout the semester in a practical way the content covered. Seeks to motivate students to active learning of theoretical and practical knowledge through practical exercises that value interdisciplinary.

7. ATTENDANCE

Mandatory two-thirds of the participants (with the exception of students covered by specific legislation).
Will be except for absences with legal justification.

8. CONTACTS AND OFFICE HOURS

Filipe Ramiro Tavares Moreira | filipertmoreira@ipg.pt | Office 2.4

Office hours: Tuesdays and wednesdays from 14:00 to 16:30

Maria de Fátima Bartolomeu da Cruz Gonçalves | fgoncalves@ipg.pt | Office 1.11

Office hours: Tuesdays from 14:00 to 18:00

<p>POLI ESCOLA SUPERIOR EDUCAÇÃO COMUNICAÇÃO DESPORTO</p> <p>TÉCNICO GUARDA</p>	<p>SUBJECT DESCRIPTION</p>	<p>MODELO PED.012.03</p>
-----------------------------------------------------------------------------------------------------	-----------------------------------	-------------------------------------

DATE

28 de setembro de 2022

SIGNATURES

Area Coordinator

(Joaquim Manuel Fernandes Brigas)

Professor

(Maria de Fátima Bartolomeu da Cruz Gonçalves)

Professor

(Filipe Ramiro Tavares Moreira)