

COMPUTER AIDED DESIGN I

Degree in Graphical Design

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Code: 11513

Main Scientific Area: Drawing

Lecturer: Raquel Maria Fernandes Costa

Language of Instruction: Portuguese

Regime: S2

Contact Hours: 60h Total Workload: 100h

ECTS: 6,0

Objectives

Computational Design I introduces students learning technology tools two-dimensional representation, through practical exercises; associated with the idea of providing students with a wide range of new solutions imagery in the area of graphic design and multimedia, including concepts theoretical / practical digital image (bitmap).

Learning Outcomes

1. Theoretical concepts

Going to digital drawing as a means of artistic expression and communication in the context of the current design and multimedia, fostering new creative solutions in imaging communicative modern and comprehensive.

2. Practical concepts

To enable students to implement a wide range of new visual identities that underpin the digital computer aided as a tool for high potential in communication design; stimulating the creation of two-dimensional models when faced with creating a graphic design project.

Course Contents

1. Theoretical concepts

1.1 Bitmap Image

Basic elements of which are created by graphic images.

The pixel and the bitmap image. Its characteristics.

Images of high and low resolution.

Specifics Resolution + standard techniques in design.

CMYK color model, RGB and Grayscale.

Basic tools in image processing.

Weight and balance of files (work organization).

Working models.

2nd. Practical concepts.

Going to digital drawing as a means of artistic expression and communication.

2.1 The bitmap image

Drawing exercises using the computer program Adobe Photoshop.

Approach to line, shape, volume, color and texture.

The selections and clipping.

The filters.

The "path".

The alpha channel.

Principles of treatment of photographic image.

The effects.

Light, shadow and differentiation plans.

Drawing from scanning solutions.

Drawing created directly from the computer.

The digital retouching.

Creativity, expression and aesthetic.

Recommended Bibliography

Adobe Photoshop Classroom in a Book (2022 release), Conrad Chavez Andrew Faulkner, Pearson Education, 2021

100% Photoshop - Create Stunning Illustrations Without Using Any Photographs, Steve Caplin, Focal Press, 2017

Learning and Teaching Methods

Through exploration tool adobe photoshop students acquire competence in the development of theory and practice of digital bitmap images. The exercises aim at two distinct approaches: the creation of synthesized images, and manipulation of images captured. The exercises and the contents are formatted so as to direct the students through a "tour" global software in order to acquire advanced skills in the use of creating and manipulating bitmap images.

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%

Introductory exercises = 30%

Work proposal 1 = 30%

Work proposal 2 = 30%

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 evaluation in the special season requires prior notice, from the student to the teacher, 45 days in advance of the scheduled date for the "exam" (the day of the "exam" corresponds to the date of delivery of the project; the student must contact the professor to ensure the necessary follow-up for the completion of the project, safeguarding the parameters related to the continuous assessment regime; the student must register for the exam and find out about the scheduled date for it in the academic services).

Assessment in this special season integrates the following elements of learning assessment with weighting: Follow-up, interest = 40%

Exam Proposal = 60%

Grade improvement

In this curricular unit, grade improvement works by continuous assessment (according to point 2 of article 6 of the ESD RACC)

he assessment integrates the following elements of learning assessment with weighting:

Student attendance and participation = 10%

Introductory exercises = 30%

Work proposal 1 = 30%

Work proposal 2 = 30%