POLI ESCOLA SUPERIOR TECNOLOGIA GESTÃO TÉCNICO GUARDA	**SUBJECT DESCRIPTION**	**MODELO** PED.013.03

Course	Design de Equipamento					
Subject	Projecto V					
Academic year	2023-2024	Curricular year	3rd	Study period	2nd semester	
Type of subject	Compulsory	Student workload (H)	Total: 252	Contact: 90	ECTS	9
Professor(s)	Rui Filipe Cardoso Carreto					
☒ Area/Group Coordinator ☐ Head of Department	José Reinas dos Santos André					

PLANNED SUBJECT DESCRIPTION

1. LEARNING OBJECTIVES

The course program provides that the student develops the following skills, in conjunction with local institutions and companies:

1. Develop, structure and support the necessary skills to formulate aesthetic solutions in the scope of product design;

2. Define the necessary skills oriented to the design of equipment from the tetrahedron authorship / technology / program / ethics;

3. Develop projects in the scope of product design taking into account the user and their characteristics, physical, psychological, cultural and social;

4. Develop equipment design projects considering the usability characteristics of the objects, ergonomic, social and economic for all phases of product use;

5. Develop design projects in an attempt to solve problems or user needs;

6. Apply the ability to develop products by applying theoretical and practical knowledge, in particular coordination with local institutions and companies;

7. Expand the ability to develop team work within the scope of the applied project;

8. Increase the capacity to develop research and apply technical knowledge in the performance of the project's trinomial: verification, representation and communication.

2. PROGRAMME

Being this the final curricular unit of Project, we intend to use a pedagogical language that allows an individual structuring of the methodology in design, in the sense of formulating solutions to simple problems where the central theme is the products.

We can summarize the program by the following topics:

1. The problem

1.1 The world; the system; the context

2. The solution

2.1 Development of the solution

2.2 Identification of the problem

2.3 Generation of several hypotheses

2.4 Tests

2.5 Prototype

3. COHERENCE BETWEEN PROGRAMME AND OBJECTIVES

The syllabus intends for the student to enhance the points stated in the objectives of the course. The project to be developed allows the student to have a greater perception of the methodology to be applied and the possible technical solutions.

4. MAIN BIBLIOGRAPHY

BENYUS, Janine M. – Biomimicry: Innovation inspired by Nature. New York: HarperCollins, 1998

BONSIEPE, Gui – Teoria e Prática do Design Industrial. Lisboa: CPD, 1992.

BÜRDEK, Bernhard E. – Design: História, Teoria e Prática do Design de Produtos. São Paulo: Edgard Blücher, 2006.

MALDONADO, Tomás – Design Industrial. Lisboa: Edições 70, 1999.

MUNARI, Bruno – Das Coisas Nascem Coisas. Lisboa: Edições 70, 2004.

PAPANEK, Victor – Arquitectura e Design: Ecologia e Ética. Lisboa: Edições 70, 1995.

VEZZOLI, Carlo & Manzini, Enzio – Design for Environmental Sustainability. London: Springer, 2008.

WALKER, Stuart – Sustainability by Design. Explorations in Theory and Practice. London: Earthscan, 2006, 2006.

MAU, Bruce – Massive Change. London: Phaidon, 2004.

PILLOTON, Emily – Design Revolution: 100 Products that are changing people's lives. London: Thames & Hudson, 2009.

5. TEACHING METHODOLOGIES (INCLUDING EVALUATION)

The project will be structured according to the phases that become necessary depending on the problems to be addressed and the solutions found. Some practical exercises will be carried out and some theoretical questions will be presented. The evaluation will consist of two phases:

1. Continuous assessment that will be based on the assessment of the development of exercises by students and that will depend on their attendance and participation (20%);

2. Final evaluation through the exhibition of graphic supports and 3d models, in conjunction with teachers and local institutions and companies (80%).

As it is a curricular unit of teaching by project and continuous assessment, access to the exam in normal and resource periods requires minimum attendance of two thirds and a minimum grade in the continuous assessment period of 8 points.

Regarding the Normal and Appeal exam periods, the curricular unit project developed during continuous assessment will count for 60% of the final grade. There will be no grade improvement in this component. The remaining 40% will relate to a theoretical-practical test on the exam date.

Work not monitored by the teacher will not be evaluated. Students covered by special legislation, student workers or final year students must agree with the teacher in the first two weeks of the academic semester, an alternative work plan, in the absence of which they will have to respect the general plan.

6. COHERENCE BETWEEN TEACHING METHODOLOGIES AND OBJECTIVES

The classes are given in an essentially practical environment where it is intended to provide the development of all the skills already indicated, taking into consideration that this course unit will be part of a group of curricular units that propose to work together.

7. ATTENDANCE

Mandatory attendance of 2/3 of the classes in the case of the student in normal regime and, in the case of worker-student, there is no compulsory attendance regime, but there should be regular monitoring of the work by the teacher, as much as possible.

8. CONTACTS AND OFFICE HOURS

Email: rfcc.design@gmail.com | ruifccarreto@gmail.com

Office hours: Monday, 4.30-6.30pm

DATE

23 de fevereiro de 2024

Professor

(signature)

Area/Group Coordinator

(signature)