

|                  |                                  |               |                |                     |       |
|------------------|----------------------------------|---------------|----------------|---------------------|-------|
| Course Unit      | Product Design I                 |               | Field of study | Design              |       |
| Bachelor in      | Art and Design - Minor in Design |               | School         | School of Education |       |
| Academic Year    | 2023/2024                        | Year of study | 2              | Level               | 1-2   |
| Type             | Semestral                        | Semester      | 1              | ECTS credits        | 5.0   |
|                  |                                  |               | Code           | 9898-662-2102-00-23 |       |
| Workload (hours) | 135                              | Contact hours | T -            | TP 18               | PL 20 |
|                  |                                  |               | TC -           | S -                 | E -   |
|                  |                                  |               | OT 16          | O -                 |       |

T - Lectures; TP - Lectures and problem-solving; PL - Problem-solving, project or laboratory; TC - Fieldwork; S - Seminar; E - Placement; OT - Tutorial; O - Other

Name(s) of lecturer(s) Jacinta Helena Alves Lourenço Casimiro da Costa

### Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:

1. Know and apply practices, languages and methods of design;
2. Know and to apply methodologies and techniques of support to the creativity and development of ideas;
3. Choose management and creative strategies for teamwork;
4. Working with multidisciplinary teams;
5. Identify the stages of the development of a product;
6. Plan the development of a project through the implementation of design methodologies;
7. Master the process of designing, implementing and communicating a product.

### Prerequisites

Before the course unit the learner is expected to be able to:  
Without pre-conditions

### Course contents

1. Design domains; 2. Product design; 3. Project methodology; 4. Sciences and techniques auxiliary of design methodology; 5. Creativity; 6. Co-creation; 7. Design and concepts.

### Course contents (extended version)

1. Design domains.
2. Product design:
  - Product Design Today - Emerging Paradigms;
  - Creative process and operational concepts;
  - Sustainability;
  - Innovation;
  - Case Study.
3. Project methodology:
  - Designer;
  - Development of the methodology phases;
  - Alternative methodologies;
4. Sciences and techniques auxiliary of design methodology:
  - Ergonomics;
  - Anthropometry;
5. Creativity:
  - The creative process as a project;
  - Theoretical contextualization of creativity;
  - Development of creativity - Techniques of creativity.
6. Co-creation:
  - Management strategies and co - creation for teamwork;
7. Design and concepts:
  - Briefing;
  - Definition of the problem;
  - Phasing and organization of the project;
  - Methodology;
  - Development of concepts and ideas;
  - Analytical matrices;
  - Selection and justification of work proposals;
  - Constructive refinement.

### Recommended reading

1. BÜRDEK, B. (2006). História, Teoria e Prática do Design de Produtos. Tradução Freddy Van, Camp. São Paulo: Edgard Blücher;
2. FUAD-LUKE, A. (2009). Making Futures: The crafts in the context of emerging global sustainability agenda, Plymouth College of Art;
3. RAMAKERS, R. & BAKKER, G. (1998). Droog Design, Vitgeverij 010; 0 edition;
4. TSCHIMMEL, K. C. (2010). Sapiens e demens no pensamento criativo do design. Tese de Doutoramento em Design: Universidade de Aveiro, Departamento de Comunicação e Arte;
5. ULRICH K. & EPPINGER S. (2003). Product Design and Development - McGraw-Hill, Singapura.

### Teaching and learning methods

The UC is organized in theoretical lectures of an expository nature, using audiovisual information and support texts, encouraging the debate and individual research and practical work proposals in the area of product design, establishing a direct relationship with the applicability of the contents the acquisition of skills in practical areas.

### Assessment methods

1. CONTINUOUS EVALUATION - (Regular, Student Worker) (Final)
  - Projects - 60%
  - Reports and Guides - 30%
  - Presentations - 10%

Assessment methods

2. EXAM EVALUATION - (Regular, Student Worker) (Supplementary, Special)  
- Projects - 60% (nº 4 art. 7 Frequency and Evaluation Regulations - Classification obtained in Continuous Assessment)  
- Practical Work - 40% (Theoretical practical work proposal with the respective technical report and oral presentation)

Language of instruction

Portuguese, with additional English support for foreign students.

| Electronic validation                           |                                  |                              |                              |
|---|----------------------------------|------------------------------|------------------------------|
| Jacinta Helena Alves Lourenço Casimiro da Costa | Helena Maria Lopes Pires Genésio | António José Santos Meireles | Carlos Manuel Costa Teixeira |
| 19-02-2024                                      | 20-02-2024                       | 21-02-2024                   | 25-02-2024                   |

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