1. OVERVIEW

Subject Area	Product Design Projects I
Degree	Bachelor's Degree in Design
School/Faculty	Architecture, Engineering and Design
Year	Third-party
ECTS	6 ECTS
Type	Optional
Language(s)	Spanish/English
Delivery Mode	On campus
Semester	First
Academic Year	2024-2025
Coordinating professor	

2. INTRODUCTION

This subject deals with product design and all its variables in different potential scenarios. Project Practice and Manufacturing Techniques. Creating Prototypes. Ergonomics and Comfort. Manufacturing and Production Processes. Lines and Systems Design. Layout and Materials.

This optional module teaches students the creative tools, methods
and technologies used in product design. Students will learn the fundamental aspects
regarding how products work, how to design them, how to improve them for use, what makes a product useful and attractive and how they are made.

3. SKILLS AND LEARNING OUTCOMES

Key skills (CB, by the acronym in Spanish):

- CB1: Students have shown their knowledge and understanding of a study area that builds on general secondary school education, and are usually at the level where, with the support of more advanced textbooks, they may also demonstrate awareness of the latest developments in their field of study.
- CB2: Students can apply their knowledge to their work or vocation in a professional manner and possess the skills which are usually evident through the forming and defending of opinions and resolving problems within their study area.
- CB3: Students have the ability to gather and interpret relevant data (usually within their study area) to form opinions which include reflecting on relevant social, scientific or ethical matters.
- CB4: Students can communicate information, ideas, problems and solutions to both specialist and non-specialist audiences.
- CB5: Students have developed the learning skills necessary to undertake further study in a much more independent manner.

Transversal skills (CT, as per the Spanish acronym):

- CT1: Independent Learning: the ability to choose the most effective strategies, tools and opportunities for independent learning and implementation of what they have learnt.
- CT4: Ability to analyse and synthesize: being able to break down complex problems into manageable blocks; also evaluating alternatives and perspectives to find the ideal solution. Synthesizing to reduce the complexity and better understand the situation and/or solve problems.
- CT5: Ability to put knowledge into practice, using the skills acquired in the academic field in mock situations based faithfully on real life issues in the profession they are studying for.
- CT12: Critical thinking: ability to analyse an idea, occurrence or situation from different perspectives and adopt their own personal viewpoint of it based on scientific rigour and subjective debate rather than from intuition.
- CT13: Problem solving: ability to resolve an unclear or complex issue or situation which has no established solution and requires skill to reach a conclusion.
- CT14: Innovation/Creativity: ability to propose and invent new and original solutions broadening the scope and bringing different aspects to the original problem.
- CT16: Decision making: ability to choose between different options or methods to effectively solve varied situations or problems.

Specific skills (CE, as per the Spanish acronym):

- CE32: Awareness of the product design technology and the industrial manufacturing processes.
- CE33: Ability to carry out product design projects.

Learning outcomes (RA, as per the Spanish acronym):

- RA1: Students will learn to: Understand the fundamental aspects of how products work: how to improve them for use, what makes a product useful and attractive, how they are made, and how they can be presented using up-to-date tools.

The following table shows how the skills developed in the subject area match up with the intended learning outcomes:

Skills	Learning outcomes
CB1, CB2, CB3, CB4, CB5 CT1, CT4, CT5, CT12, CT14, CT16 CE32, CE33	RA1: Students will learn to: Understand the fundamental aspects of how products work: how to improve them for use, what makes a product useful and attractive, how they are made, and how they can be presented using up-to-date tools.

4. CONTENTS

The subject matter is divided into four units

Unit 1. The maker movement

- Presentation on the maker movement and its philosophy
- Examples of the maker movement
- Carry out a maker project

Unit 2. Research

- Sources of inspiration and ideas to do a maker project
- Writing of a brief and moodboards

Unit 3. Development of the design

- Techniques for presenting the development of a design project
- Sketches
- Work models
- Informative drawings

Unit 4. Detailed design

- Techniques for presenting the final project
- Technical drawing
- Constructive details
- Prototyping

5. TEACHING/LEARNING METHODS

The types of teaching/learning methods are as follows:

- Master lecture
- Collaborative learning.
- Problem-based learning (PBL).
- Project-based studies (PBS)
- Learning based on workshop teaching

6. LEARNING ACTIVITIES

The types of learning activities, plus the amount of time spent on each activity, are as follows:

On-campus:

Learning activity	Number of hours
Attendance and participation in activities	6.25h (on-site)
Directed learning, practical exercises and problem-solving	25h (20% on-site)
Project presentation	12.5h (on-site)
Integrated group project	12.5h (40% on-site)
Research work and projects	62.5h (40% on-site)
Self-study	12.5h (off-site)
Tutorials, academic follow-up and assessment	18.75h (on-site)
TOTAL	150 h

7. ASSESSMENT

The assessment methods, plus their weighting in the final grade for the course, are as follows:

On-campus:

Assessment method	Weight
Submission and/or presentation of projects	100%

On the Virtual Campus, when you open the course, you can see all the details of your assessment activities and the deadlines and assessment procedures for each activity.

7.1. Ordinary examination period

To pass the course in the ordinary examination period you must obtain a grade of 5.0 or more out of 10.0 in the final grade (weighted average) for the subject.

In any case, you must achieve a grade greater than or equal to 4.0 in the final assessment so this can be used for the average with the other activities.

We will assess:

- The ability to organise and plan work efficiently.
- The ability to gather relevant information and then analyse, synthesise and process this information.
- Resources for solving problems and taking decisions in line with the final objectives.
- The ability to demonstrate critical thinking.
- The appropriate assimilation of knowledge and resources taught in class.
- Interest, work and effort in performing designated tasks.

7.2. Extraordinary examination period

To pass the course in the extraordinary examination period you must obtain a grade of 5.0 or more out of 10.0 in the final grade (weighted average) for the subject.

In any case, you must achieve a grade greater than or equal to 4.0 in the final assessment so this can be used for the average with the other activities.

Activities not passed in the ordinary examination period, or those not delivered, must now be delivered after having received the relevant corrections to them by the lecturer.

8. SCHEDULE

The schedule with delivery dates of assessable activities in the course is indicated in this section:

Assessable activities	Date
Activity 1. Report writing and brief Projection and oral presentation	Week 1-6
Activity 2. Projection and oral presentation of the design progress	Week 7-11
Activity 3. Projection and oral presentation of the final project	Week 12-15

The schedule may be subject to modifications for logistical reasons of the activities. Students will be informed of any changes in due time and course.

9. BIBLIOGRAPHY

The reference work for following this subject area is:

- Anderson, C. (2013). *Makers: La nueva revolucion industrial*. Empresa Activa

The recommended bibliography is indicated below:

- Hatch, M. (2013). *The Maker Movement Manifesto: Rules for Innovation in the New World of Crafters, Hackers, and Tinkerers*. McGraw Hill Professional

10. EDUCATIONAL GUIDANCE AND DIVERSITY UNIT

The Educational Guidance and Diversity Unit offers support throughout your time at university to help you with your academic achievement. One of the main pillars of our educational policy is the inclusion of students with special educational needs, universal accessibility to the different university campuses and equal opportunities.
This unit offers students:

1. Support and monitoring through personalised counselling and programmes for students who need to improve their academic performance.
2. Promotion of diversity, with curricular changes possible in terms of methodology or assessment for those students with special educational needs in order to provide equal opportunities for all our students.
3. We also offer students a range of educational extracurricular resources for developing a variety of skills to enhance their personal and professional development.
4. Career guidance by offering tools and advice to students with doubts regarding their professional careers or those who believe they have chosen the wrong line of study.

Students who need educational support can contact us at:
orientacioneducativa@universidadeuropea.es

11. SATISFACTION SURVEYS

Your opinion matters!

Universidad Europea encourages you to complete our satisfaction surveys to identify strengths and areas for improvement for staff, degree courses and the learning process.

These surveys will be available in the surveys area of your virtual campus or by email.

Your opinion is essential to improve the quality of the course.

Many thanks for taking part.