BACHELOR'S DEGREE IN INDUSTRIAL DESIGN ENGINEERING

SYLLABUS
DESIGN AND EXPERIMENTAL PROJECT

ACADEMIC YEAR: 2026-27
YEAR: 2nd
CHARACTER: Compulsory
SEMESTER: 3rd
ECTS: 6
TEACHING HOURS: 49
HOURS OF SELF-EMPLOYMENT: 101
TOTAL HOURS: 150
LANGUAGE/S: Spanish/Catalan
CODE: 17049

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PRESENTATION OF SUBJECT / OBJECTIVES
This subject provides an introduction to the project from the most explorative and experimental aspect, having scientific knowledge as the starting point of the research. A challenge or problem to be solved is proposed in order to implement project techniques and methodologies that allow a solid value proposition to be reached. All the technical documentation of the scientific research is carried out to justify the decisions made.
A global perspective and analysis are provided of the social aspects, technological challenges, stylistic trends and theoretical foundations that have presided over the main educational centres at each moment in history. A methodological basis of the projectuality of design engineering is provided. User-centred design taking into account the different cultural, social, economic, ethical and gender realities. Creativity in decision-making, search techniques and information processing.



SUSTAINABLE DEVELOPMENT GOALS (SDGS)

This subject specifically incorporates the following SDG and its target:
Goal 12: Responsible consumption and production.12.6 Encourage enterprises, especially large corporations and transnational corporations, to adopt sustainable practices and incorporate sustainability information into their reporting cycle.

CONTENTS
Block-I: Scientific and experimental research in Design.
1.1. Scientific research.
1.2. Experimental design methodologies and techniques.

Block-II: Research in design for innovation.
2.1. Innovation from scientific research.
2.2. Experimentation for innovative value propositions.
2.3. Speculative design methodologies.

Block-III: Philosophy and trends applied to design.
3.1. Society, culture and objects.
3.2. Applied trends.
3.3. Trend manuals.
3.4. Value Proposition.

Block-IV: People-centred design.
4.1. First-person focused design, embodied experimentation.
4.2. Quantitative and qualitative analysis methodologies.
4.3. Lifestyles.

Block-V: Communication.
5.1. Image of the project.

5.2. Formalization of a proposal.
5.3. Project narrative.

TEACHING METHODOLOGIES

- Work sessions with the whole group class with the teacher (PA)
- Individual Autonomous Work (EP) Sessions
- Autonomous Group Work (PF) Sessions

COMPETENCIES

- G1 - Develop a creative attitude of experimentation, under scientific and humanistic criteria, which favours the exploration of relevant and innovative contributions.
- G3 - Integrate formal sensitivity as a fundamental part of the project process.
- CB3 - Students must have the ability to gather and interpret relevant data (usually within their area of study) in order to make judgments that include reflection on relevant social, scientific or ethical issues
- CB4 - Students are able to transmit information, ideas, problems and solutions to both a specialised and non-specialised audience
- T2 - Projecting the values of entrepreneurship and innovation in the exercise of the personal, academic and professional career
- through contact with different realities of practice and with motivation towards professional development.
- T5 - Exercise active citizenship and individual responsibility with a commitment to democratic values, sustainability and universal design, based on practices based on learning, service and social inclusion.
- T6 - Use different forms of communication, both oral and written or audiovisual, in their own language and in foreign languages, with a high degree of correctness in use, form and content.
- E6 - Use different methodologies and work tools to correctly design any product, system or service.
- E7 - Develop prototypes for experimentation and formal and technical testing that allow the communication of the concept and technical justification of the project.
- E9 - Recognize scientific methods to integrate research sources into decision-making.

LEARNING OUTCOMES

- Collects and interprets data and information on which to base their conclusions, including reflections on social, scientific or historical issues in the field of design.
- It proposes interventions in coherence with democratic values and universal design, showing respect for the fundamental rights of people.
- Appropriately uses oral language (verbal and non-verbal) in personal and professional interaction.
- It includes oral and written messages of different types in a complete way expressed in the languages of the country.
- It uses audiovisual language and its different resources to express and present content linked to specific knowledge of the field.
- Proposes and executes the project from start to finish, justifying the necessary methodologies during the process.
- Makes prototypes during the process suitable for the understanding and justification of the project.
- Applies scientific research methodologies "for", "through" or "about" design.

TRAINING ACTIVITIES

Each subject will present at the beginning of the course its WORK PLAN where the didactic activities per week / session / autonomous work are recorded.

EVALUATION

EVALUATION SYSTEMS

The evaluation of the subject will be based on continuous monitoring of the student's academic work throughout the course.

EVALUATION SYSTEM	FINAL WEIGHTING
P2-Follow-up of the work done	20
P4-Specific assessment tests: exams	20
P5-Completion of required work or projects	60

EVALUATION CRITERIA
The final grade of the subject will be the weighted average of the grades of the assessable activities according to the following table:

ASSESSABLE ACTIVITY	WEIGHT	RETRIEVABLE (up to 50%)	EVALUATION SYSTEM
Activity-1 Performing exercises and participating in class	20%	NO	P-2
Activity 2 Individual report	20%	YES*	P-4
Activity-3 Experimentation Report	20%	NO	P-5
Activity-4 Design Projects	40%	YES*	P-5

Students will have the option of retaking the retake tests. The retake tests will be carried out in the period of the semester allocated to this function, not being able to recover more than 50% of the subject.
* If the Recoverable Assessable Activities exceed 50%, the student body may choose, up to a limit of 50%.
The unjustified non-submission of any assessable activity implies a grade of 0, even if the activity has been classified as Recoverable.
Recoverable Activities can only be recovered when they have been submitted by the student body on the indicated date and with a grade equal to or greater than 3.
If access to the retake test is waived, the grade achieved in the first instance will be maintained.
In case of taking the recovery, the grade obtained will be the last, even if it is lower than the first.
Plagiarism or copying someone else's work is penalised in all universities and, according to the Rules of Coexistence of the University of Vic-Central University of Catalonia, they constitute serious or very serious offences. That is why in the course of this subject any indication of plagiarism or misappropriation of texts or ideas of other people (What is considered plagiarism?) as well as the improper or undeclared use of Artificial Intelligence in an activity, automatically translates into a failure and/or other disciplinary measures (Normes de Convivencia de la Universitat de Vic-Universitat Central de Catalunya).
For any questions or queries, see the (Academic Regulations of the Bachelor's Degree of the Faculty of Design and Engineering Elisava UVic-UCC).

BIBLIOGRAPHY AND TEACHING RESOURCES

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