BACHELOR'S DEGREE IN INDUSTRIAL DESIGN ENGINEERING

SYLLABUS
DESIGN RESEARCH

ACADEMIC YEAR: 2025-26
GRADE: 4th
CHARACTER: Compulsory
SEMESTER: 1st
ECTS: 6
TEACHING HOURS: 49
HOURS OF WORK ON BEHALF OF THE STUDENT: 101
TOTAL HOURS: 150
LANGUAGE/S: English
CODE: 17053

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PRESENTATION OF SUBJECT / OBJECTIVES
This subject focuses on theoretical and applied work, from the perspective of industrial design engineering. The objective is to design the research proposal for the possible final degree project, based on the posing of questions, objectives and working methods. The purpose is focused on the professional project process that is developed in industrial design, considering possible lines of exploration: social, industrial or academic.

The purpose is focused on providing:
- Concepts of scientific research "for", "through", "about" or "applied" in design.
- Methodology based on project and scientific working methods, applied in the industrial design process considering the different cultural, social, economic, ethical and gender realities, including sustainability.
- Tools for visual, oral and written communication of work.
- Project methods for generating information and data for: planning, programming, innovation management, analysis of the value chain of a product, industrial implications, financing and profitability of the final product.

This subject of the researcher's design aims to guide the value proposition towards the content structure of the TFG research report, to facilitate possible academic-scientific communication.

SUSTAINABLE DEVELOPMENT GOALS (SDGS)
This subject does not specifically incorporate any SDGs.

CONTENTS
Block-I: Research approach
1.1. Scientific research "through", "about" or "applied" in design.
1.2. Lines of research: society-context; academic-scientific.
1.3. Research activity: exploration, generation and evaluation.
1.4. Contextual framework who? What? where? when? Why? how?
1.5. Memory. Content structure.

Block-II: Research Design
2.1. Industrial Design Engineering. Contextualization.
2.2. Line of research: industrial technician.
2.3. Experimentation (project)
2.4. Implementation (white paper)
2.5. Planned work plan.

Block-III: Research proposal
3.1 Follow-up tutoring.
3.2 Submission of the proposal.

TEACHING METHODOLOGIES
- Work sessions with the whole group class with the teacher (PA)
- Group tutoring sessions with the teacher (DP)
- Individual Autonomous Work (EP) Sessions

COMPETENCES

- G1 - Develop a creative attitude of experimentation, under scientific and humanistic criteria, which favours the exploration of relevant and innovative contributions.
- 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.
- T3 - Interact in global and international contexts to identify needs and new realities that allow the transfer of information to the environment. knowledge towards current or emerging areas of professional development, with the capacity for adaptation and self-direction in the professional and Research processes.
- T6 - Use different forms of communication, both oral and written or audiovisual, in their own language and in languages foreign, with a high degree of correctness in use, form and content.
- E9 - Recognize scientific methods to integrate research sources into decision-making.
- E10 - Understand the current industrial reality in order to function in the professional environment.

LEARNING OUTCOMES

- It communicates knowledge, methodology, ideas, problems and solutions to all types of audiences (specialized or not) in a clear and precise way.
- Identify their own training needs and to organize their own learning with a high degree of autonomy in all types of contexts (structured or not).
- Solves problems and situations typical of professional performance with entrepreneurial and innovative attitudes.
- Assumes different responsibilities in the collaborative individual work and evaluates the results obtained.
- Appropriately uses oral language (verbal and non-verbal) in personal and professional interaction in Catalan, Spanish and English.
- She uses gender-sensitive language, both in oral and written productions.
- Use basic business and innovation skills in any business environment.
- Applies scientific research methodologies "for," "through," or "about" design
- Communicates in a professional way the value of the project developed in an academic and work environment.
- It justifies the selection of emerging technologies through innovative future scenarios.

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	30
P4-Specific assessment tests: exams	00
P5-Completion of required work or projects	70

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 Participation in class	20%	NO	P-2
Activity-2 Completion of proposed exercises in class	20%	NO	P-5
Activity-3 Pre-Proposal	10%	YES*	P-5
Activity-4 Partial delivery	10%	NO	P-2
Activity-5 Final Submission Research proposal	40%	YES*	P-5

Students will have the option of re-examining themselves for recoverable tests. The recovery tests will be carried out in the period of the semester destined to this function, not being able to recover more than 50% of the subject.

* If the Recoverable Evaluable Activities exceed 50%, the student may choose, up to a limit of 50%.

The unjustified non-presentation of any evaluable activity implies a grade of 0, even if the activity has been qualified as Recoverable.

The Recoverable Activities can only be subject to recovery when they have been delivered by the student on the indicated date and with a grade equal to or greater than 3.
If you renounce access to the recovery test, the grade achieved in the first instance will be maintained.
In case of presenting to recovery, the note obtained will be the last, even if it is less than the first.
Plagiarism or copying someone else's work is penalized 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 offenses. That is why during the course of this subject any indication of plagiarism or misappropriation of other people's texts or ideas (What is considered plagiarism?) as well as the improper or undeclared use of Artificial Intelligence in an activity, will result automatically in failure of the subject and/or other disciplinary measures (Norms of Coexistence of the University of Vic-Central University of Catalonia). For any questions or queries, see the (Academic Regulations for the Degree of the Elisava Faculty of Design and Engineering UVic-UCC).

BIBLIOGRAPHY AND TEACHING RESOURCES

- Bravo, R. Sierra. 2001. *Técnicas de investigación social.* Teoría y Ejercicios. Madrid: Paraninfo.
- Hernandéz R., C. Fernandéz, M.P. Batista. 2010. *Metodología de la Investigación.* 5ª ed. México: McGraw Hill Educación.
- Maxwell, J. A. 1996. *Qualitative Research Design: an interactive approach.* London: Sage publications.
- Pozo-Puértolas, R. 2023. *Representación del marco contextual de una investigación en diseño.* Revista Grafica. Journal of graphic design. ISSN 20149298. https://doi.org/10.5565/rev/grafica.246
- Pozo-Puértolas, R. 2023. *Investigación aplicada en diseño. Etapas de la actividad.* Revista Grafica. Journal of graphic design. ISSN 2014-9298. https://doi.org/10.5565/rev/grafica.282

The teaching staff will provide a specific bibliography at the beginning of the subject, if applicable.

Facultat de Disseny i Enginyeria
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