



Universidad
de Navarra

Comprehensive Lab IV (Gr. Diseño)

Guía docente 2023-24

INTRODUCTION

Course Description:

Laboratories of matter and form offers the student the necessary resources to complete their training through practice, experimentation and, consequently, the understanding of the possibilities offered by the relationship between matter and form. It implies a direct knowledge of the materials, their physical characteristics, their configuring geometry, the possibilities offered by their manipulation and the most adequate technical resources for the transformation of each one of them. It is a space of clearly experimental character in which the student achieves, by doing as a method of learning, develop skills and fundamental skills for the future designer. The subject belongs to the Module 4 Comprehensive Lab, within the Subject 2 of Laboratories of Technologies and Systems of Production.

- **Degree:** Grado en Diseño/ Degree in Design
- **Module in the Degree Program:** Module 4 "Comprehensive Laboratories", subject "Laboratories of Technologies and Systems of Production"
- **Number of credits:** 6 ECTS
- **Year and semester:** Second year and second semester
- **Type of course:** Mandatory
- **Instructors:** María Fernández-Vigil Iglesias. Responsible teacher; María Duro. PAD; invited teachers for the workshops and projects.
- **Language:** English
- **Department:** Department of Construction, Installations and Structures
- **Lecture schedule:** Aula 1 and Taller 2B. Wednesdays from 15:00 to 19:00 h.

COMPETENCIES

BASIC

BC1 – Students should have demonstrable knowledge and understanding of an area of study that builds on the base knowledge of general secondary education, and at a level at which, although supported by advanced text books, also includes aspects that imply knowledge related to the vanguard of the field of study.

BC3 – Students should have the ability to gather and interpret relevant data (normally within their area of study) in order to make judgments that reflection on relevant social, scientific or ethical issues.

BC5 – Students should have developed the learning and study skills that are necessary for undertaking studies with a high degree of autonomy.

GENERAL

GC2 – Analyze, evaluate and present the creative qualities of the different technical and material resources in the field of design.

GC4 – Propose, create and express (both written and verbally) concrete solutions to design challenges that affect today's society.



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GC5 – Skillfully manage modern technologies geared toward creation and manufacturing processes specific to the design world.

GC6 – Ability to speak English, B2 level, with knowledge of scientific and academic terminology related to the world of art, design, and applied arts.

SPECIFIC COMPETENCIES

SC1 – Use graphic and computer/technological procedures in order to represent concepts, spaces, and objects in design.

SC2 – Be familiar with the theory of form, as well as the laws of visual perception as they apply to design.

SC6 – Know the concepts and techniques utilized in applied, traditional and contemporary arts, as well as their application to design.

SC7 – Know the composition, as well as the plastic, elastic, and resistance qualities of materials related to the world of design.

SC10 – Know the systems and industrial manufacture processes specialized according to the different fields of design.

PROGRAM

The course program falls within the integrated projects, which are common for the rest of the courses in the semester. During the semester the evaluable works will be framed in the development of two main projects (P) that also include several workshops (WS) and exercises (E):

P03. Transformation (VOID)

The student will work on the use of basic tools of services design, mainly focused for research and ideation phase.

Introduction to production systems in service providers and product-service systems.

P04. Reproduction (COPY)

Introduction to speculative design.

Within this project, the student will explore the characteristics of speculative design, starting with a rigorous research, developing a future ecosystem, and finally prototyping a representative element of that scenario.

The distribution of hours, intermediate works and final deliveries will be provided according to the course coordination work.

EDUCATIONAL ACTIVITIES

The subject has an eminently applied character, with a combination of technical and practical sessions according to the calendar that is given to the students in the first class of the semester.



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The training activities include face-to-face sessions in the classroom and workshop, as well as practical sessions in the School Laboratory, with specific development for each of the competences that the student must achieve.

Outside of class time, students can attend tutorials with the faculty and, in a non-face-to-face manner, they will have to carry out directed work supported by personal study.

AF01 Attendance and participation in theoretical face-to-face classes (6 h)

Attendance and participation during the theoretical lessons. The active participation and the answers to the questions that the teacher makes are valued.

AF02 Attendance and participation in practical face-to-face classes (54 h)

Attendance and participation during the theoretical lessons. The active participation and the answers to the questions that the teacher makes are valued. The course is divided in two phases, corresponding to the two main projects.

Apart from the project itself, the students will carry out different exercises related to the project topic.

AF03 Seminar's participation (12 h)

Throughout the course, two seminars will be held. Since these workshops are part of the final mark, participation will also be taken into account.

AF04 Tutor-driven exercises (individual and in groups) (45 h)

AF05 Office hours (3 h)

AF06 Personal work and study (30 h)

Time dedicated to the study of the subject and the preparation of the different training activities.

ASSESSMENT

ORDINARY CALL

SE01 Attendance control and level of participation* 10%

Control of attendance* and participation in expository, practical, master classes and workshops

SE02 Practical exercises (individual/team) 70%

- Individual and team practical exercises specific to Laboratory** 60%

(Laboratory exercises: 45 %, WS 15 %)

- Integrated projects *** 10%

(P03 2%, P04 8 %)



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SE03 Activity to be developed during the academic trip 10%

SE04 Exams 10%

** It is mandatory to attend at least 80% of the classes, otherwise the student will lose the right of evaluation of the complete course.*

*** Only the exercises scored over 4.0 will be considered for this mark.*

**** It is a requirement that the final project (P04) will hold a mark of pass (equal or greater than a 5.0 out of 10) to pass the subject.*

EXTRAORDINARY CALL

Final exam of theoretical knowledge and development of an individual project according to the criteria of the teaching staff.

As stated in the General Evaluation Regulations of the University of Navarra approved in May 2019, "Students who request it may be evaluated in the extraordinary call, even if they have passed the course in that course. To do this they must request to be included in the minutes at least five days before the start of the exam period of that call. The final grade of the subject will be that of the extraordinary call, even if it is lower than the one obtained previously".

Therefore, the grade obtained in the extraordinary call will be the valid one, regardless of that obtained in the ordinary call, even the student may not pass the subject if he or she fails to attend.

Those students interested must submit an instance through *Gestión Académica* choosing the option "*convocatoria extraordinaria: solicitud para concurrir (grado)*", before the extraordinary exams term.

Students on second opportunity

The grade of the works of the previous course is not preserved. They must present the works, obligatorily and with the same requirements.

OFFICE HOURS

Dra. María Fernández-Vigil Iglesias (mfernandez-@unav.es)

Meetings by appointment (email).

BIBLIOGRAPHY AND RESOURCES

Addis, Bill. **"Building: 3000 Years of Design Engineering and Construction"**, Phaidon Press Limited, 2007. ISBN 9780714841465. [Localízalo en la Biblioteca](#)

Banham, Reyner. **"Teoría y diseño en la primera era de la máquina"**, Ediciones Paidós Ibérica, 1985. ISBN 8475093477.



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Bennett, Stuart. **"A history of control engineering 1930-1955"**, Peter Peregrinus Ltd. on behalf of the Institution of Electrical Engineers, 1993. ISBN 0863412807.

Bonilla de la Corte, Antonio. **"Construcción naval y servicios"**, 1984. ISBN 843982629X.

Fuad-Luke, Alastair. **"Manual de diseño ecológico"**, Editorial Cártago, S.L, 2002. ISBN 1900826364.

Fuller, Buckminster. **"El capitán etéreo y otros escritos"**, Colegio Oficial de Aparejadores y Arquitectos Técnicos de Murcia, 2003. ISBN 8489882177. [Localízalo en la Biblioteca](#)

Koolhaas, Rem. **"Delirio de Nueva York"**, Editorial Gustavo Gili, S.A, 1978. ISBN 8425219663. Localízalo en la Biblioteca

Peters, Nils. **"Jean Prouvé"**, Taschen, 2006. ISBN 9783822848777.

Polaine, Andy et al. **"Service Design. From insight to implementation"**. Rosenfeld Media, 2013.

Samara, Timothy. **"Drawing for Graphic Design: Understanding Conceptual Principles and Practical Techniques to Create Unique, Effective Design"**

Sennett, Richard. **"The craftsman"**, Yale University Press, 2008.

Stickdorn, Marc et al. **"This is service Design thinking: Bases-Tools-Cases"**. BIS Publishers, Amsterdam, 2011.

Stickdorn, Marc et al. **"This is service Design Doing: Using Research and Customer Journey Maps to Create Successful Services"**. O'Reilly, USA, 2016.

Verganti, Roberto. **"Design Driven Innovation: Changing the Rules of Competition by Radically Innovating What Things Mean"**. Harvard Business School, Cambridge-Boston, 2009

Andrea Caputo, Anniina Koivu. **"U-joints: a taxonomy of connections"**. SYNC-SYNC Editions, 2022