

## Laboratoris de Creació 2

Sofia Acosta , Yuri Alemany Mascareñas, Marta Cerda Alimbau,  
Manuel Cirauqui Esbec, Javier Nieto Cubero

Supervising Teacher: Javier Nieto Cubero

Content: 1,2,3,4,5

Code: 106070

Credits: 3 ECTS

Course: 3

Semester: 1

Typology: Obligatory

Subject: Means of Expression

Schedules:

Content	Schedules	Teacher
1	Divendres 08:30 - 12:00	Javier Nieto Cubero
		Marta Cerda Alimbau
2	Divendres 08:30 - 12:00	Javier Nieto Cubero
		Yuri Alemany Mascareñas
3	Divendres 08:30 - 12:00	Javier Nieto Cubero
		Manuel Cirauqui Esbec
4	Divendres 08:30 - 12:00	Sofia Acosta
		Javier Nieto Cubero
5	Divendres 12:00 - 15:30	Javier Nieto Cubero



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## Subject Presentation

Creation Labs II is a practical subject that explores creation and materiality through experimentation and project development in various design disciplines. These labs offer a space for research, innovation and collaboration, using different materials, techniques and tools.

## Learning outcomes of the subject

### Knowledge

Relate visual arts languages to the communicative and expressive possibilities of different artistic techniques. (KT03)

### Skills

Apply plastic and expressive qualities in the formalization of design projects. (ST04)

Use the technical and expressive resources of different artistic disciplines to generate images. (ST08)

### Competencies

Develop artistic projects in different formats: editions, installations, pieces for exhibition, etc. (CT01)

Combining traditional artistic techniques with digital image manipulation. (CT04)

## Learning outcomes of the degree program

### Knowledge

Respond to global issues related to the fields of design and art, cultural industries, their institutional environments, and the agents involved.

Correctly reference documentary sources, the necessary bibliography and knowledge of the heritage environment both for the projection and for the analysis and reasoned criticism of design and/or art.

Catalogue materials, their properties and physical principles in relation to the conceptualisation and formalisation of design projects, taking into account environmental and sustainability criteria.

Categorise technologies and production processes, along with their respective costs, in relation to the conceptualisation and formalisation of design projects, while ensuring rigour and quality in finishes and details.

Reference essential knowledge of the sciences and auxiliary disciplines of design, such as anthropometry, ergonomics, visual communication, evaluation methods, marketing, and prospecting.

Demonstrate a sufficient command of the English (level B1 of MCER), in both general communicative contexts and design-specific contexts, with particular attention to democratic, human, and fundamental rights.

### Skills

Identify design problems through the analysis of objects, graphic communication elements, and

spaces, from a perspective rooted in contemporaneity, universal accessibility, and equal opportunities.

Apply plastic expression skills and knowledge of materials and production technologies in accordance with the objectives of a design project.

Propose design solutions (or solutions in related areas) clearly and precisely, using appropriate vocabulary and techniques of expression and representation.

Graphically represent spaces, volumes, planes, and surfaces using the characteristic techniques of design.

Use digital tools and technologies according to creative and production processes in the field of design

Structure visual information hierarchically and apply typographic families and font architecture appropriately.

Apply ethical and aesthetic criteria and values to design practice, taking into account the formal dimensions of environments and their diversity.

Adapt visual languages, media, and artistic techniques to the communicative goals of each design project.

Make value judgments about design projects by interpreting data and justifying critical analysis using knowledge of graphic communication, space, objects, and reference texts.

Conduct research with a critical spirit in the field of design and related disciplines, considering innovation, experimentation, and the ongoing renewal of the cultural industries, while promoting equality and democratic values.

Synthesize knowledge from diverse sources—studies, fieldwork, literature, direct observation, or practical experience—in the field of design and related disciplines within the cultural industries.

Evaluate the social, economic, environmental, and technological feasibility of a design project, incorporating gender and diversity perspectives, and ensuring respect for sustainability, democratic values, and fundamental rights.

## **Competencies**

Propose creative, socially and environmentally sustainable design solutions, aligned with the Sustainable Development Goals (SDGs).

Manage the development of design projects—individually or in teams—with adaptability, within the organisational context of companies and institutions.

Manage design-related tasks autonomously, planning and organising time and processes in professional and/or academic settings.

Apply acquired knowledge to the execution of design and art projects with professional standards, considering user and audience diversity.



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Content: 1

**Brief Description:**

Animated graphic identity based on animated typographic behavior.

**Training Objectives:**

- Define an animated typographic behavior based on an idea.
- Create an identity based on audiovisual behavior.
- Build a dynamic and scalable identity. So that with one (or several) animated behaviors we can provide a solution to all the animated pieces of the identity that we have to develop.

Recommendations

Work in groups of 2 people.



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## Contents and Methodology

### **Brief Description:**

### **Teaching methodology:**

Class work with tutorials. Small software capsules combined with exposure to Case Studies.

### **Training activities:**

- Definition of audiovisual behavior.
- Creation of animated identity.
- Presentation

## Evaluation

### General evaluation regulations

A student will be considered "Not Assessable" (NA) if they have not submitted all the learning evidences or have not attended 80% of the classes without justifying their absences. In case of a justified absence, the student must contact the teacher at the time of rejoining to determine the recovery of the activities they missed.

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### Continuous evaluation system

The evaluation system of EINA and UAB is a continuous assessment system, the objective of which is for the student to know their academic progress throughout their educational process to allow them to improve it.

The continuous assessment process must include a minimum of three evaluative activities, of two different types, distributed throughout the course, none of which can represent more than 50% of the final grade.

The evaluation will be carried out through three exercises.

1. Definition of animated behavior. 25% final grade
2. Creation of animated identity based on kinetic typography. 50% final grade
3. Presentation and exhibition of the project. 25% final grade

### Review process

The conceptualization and execution of activities 1 and 2 and the quality of the presentation in activity 3 will be assessed. In addition to daily monitoring and attendance and participation in class throughout the 3 activities.



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## Bibliography and Resources

Case Studies.

Reference studies

Small Software Capsules





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Content: 2

**Brief Description:**

It is a continuation and natural evolution of the "creation workshop 1. Photography and art direction"  
In this subject we will understand the vision, work and coexistence of an Art Director with the moving image.

And we will put it into practice by carrying out an audiovisual project.

**Training Objectives:**

Think, create, write, direct, produce and post-produce.

The idea, the concept, the narration and the realization.

Criterion. Knowing how to choose and do.

Work as a team.

Recommendations

This creative workshop is recommended for anyone interested in audiovisuals, content, music, video art, art direction and communication, regardless of their specialization.



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## Contents and Methodology

### **Brief Description:**

Introduction to audiovisual language.

Who is who and who does what, in the creative and production process, in the audiovisual world.

References and Referents.

Art direction and audiovisual

Trends.

Each student will make a personal audiovisual project.

We will invite directors/filmmakers.

### **Teaching methodology:**

Let's do it!

We learn by doing.

We argue, share, develop and defend our ideas.

Be honest and talk about what interests us.

Let's take advantage now that we still have the freedom to express who we are and what sets us apart.

Do some personal reflection and take advantage of the subject to do what we want to do.

### **Training activities:**

Joint proposals and content creation

Presentations and debates in the classroom.

Argumentation, conceptualization and development of projects.

Realization and production.

## Evaluation

### **General evaluation regulations**

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### **Continuous evaluation system**

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The continuous assessment process must include a minimum of three evaluative activities, of two different types, distributed throughout the course, none of which can represent more than 50% of the final grade.

The objective of continuous assessment is for the student to be able to know their progress throughout their training process in order to allow them to improve it. The grade for the subject will correspond to the grade for the projects, attendance, participation, personal and group contribution. The assignments scheduled in the program will be scored numerically based on 10 as partial grades. The final grade will take into account the partial grades in the various phases of the subject as well as attendance and completion of the assignments (20%), the idea or proposal (40%) and the formalization and presentation (40%).

### **Review process**

The review can be requested from the corresponding department and will be carried out during the week indicated in the academic calendar.



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## Bibliography and Resources

D&AD Rotovision. The Art Direction Book

Milton Glaser. Citizen designer ed. Gustavo Gili

A. Tarkowski. Sculpting in Time. Rialp-

Fontcuberta, Joan. The kiss of Judas. Photography and truth

Pablo d'ors. Biography of silence. ed Siruela

## Content: 3

### **Brief Description:**

Remake 3%

What if consider art and design histories as an instructions book to be interpreted, performed, and hacked? Virgil Abloh once said that in order to make something original you only need to change 3% of an existing object. What if we apply this principle to art and design histories? What if we consider artworks as open source furnitures, and Ikea table instructions as concrete poems? Perhaps cosplay is not an exclusively human behavior, after all. Drawing from readymade tactics and appropriation art, we will study variations on works by Enzo Mari, Sol LeWitt, Sherrie Levine, Esther Ferrer and Marcel Duchamp, among others.

Keywords: Appropriation art, antidesign, autoprogettazione, cosplay, permutation, reenactment, Situationism, sampling, variation.

### **Training Objectives:**

The aim of this course is to develop a critical and practice-oriented sense of the mechanics of originality -- that is, of originality as a "trick" -- both in its occurrences through contemporary art and radical design histories. Awareness of that level of cultural operations, in which we constantly buy new iterations of the "new" while we perfectly know it is not, will be the basis to a production process in which students will choose their path: three-dimensional, audio-visual, or theoretical.

This subject is taught in: English (International)

Tutoring can be done in: Catalan, Spanish, English, French

## Recommendations

This course, "Remake 3%", will be of particular interest to all those willing to explore the intersection of radical design practices, contemporary art and critical thought. While the historical stage for that intersection, as we will examine it, will be Western consumerist society in the past few decades, we will also keep an eye on the cultural and artistic movements produced by non-aligned cultures and underground currents in the diverse latitudes of the Global South. Specifically, this course is designed for students developing a practice that opposes naive, ethnocentric, and/or normative approaches of "innovation" and/or "creativity". Instead, we will seek for alternatives in which uncreative experimentation is able to trigger epiphanic reflexes.

## Contents and Methodology

### Brief Description:

This practical and theoretical course has been conceived for students to choose their path while building on a common basis that will enable constant group debate.

Focusing on the quantitative aspects of taste, trends, and social interest, the course "Remake 3%" will function as a progressive, albeit non-linear, construction of a navigation chart. Intended for future agents in the cultural industry, concepts such "Appropriation art", "antidesign", "autoprogettazione", "readymade", "permutation", "remake", "détournement", among others, will appear as key points on the map.

Ultimately, we will ask ourselves whether it is possible to assume that the crisis of originality is also the crisis of counter-culture, and whether the production of "newness" can be equaled to that of "otherness". In that sense, function is fiction and form is... simply not enough.

### Teaching methodology:

Understood as a space for creation and speculation, theoretical sessions, viewing images and debate on readings will be combined, with practical sessions where exercises will be developed outside and inside the school.

#### Directed Activities

- Theoretical classes: master classes and large group debate

Learning outcomes: CE3,

- Representation workshop: assistance in resolving graphic representation difficulties.

Learning outcomes: CE3, CE4, CE 9

- Presentation of works: presentation of results, partial and final and round of evaluations.

Learning outcomes: CE 3.2, CE 9.3,

#### Supervised activities

- Tutorials: tutorials for monitoring and correcting the project.

Learning outcomes: CE 3.2, CE 4.1, CT 10, CT 15, CT 19

- Development of projects and learning of stamping processes. CE 3.2, CE 4.1, CE9.3, CT 10, CT 15, CT 19

#### Autonomous Activities

- Activity: Information and documentation: independent work on source research, information collection, analysis and documentary preparation of the same.

- Learning outcomes: CT19.

- Activity: Elaboration of projects: independent work on the formulation of design programs and their development based on simulated situations and guidelines for the development of the project.

- Learning outcomes: CE3, CE 4, CE 9, CT10, CT15, CT19

### Training activities:

The course will be divided in three blocks: (1) Theories, (2) Exploration/Ideation, (3) Production

- Block (1) consists of three sessions dedicated to presentation, viewing, and discussion of core references within the course's discussion of "mechanics of originality" and the "uncreative economies"

- Block (2) devotes two sessions for students to identify cases and sources of their specific personal interest, for the exploration of potential production scenarios

- Block (3), in the last three sessions, will focus on production. Individually or in groups, students will be asked to produce physical, digital artefacts in response to any of the paradigms studied (Abloh's "the 3% approach", Levine's "Rephotography", Borges's "Pierre Menard-ism", Duchamp's "readymade", etc)

Conclusion: The course will conclude with a public presentation / exhibition of the works produced by students

## Evaluation

### General evaluation regulations

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Each of the three Blocks of "Remake 3%" will involve a methodology of assessment and evaluation.

Evaluation Block (1):

Attendance 30%

Active participation / debate 40%

Complete viewings & readings 30%

Evaluation Block (2):

Attendance 30%

Project ideation: Narrative 30%, Visual quality 20%, Doability 20%

Evaluation Block (3):

Attendance 30%

Project ideation: Narrative 30%, Visual quality 20%, Execution/presentation 20%

Minimum attendance to be evaluated: 80%

In case of absence, the corresponding certificate will have to be delivered and the delivery of pending work agreed upon. The evaluation of the exercises will be done throughout the course. In the event of



a failed exercise or a low grade, the student may present a new version of the work at the end of the course for reassessment.

Total or partial non-presentation of assignments as well as repeated and unjustified absence from face-to-face sessions will lead to the qualification of "non-evaluable".

### **Review process**

The review can be requested from the relevant teaching staff and will be carried out during the week indicated in the academic calendar.

The student who wants to present a work for a re-evaluation given to a suspended student or for a justified absence can present the pending work at the end of the first week of recovery following the same requirements as the first delivery.

## Bibliography and Resources

### Bibliography:

Core Studio Public Lecture: Virgil Abloh, "Insert Complicated Title Here", 30 October 2017

<https://www.youtube.com/watch?v=qie5VITX6eQ>

Marcel Duchamp, "Apropos of Readymades", 1961.

[https://monoskop.org/images/8/8e/Duchamp\\_Marcel\\_1961\\_1975\\_Apropos\\_of\\_Readymades.pdf](https://monoskop.org/images/8/8e/Duchamp_Marcel_1961_1975_Apropos_of_Readymades.pdf)

Barbara Kruger/Supreme: who's hijacking whom?

Graphéine, 19 January 2022. <https://www.grapheine.com/en/history-of-graphic-design/barbara-kruger-supreme-who-is-hijacking-whom>

Alexandra Midal, Design by Accident. For a New History of Design, London: Sternberg Press, 2019

Enzo Mari, Proposta per un'Autoprogettazione [Proposal for Self-Design], Milan: Galleria Milano, 1974.

Available:

[https://syllabus.pirate.care/library/Enzo%20Mari/Autoprogettazione\\_%20\(221\)/Autoprogettazione\\_%20-%20Enzo%20Mari.pdf](https://syllabus.pirate.care/library/Enzo%20Mari/Autoprogettazione_%20(221)/Autoprogettazione_%20-%20Enzo%20Mari.pdf)

Group Material, Democracy, New York: Dia Art Foundation, 1989

Jorge Luis Borges, "Pierre Menard, autor del Quijote", Revista Sur, May 1939. Available in Spanish:

<https://ciudadseva.com/texto/pierre-menard-autor-del-quiote/>

Liz Linden, "Reframing Pictures: Reading the Art of Appropriation", Art Journal, Winter 2016, 75 (4): 40–57.

"Mode d'emploi du détournement" in Situationist International Anthology, Revised and Expanded Edition, PM Press, 2024. Available: <https://www.bopsecrets.org/SI/detourn.htm>

Los readymade pertenecen a todos, exposición, MACBA, 2000.

## Content: 4

### **Brief Description:**

In this creative workshop, we will explore light as the primary creative material. Through practicing observation of the world around us and the manipulation of different light sources, we will explore Light Art, an artistic discipline in which light is the central axis of creation.

The internship prioritizes writing, photography, drawing, and layout through playful exercises, research, and rapid prototyping, with results transferable to various types of projects. At the end, each student will present a model/lighting piece accompanied by a written report.

We will develop creative and procedural skills specific to design (ideation, iteration, documentation, and presentation) that can be transferred to any project.

### **Training Objectives:**

- Train your eye to start looking instead of seeing.
- Understand the relationship between observer, work and light, and how light constructs and can modify that relationship.
- Work with light as a configurator of spaces, atmospheres and sensations through writing, photography, drawing and layout.
- Critically analyze the role of light in any design and integrate aesthetic and interactive criteria.
- Develop artistic creation process skills applicable to multiple physical and virtual contexts.

## Recommendations

No prior lighting knowledge is required. It's recommended that you bring a notebook/log, cell phone, or camera for documentation, and a willingness to experiment, record, and reflect on the process in class (lab + project-based learning).

## Contents and Methodology

### **Brief Description:**

Light Art. We will analyze artists who work with light as their primary medium (e.g., Turrell, Cruz-Diez, Le Parc, Fontana, Moholy-Nagy) to identify strategies transferable to design. Within this framework and through playful practices, research, and rapid prototyping, we will prioritize writing (journals and statements), photography (test series), drawing (sketches and light notation), and layout (scale models) to explore how light shapes spaces, objects, and perceptions.

Rethinking garden lighting (couples).

Small format light piece (up to 50 × 50 cm).

Each group will design a portable outdoor piece made from unconventional sources (bike lights, EL wire, flashlights, fiber optics, light toys, small solar/USB modules) and light modulators (translucent paper, textiles, water, glass, perforated metal, mirrors).

Curatorial theme: Tiny garden inhabitants. The piece should evoke microecosystems and behaviors (shelter, trail, vibration, flight, growth) without literal representation.

Conditions: Low voltage/USB or battery; reversible, zero-footprint mounting (no permanent fixtures, harsh adhesives, or vegetation interventions).

Deliverables: finished piece + technical sheet (materials, source and assembly diagram) + 200–300 word report (intention, references and iterations) + sketch/plan and 5 photos (day/night) + 10–30 s video in operation.

**IMPORTANT:** There will be two sessions that will be moved to Thursday afternoon in order to work without natural light.

### **Teaching methodology:**

Experimental sessions are planned with samples and various materials provided by the students and the teacher to create a "light laboratory" and learn through experience. There will be required readings to provide theoretical content, with the goal of generating a toolkit for use in our practical sessions.

### **Training activities:**

ACT 1: Written exam (20%) — theoretical, individual

Session: S3 (checkpoint).

Scope: fundamentals of light, vision phenomena, Light Art references and vocabulary worked on in S1–S2.

Evidence: classroom test (short questions + brief development).

ACT 2: Extended Essay (40%) — individual

Delivery session: S5.

Instructions: Choose a piece of Light Art and address:

Description: morphology + spatial and temporal functioning.

Light phenomena used.

Light tools (according to Eli Sirlin) applied to the piece.

Classification of the work (according to Suppicich & Acosta) and justification.

Viewer experience: sensations and connection with the piece.

Format: A4 · Arial/Times 12 · line spacing 1.5 · top/bottom margins 2.5 cm, left/right 3 cm · 5–10 pages (not including cover and bibliography) · APA · images in Annex with captions · printed and digital delivery per campus.

ACT 3: Lighting project (40%) — in pairs

Working sessions: S4, S6, S7 · Presentation: S8.

Statement: design and construction of a small-format portable lighting piece (← 50 × 50 cm) with non-conventional sources (e.g., bike lights, EL wire, flashlights, fibers, USB/solar modules) and modulators (paper, textile, water, glass, perforated metal, mirror).

Curatorial theme: "Little Garden Inhabitants" (evoking micro-ecosystems and behaviors without literal representation).

Mounting: reversible and footprint-free.

Deliverables: finished piece + technical sheet (materials, source, diagram) + 200–300 word report + simple sketch/plan + 5 photos (day/night) + 10–30 s video.

Agenda: Two sessions are moved to Thursday afternoon to work without natural light.

Final grade: weighted average 20% (ACT1) + 40% (ACT2) + 40% (ACT3).

## Evaluation

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ACT1: Written theory test: 20% (individual)

ACT 2: Analysis Monograph on a Light Art Piece (40%) (individual - theory)

ACT 3: Light piece creation project (40%) (couples)

- 30% creation procedure
- 10% delivery of final piece

### Review process

The theoretical test may be repeated within the established review period, and if the minimum level of the practical tests is not met, they may be retaken during this period.

## Bibliography and Resources

### Required Bibliography

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Encuentro Channel. (February 19, 2021). Footprints. Argentine Art: Lucio Fontana - Encuentro Channel [Video]. YouTube. <https://www.youtube.com/watch?v=DF2BjuFGooA>

Cruz-Diez Foundation. (2019, March 29). What is Chromosaturacion? | Carlos Cruz-Diez [Video]. YouTube. <https://www.youtube.com/watch?v=pZJYmsg7GA>

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Los Angeles County Museum of Art. (2020, February 12). James Turrell's Roden Crater [Video]. YouTube. <https://www.youtube.com/watch?v=g0g6JFYRKxQ>

Lucio Fontana, G. Kaisslerian, B. Joppolo, M. (1948). Manifesto of Spatialism. Buenos Aires.

Luciana Suppicich, Sophya Acosta. (2022). Light Art as an Artistic Support. Proceedings: XVI Ibero-American Lighting Congress LUXAMÉRICA 2022 (Nos. 1, 1, 342, 193, 199). Federico Santa María Technical University.

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Kosice Museum. (2016, December 2). Gyula Kosice, a visionary in contemporary art (ArtOnline) [Video]. YouTube. <https://www.youtube.com/watch?v=JJYYKiAP0zE>

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Zajonc, Arthur. (2015). Less Light: A Contemporary View. Capturing Light: The Intertwined History of Light and Mind (Nos. 2, 1, 390, 295, 333). Atalanta Publishing, SL

#### SUPPLEMENTARY BIBLIOGRAPHY

History of Electricity. (2013). Epec University.  
<https://web.epec.com.ar/docs/educativo/institucional/historia.pdf>

José Roberto García Chávez. (2019). Towards a Sustainable and Resilient Bioclimatic Architecture, Sustainable Bioclimatic Architecture in Europe II. Autonomous Metropolitan University.

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Mercedes, GR (2017). Light in Islamic Architecture: King Abdul Aziz and Abu Bakr Mosques I UPM Digital Archive. <https://oa.upm.es/47412/>



## Content: 5

### **Brief Description:**

This Laboratory focuses on experimentation, innovation, sustainable design and creativity through new materials.

This laboratory offers a combination of theory and practice, based on experimentation and prototyping, providing participants with the knowledge and skills necessary to innovate in the use of advanced materials. It values the relationship between materials and the design project, exploring new innovative and sustainable materials, generating new applications, new developments or material languages.

We will also pay attention to the emotional values of materials, based on their technical and sensory properties, and their relationship and interactions with the user, as well as their dynamic properties.

Sustainable materials generate an impact that influences industry and society. Innovation based on materials allows us to develop new initiatives, find more responsible solutions and launch more creative design processes.

The subject will address advanced materials, but will also study design practices that can arise from popular materials, vernacular traditions, reflecting the materials, techniques and styles specific to a local context and that are rooted in the cultural, economic, climatic and social reality. . .

### **Training Objectives:**

- Expand knowledge about innovative and sustainable materials.
- Know and learn from the specific standards linked to the mechanical, physical, chemical or thermal properties of each material. These standards will guide designers in the choice of materials when developing a design project, as well as innovating with new materials or reinventing themselves with existing materials.
- Select and apply materials, technologies and manufacturing processes in the design and specificity of development processes.
- Acquire skills to devise applications for new materials.
- Experiment and prototype with new materials and related technologies to generate new material applications, new material developments or new material languages.
- Evaluate the sustainability and environmental impact aspects of materials for their application in industry.
- Generate a solid narrative and strategy to successfully position a material within the market or sector.
- Provide the student with the ability to understand the materials not as the final consequence of the project procedure but as an instrument to be incorporated in the first stage of the process, either as a

method of exploring ideas or as a premise of the project.

## Recommendations

This subject is recommended for any undergraduate design student with a curiosity and interest in materials and the exploration of their possibilities. The multidisciplinary content makes the subject open to all specialities, with Product Design being the most suitable.

## Contents and Methodology

### **Brief Description:**

- Fundamentals of materials.
- Materials in context and in use.
- Materials as a source of inspiration. Strategies: Biomimicry, nanotechnology...
- Sustainability, industry and society.
- Vernacular materials.
- Intelligent and adaptive materials.
- Narratives, languages and interaction.

### **Teaching methodology:**

The course will be structured mainly in intensive sessions throughout the semester, in the format of knowledge capsules, workshops, presentations and visits to specific contexts. The knowledge acquired in each session will be complemented by more continuous research and action work, in the form of a personal project, based on the monitoring and support of the student's autonomous work, through individual and collective tutoring.

- Theoretical classes, practical cases and visualization of applied examples to illustrate the contents of the subject.
- Visits to technology and materials centers, industry and other agents in the field of knowledge.
- Application of idea generation systems through the use of materials in the first instance.
- Exploration of research methods that can be useful for understanding new materials.
- Experimentation and prototyping as a method of creation, exploration and validation
- Development of other self-analysis methods to evaluate the results obtained.
- Individual and/or group work focused on the use and/or creation of new materials.
- Presentation of the work.
- Viewing documentaries on the latest research on materials.

### **Training activities:**

- Visits to material centers, experts in the classroom, industry and crafts.
- Knowledge capsules and thematic workshops
- Experimentation and prototyping workshops
- Participation in corrections and others
- Autonomous viewing of the proposed materials and contents
- Research, analysis, design and development work and application of a new material in a specific context.

## Evaluation

### General evaluation regulations

A student will be considered "Not Assessable" (NA) if they have not submitted all the learning evidences or have not attended 80% of the classes without justifying their absences. In case of a justified absence, the student must contact the teacher at the time of rejoining to determine the recovery of the activities they missed.

If the student commits any irregularity that may lead to a significant variation in the grade of an evaluation act, that evaluation act will be graded with 0, regardless of the disciplinary process that may be initiated. If several irregularities occur in the evaluation acts of the same subject, the final grade for that subject will be 0.

### Continuous evaluation system

The evaluation system of EINA and UAB is a continuous assessment system, the objective of which is for the student to know their academic progress throughout their educational process to allow them to improve it.

The continuous assessment process must include a minimum of three evaluative activities, of two different types, distributed throughout the course, none of which can represent more than 50% of the final grade.

The course work will be done individually or in pairs.

The competencies of this subject will be assessed as follows:

- Delivery and presentation of a research paper, 30%.
- Ideation work, 30%
- Experimentation, development and prototyping project of a new material/application or creative process linked to a material, 40%

For each of the assessable activities, a rubric will be proposed based on the following concepts: rigor, creative and resolution capacity, depth and development, and presentation and argumentation capacity.

Class attendance and external visits are mandatory. Unjustified absence from more than 20% of these will result in a grade of No Attendance.

Submissions of exercises or work outside the established deadlines or without the minimum presentation requirements requested will not be accepted.

To be eligible for reassessment, the student must have attended more than 80% of the classes/visits

and have submitted the proposed exercises.

The reassessment may consist of a correction/expansion of the exercises previously worked on or a final synthesis test to assess the acquisition of skills.

The maximum grade that can be chosen in the reassessment will be a 6 and will replace the rest of the grades.

### **Review process**

The teacher will communicate the review process when evaluating the work.

## Bibliography and Resources

- William McDonough, Michael Braungart. "Cradle to Cradle = from cradle to cradle: redesigning the way we do things." SAMcgraw - Hill/Interamericana of Spain
- Chris Lefteri. (2009). "Ingredients". Chris Lefteri Design Ltd. London
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- Etienne Guyon – Alice Pedregosa – Beatrice Salviat. "Subjects and materials. From "Who is fait le monde?" Publisher: Belin (March 23, 2010 Collection: Bibliothèque scientist
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- George M. Beylerian – Andrew Dent. "Ultramaterials. Ways in which "Materials innovation changes the world." Ed. Blume.
- Guillermo Aguilar Sahagún. "Man and materials". Ed. FCE Culture Fund Economic Mexico.
- Guillermo Aguilar Sahagún, Salvador Cruz Jiménez, Jorge Flores Valdés. "A look at the matter." Ed. FCE Mexico Economic Culture Fund.
- Janine M. Benyus. "Biomimicry. How science innovates by being inspired by nature". Ed. Tusquets.
- Javier Peña Andrés. (2009). "Selection of materials in the design process". CPG Editions.
- Klaus-Michael Koch. (2004). "Membrane structures, innovative construction with films and fabric". Ed Prestel. Munich.
- Linda Nussbaumer. (2011). "Inclusive Design: A Universal Need". Fairchild Pubns. Wilmington.
- "Mater in progress. "New materials, new industry". Barcelona Subject "World of Materials 3. Innovative Materials for Architecture and Design" Ed.Frame Editors
- Peter Zumthor. (2006) "Atmospheres" Ed Gustavo Gili. Barcelona
- Rafael Serra (1993). "You dynamize architecture". Edicions UPC. Barcelona.
- Rob Thompson. (2009). "Manufacturing Processes for Design Professionals". Thames & Hudson. New York.
- Roberto Verganti. (2009). "Design-driven innovation: changing the rules of Competence to radically innovate what things mean." Harvard Business School Press. Boston.
- S. Kalpakjian, SR Schmid. (2008). "Manufacturing, engineering and technology". Ed. Pearson Education, Mexico.

Digital resources - Websites:

<http://www.materialconnexion.com>

<http://es.materfad.com/materiales>

<http://www.inventables.com>

<http://www.materialslibrary.org.uk>

<http://www.materia.nl>

<http://www.materio.com>

<https://mtrl.com/en/>