

Tecnologia

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Martinez, Jordi Esteve Pastor, Jordi Pla Sabate, Cristina Subias Soto

Supervising Teacher: Silvia Escursell Martinez

Content: 1,2,3,4,5,6

Code: 108089

Credits: 6 ECTS

Course: 2

Semester: 2

Typology: Obligatory

Subject:

Schedules:

Content	Schedules	Teacher
1	Dimarts 10:45 - 12:45	Cristina Subias Soto
		Silvia Escursell Martinez
	Dijous 12:15 - 13:45	Cristina Subias Soto
		Silvia Escursell Martinez
2	Dilluns 12:30 - 14:30	Albert Conejos Sandoval
		Silvia Escursell Martinez
		Jordi Pla Sabate
		Jordi Esteve Pastor
	Dijous 08:30 - 10:00	Albert Conejos Sandoval
		Silvia Escursell Martinez
		Jordi Pla Sabate
		Jordi Esteve Pastor
3	Dilluns 12:30 - 14:30	Silvia Escursell Martinez
		Mariya Alipieva Lazarova
	Dijous 11:00 - 12:30	Silvia Escursell Martinez
		Mariya Alipieva Lazarova

Content	Schedules	Teacher
4	Dimarts 11:30 - 13:30	Silvia Escursell Martinez
	Dimarts 13:45 - 15:15	Silvia Escursell Martinez
5	Dijous 08:30 - 10:00	Silvia Escursell Martinez
		Cristina Subias Soto
	Dimarts 08:30 - 10:30	Silvia Escursell Martinez
		Cristina Subias Soto
6	Dimarts 08:30 - 10:30	Silvia Escursell Martinez
	Dijous 11:45 - 13:15	Silvia Escursell Martinez



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Subject Presentation

This subject introduces the technological foundations applied to design, with special attention to the properties, behaviors and performances of materials, as well as to the processes of transformation, construction and manufacturing. It addresses construction techniques and criteria for technological choice depending on the context, typology and viability of the project. It also explores basic concepts of ergonomics, anthropometry and interaction between people and environments or devices, in order to guarantee coherent, functional and sustainable design solutions.

Learning outcomes of the degree program

Knowledge

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.

Skills

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.

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 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.

Learning outcomes of the subject

Knowledge

Describe the characteristics, behaviors and performance of materials applied to design, as well as printing, construction and industrial transformation technologies. (KT04)

Skills

Apply appropriate technology in relation to materials and construction or transformation processes according to criteria derived from the economic analysis of the context. (ST02)

Relate formal and expressive design solutions to materials, their characteristics and behaviors, their transformation processes and surface treatment in order to develop realistic preliminary design proposals. (ST04)

To effectively apply the basic concepts of anthropometry, visual perception physiology, and ergonomics in the planning and development of design projects. (ST04)

Competencies

Adapt the design project to the specific regulations and conditions of the context in which it is proposed. (CT02)

Evaluate objects, graphic communications, and living spaces to identify design problems related to the characteristics and performance of materials or manufacturing processes. (CT04)

Propose design solutions and alternatives in the use of materials and manufacturing processes. (CT04)

Evaluate the technological feasibility of alternative design solutions, considering the use of materials and manufacturing processes. (CT04)

To verify, during the design process, how basic physical principles act on the designed objects and/or spaces. (CT04)

Content: 1

Brief Description:

Understanding space through the materials that make it up and the construction techniques used to move from design to material execution.

Learn which material or group of materials to use, in relation to its properties, its use process, paying attention to aspects such as durability, efficiency and sustainability.

Understand what technology involves the use of certain materials or others.

Training Objectives:

The subject aims to transmit the necessary knowledge that technology can bring to interior design, to understand space and so that the designer can successfully carry out their project.

Construction systems and technological criteria will be discussed so that the student develops an understanding of general technology, an idea of the language of technology.

The objective is to learn about the possibilities and limits of construction, so that the student can use their knowledge in any project or assignment.

Recommendations

Know, understand and master the fundamental quantities of length, surface area and volume of space.

Mastering minimal mathematical calculations.

Know how to graphically represent a space or element of a space, on a scale plan.

Mastery of scale drawing is essential.

Have passed the technical drawing subject of the previous year.

Contents and Methodology

Brief Description:

The course material will be structured into 3 thematic blocks:

- Block 1: Construction systems in architectural space: techniques and materials

A wide selection of construction systems and materials is shown.

It starts from traditional construction technologies from which the student must be able to understand more complex high technologies that they will encounter in their professional life.

Weekly exercises will be carried out on given situations, applied to a space with uses such as housing, work or any other use.

Different topics will be discussed in order to understand how they are formed: enclosures, partitions, transposed walls and wall coverings, floors and ceilings. Carpentry and glass.

- Block 2: Materials, sustainability and regulations.

Sustainability concepts applied to construction materials and systems will be discussed: eco-labeling of materials and environmental certifications.

Materials and their impact on the environment and on the health of users.

Minimum concepts of CTE regulations will be explained in relation to the selection and proposal of materials in a space.

- Block 3: Design for comfort in the interior space (thermal comfort and acoustic comfort).

We will analyze and explain the criteria and techniques for good control of different types of comfort indoors: hygrothermal comfort and acoustic comfort, as a starting point for the design of healthy spaces.

Minimal calculation concepts will be taught.

The student must be able to make proposals to resolve the adaptation of an empty space to a specific use, through passive design techniques and the use of appropriate materials, to achieve a comfortable, efficient and healthy space.

Concepts such as thermal insulation, insulation and acoustic conditioning will be discussed.

Teaching methodology:

- Theoretical classes and visualization of examples to illustrate the contents of the subject.

- Practical classes related to the techniques explained: individual development of exercises in relation to the contents of the theoretical sessions.

- Practical assignments and periodic written checks of the content taught in classes.

Training activities:

- Development and practical resolution of construction details - blocks 1 and 3.

- Theoretical follow-up controls at the end of each topic.

- Preparation and participation in joint corrections and other proposed activities.

- Viewing practical examples and visiting a work site (if the calendar allows).

- Class attendance.

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.

Both practical exercises to resolve construction details will be required each week, as well as theoretical checks of the material taught once each topic has been completed.

In principle, 3 graded practical assignments and 3 graded theoretical tests are planned (any changes will be announced in advance), in order to evaluate the student.

The average of the practical exercises must be equal to or greater than 4 to be averaged with the rest of the grades for the subject.

Similarly, the average of the 3 theoretical tests that can be scored must be equal to or greater than 4 to be averaged with the rest of the grades for the subject.

If you do not reach a 4 in these parts, you will not be averaged between them, nor with the monitoring and participation grades to obtain the final grade, and you will have to go for a reassessment.

Dedication and continuous and constant work from the student is required, from the beginning of the subject, as each week the knowledge acquired will have to be put into practice, solving an exercise arising from the theoretical class that will be corrected in the following practical class.

* Evaluation criteria:

45% of the grade in the evaluation will be given by the practical resolution and graphic representation on a detailed scale of 3 of the exercises proposed weekly in the different blocks (the average of the 3 will be this 45% of the final grade).

40% of the grade in the evaluation will be obtained from the different theoretical controls of the

subject taught, at the end of each topic (3 theoretical controls will be carried out, the average of the 3 will be this 40% of the final grade).

15% of the grade in the evaluation will be obtained from class attendance, monitoring of the subject and participation in practical corrections.

In the event of not passing the subject, you may opt for re-evaluation.

The reassessment will consist of a single mainly practical exam with resolution of constructive details, where the theoretical knowledge acquired in the subject taught in the course must also be demonstrated.

The grade obtained in the reassessment will replace the rest of the grades obtained previously. The maximum grade that can be obtained in the reassessment will be 6.

Review process

At any time, the student can request the review of a completed assignment or test.

Bibliography and Resources

* Bibliography

Magazines:

Tectonics

Constructive

Details

Detail Praxis (monographic, wood, stone, concrete...)

Books:

"Manual of construction details of interior design". W. Nutsch. Ed. GG

"Thermal and acoustic insulation". Miguel Payà – Monographs Ceac de la Construcción.

"The construction of architecture". Ignacio Paricio. ITEC

- vol.1- The techniques

- vol.2- The elements

- vol.3 The composition

"Basic guide to sustainability". Brian Edwards. Ed. GG

"Architecture as a technique 1. Surfaces" R. Araujo. ATC Editions. Madrid 2007

"Ecological architecture". D. Gauzin-Müller. Ed. Gustavo Gili, Bcn 2002

"Bioclimatic architecture in a sustainable environment". F.Javier Neila González. Ed. Munillalería

"Constructive architectural techniques of environmental conditioning" Cesar Bedoya Frutos, Fco. Javier Neila González. Ed. Munillalería

* Resources:

"Visual Dictionary of Construction": from the website of the Department of Territory and Sustainability of the Generalitat.

https://territori.gencat.cat/ca/01_departament/documentacio/general/terminologia_tecnica/diccionari_visual_

Regulations "Technical Building Code" (CTE)

<https://www.codigotecnico.org/>

Audiovisuals from the website SUSTAINABLE CONSTRUCTION AGENDA

<https://www.csostenible.net/>

<https://www.cateb.cat/sostenibilitat-i-edificacio/>

MATERFAD Materials Center of Barcelona

<https://www.fad.cat/materfad/es>

Content: 2

Brief Description:

The subject falls within the field of product design technology. It is focused on providing students with knowledge about the main industrial transformation processes, basic and advanced, linked to the different families of materials, defining their relationship with product design processes.

The subject is characterized by three basic pillars:

- Knowledge is taught from the application of processes and materials to the design project and not from a theoretical point of view.
- The knowledge, taught through case studies, is complemented by multiple visits to manufacturing centers, workshops and production companies where students will be able to practically experience the processes involved and consult their doubts directly with professionals with high expertise in the field.
- The subject proposes synergies with the semester's project subject in the application of acquired knowledge.

It is taught by a professor but with the collaboration of a group of experts in projects linked to the different processes and materials covered.

Training Objectives:

Understand the role of manufacturing processes in product design

- Understand the relationship between materials, processes and design requirements
- Be able to link functional, mechanical, formal and finishing needs to the most appropriate process and material
- Have design criteria
- Be able to have a specialized language to communicate with manufacturers and generate the appropriate documentation depending on the project and manufacturing process.
- Learn to make and justify technical decisions that affect the outcome

- Understand the implication of cost and the relationship with the process and production volumes

Recommendations

Contents and Methodology

Brief Description:

Ceramics and Aggregates.

- Types and general characteristics of ceramics. Case studies.
- Transformation processes: Manual ceramic lathe, molding, pressed shaping.
- Surface finishes and treatments
- Visit to an industrial ceramics workshop.
- Types and general characteristics of aggregates. Case studies.
- Transformation processes: Molding and press forming.
- Surface finishes and treatments.
- Visit to a company specializing in concrete production.

Glass

- Types and general characteristics of glass and crystal. Case studies.
- Glass transformation processes: mold blowing and blow molding, artisanal techniques. Press molding or automatic blowing.
- Glass treatments and surface finishes.
- Visit to a company specializing in glass production.

Introduction to the additive industry. 3D printing.

- Typologies and general characteristics of the different additive manufacturing technologies.
- Visit to a technology center where you can see how these processes work.

Plastic

- Introduction: Polymerization, Blends, Additives, Mechanical and thermal behavior
- Plastic Materials: Thermosets, Thermoplastics, Rubbers, Silicones, Composites
- Shaping processes: Foaming, Extrusion, Injection, Blowing, Rotomolding, Thermoforming
- Basic rules for designing plastic parts
- Unions of plastic elements
- Surface finishes

Metals

- General types and characteristics: ferrous and non-ferrous metals
- Transformation processes
- Working with metal sheets: Cutting, Folding, Stretching
- Visit to a company specializing in sheet metal
- Extrusion
- Forging
- Foundry
- Visit to a company specializing in non-ferrous metal casting

- Unions of metal elements
- Surface finishes and treatments

Wood

- Industrial formats: solid wood, manufactured planks and veneers
- Wood bending: plywood and steam.
- Unions
- Finishes

Teaching methodology:

The subject is divided into three main blocks:

1. CERAMICS AND GLASS
2. PLASTICS
3. METALS, WOOD

Each of these blocks will consist of the following contents:

- Theoretical classes: case studies
- Workshop classes where theory and practice are combined.
- Making-offs of specific products
- Seminars on specific content taught by experts
- Scheduled visits to workshops and factories
- Independent or group work in the classroom

Training activities:

Block 1 - Ceramics, aggregates and glass: 20% of the grade

1. Practice I: Exercise linked to the ceramics and aggregates block. (10% of the grade).

2. Practice II: Exercise linked to the glass block. (10% of the grade).

Block 2 - Plastics: 20% of the grade

3. Practice I: Understanding and applying knowledge of the different types of plastics on an object to be analyzed. (5% of the grade).

4. Practice II: Understanding and application of knowledge of the manufacturing processes of an object to be analyzed. (5% of the grade).

5. Final block project: Design of a prototype injection mold for the manufacture of modular parts in series. (10% of the grade).

Block 3 - Metals and wood: 20% of the grade

1. Exam: Linked to the metals block. (10% of the grade).

2. Practice II: Exercise linked to the wooden block. (10% of the grade).

Final subject work 35% of the grade

Attendance and participatory attitude count for 5% of the grade.

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.

Block 1 - Ceramics, aggregates and glass: 20% of the grade

1. Practice I: Exercise linked to the ceramics and aggregates block. (10% of the grade).
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Block 2 - Plastics: 20% of the grade

3. Practice I: Understanding and applying knowledge of the different types of plastics on an object to be analyzed. (5% of the grade).
4. Practice II: Understanding and application of knowledge of the manufacturing processes of an object to be analyzed. (5% of the grade).

5. Final block project: Design of a prototype injection mold for the manufacture of modular parts in series. (10% of the grade).

Block 3 - Metals and wood: 20% of the grade

1. Exam: Linked to the metals block. (10% of the grade).

2. Practice II: Exercise linked to the wooden block. (10% of the grade).

Final subject work 35% of the grade

Attendance and participatory attitude count for 5% of the grade.

Review process

The review will consist of a work that encompasses different topics presented throughout the course and that demonstrates having achieved the necessary skills and knowledge.



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Bibliography and Resources

S.KALPAKJIAN, MR SCHMID. Manufacturing, Engineering and Technology. Pearson. Mexico, 2008

THOMPSON ROB. Manufacturing Processes for design professionals. Thames & Hudson. New York, 2007

CHRIS LEFTERI, Manufacturing Techniques for product design. Making it, 2007

A. JACKSON, D. DAY Handbook of woodwork, carpentry and joinery. Ed Prado, Madrid, 1998)

CHRIS LEFTERI, Materials for Design, 2014

Content: 3

Brief Description:

The subject aims to introduce the stages of production of an artistic project and its subsequent promotion. It combines creation with the management of documentation and actions, required by the institutions involved in the process of showing the work to the public.

Screen printing is incorporated as a means of expression, due to its ability to adapt to multiple materials, which in turn could be manipulated and combined with many others. This printing technique could be applied in many areas of one's own creation or to enhance the presentation of projects.

Training Objectives:

- Encourage creation, experimentation and critical thinking.
- Know the different production stages of a project and its possible outcomes.
- Understand the mechanisms of self-production and the relationship with other professionals, institutions and cultural agents.
- Learn to plan and work in an orderly manner.

Recommendations

No specific knowledge is required.

Contents and Methodology

Brief Description:

- The role of the artist in the production and promotion phases of artistic projects and their relationship with other cultural agents.
- Self-production of individual projects. Resource planning.
- Manual silkscreen printing processes. Manipulation of the results generating three-dimensional pieces in the installation format.
- Preparation and management of the documentation that accompanies and explains the project.
- Planning appropriate packaging for each piece.
- Finishing and presentation. Location in the exhibition space and interaction of the works with the public.
- Learn about the possibilities of financing the production costs of the work and also for expenses related to its participation in international exhibitions and fairs.

Teaching methodology:

A minimum dedication equivalent to two weekly sessions will be required, one guided and one autonomous, lasting approximately three and a half hours.

During the guided session, presentations of the topics and references will take place, the necessary demonstrations will be carried out, and the remaining time will be dedicated to visits, materialization and monitoring of the projects.

The autonomous sessions will be fundamentally productive and will have the support of the workshop teachers when necessary.

Training activities:

Historical and referential contextualization sessions, accompanied by viewings of physical examples of contemporary artists.

Sessions explaining procedures and practical demonstrations. Comments on readings, consultations, debates and visits to scheduled exhibitions.

Supervised internships in the workshop and occasionally preparation for internships to be carried out abroad.

Initially, the production of an installation project is planned, which includes a minimum of two elements, printed in screen printing and with volume. These can be combined with other techniques and artistic expressions (audio, video, performance, etc.). The project will be divided into three parts:

1. Preliminary draft (10%):

Present the initial idea, defining the production phases and estimating the time and production costs required for each stage. Each student presents an individual proposal in digital format, which includes a brief descriptive text, sketches, a schedule and an initial forecast of production costs.

2. Project (30%):

Realization of the project elements - choice of materials, conceptual justification, descriptive graphic documentation, distribution in the exhibition space, balance of expenses incurred.

If a large-scale installation is planned, a model can be made, maintaining the proportions, location and interaction of the elements.

3. Project promotion (30%):

- Construct suitable packaging for all the elements that make up the work.
- Prepare instructions for unpacking and installing the work.
- Mock application for a grant for the external promotion of the project (Institut Ramon Llull Model).

The planning of shipping and travel expenses for the artists will be worked on in pairs.

Constructive criticism (5%)

The last activity of the subject will consist of commenting on and evaluating a classmate's project.

At the beginning of the course, intensive capsules will also be held, lasting two sessions. One on the use of screens (5%) and the other will focus on the exploration of materials suitable for screen printing and for the construction of three-dimensional pieces (10%).

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.

Each of the proposed projects will have a certain value for the final grade:

- Capsule 1 (Wefts) - 5%
- Capsule 2 (Materials) - 10%
- Preliminary draft - 10%
- Project - 30%
- Project promotion - 30%
- Constructive criticism - 5%

The criteria will have to do in each case with the objectives of each project, but in all of them the following will be assessed:

- Conceptualization, coherence and originality.
- Effort, questioning and proper implementation.
- Punctuality, self-demanding and care in presentation.

Class attendance and participation will be weighted with 10% of the grade.

Review process

The review can be requested from the teaching staff and will be carried out according to the school calendar.



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Bibliography and Resources

Cossu, M and Dalquié, C. Serigraphy. Ed. Gustavo Gili. Barcelona 2015

Dawson, J. Complete Guide to Engraving and Printing. Techniques and materials. Ed. Blume. Madrid 1982.

Grabowski, B and Flick, B. The engraving and printing. Complete guide to materials and processes. Ed. Blume. Barcelona 2009

Sultan, T. Chuck Close Prints: Process and Collaboration. Princeton University Press. 2003

Weitman, W. Kiki Smith: Prints, Books & Things. The Museum of Modern Art. New York. 2003

Resources:

Ramon Llull Institute www.llull.cat

Institute of Balearic Studies www.iebalearics.org

Acción Cultural Española <https://www.accioncultural.es>

Content: 4

Brief Description:

This subject is interpreted from the technological side of design, with the intention of introducing students to the different technical typologies aimed at the formal solution of graphic design projects.

Through the contents taught during the course, it is intended to make known and reinforce the different aspects that revolve around the production of graphic projects, their variables and the multiple construction routes. This area of production is surrounded by a complex world that revolves around materials, printing systems, printing supports, finishes, among others.

Training Objectives:

The objectives of the subject are the following:

- Know the different processes that make up a design project, and understand the relationship of dependency that exists between them.
- Understand and know the professional relationship that exists between the graphic designer, technicians and suppliers.
- Discover the various aspects that make up graphic production processes (the operation of the different printing techniques, the specific language of each specialty and basic technical knowledge, for better optimization of the project conceptualization process).
- Develop the best option for preparing originals for reproduction.
- Learn to work with order, discipline and neatness.
- Achieve student self-management in the design of printed products.
- Visits to suppliers to develop and strengthen communication skills with professionals in the sector.

Recommendations

Contents and Methodology

Brief Description:

The subject addresses graphic production from the technological aspect of design, with the aim of providing the student with the technical knowledge necessary for the formal resolution of graphic projects. The processes, materials, systems and printing supports, as well as finishes, are studied from an applied and professional perspective.

The methodology combines theoretical sessions, case analysis, practical exercises and projects, promoting the autonomy and technical rigor of the students. The course is complemented by the participation of invited professionals and possible external visits to delve deeper into the various areas of graphic production.

Teaching methodology:

Theoretical presentations by the teaching staff

Carrying out exercises and projects related to graphic production

Analysis and discourse of graphic pieces

External visits from professionals from different fields.

Training activities:

1.- Typometry (10%)

Analysis of a printed product

2.- Research and analysis of originals (25%)

Prepare a map of printed materials. (semester)

3.- Color management and inks (5%)

Color modulations (hue and saturation of the sample)

4.- Postcard design (10%)

Creation of a line of postcards. Images and closed format.

5.- Design of a commercial stationery. (10%)

Develop a proposal for commercial stationery, starting from the format. Utilization of paper.

6.- Expandable. Programming.(10%)

Layout a spread with the program of a festival. Emphasis on the synthesis of information and placement of text. Work with tabs.

7.- Adaptations (15%)

Design an institutional A3 (Barcelona City Council). Change the proposal between the students. Make the relevant adaptations, in relation to CAP05 (City Council Style Guide).

8.- Packaging. (15%)

Creation of a die cut and visual proposal for a pack.

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 student must submit all the exercises set in the different sessions of the subject, taking into account the continuous assessment. Emphasis will be placed on the aesthetic and formal quality of the proposals, as well as on the final models/prototypes.

Review process

The review will be carried out according to the academic calendar, following the academic regulations of the Degree in Design.

Bibliography and Resources

JOHANSSON Kaj, LUNDBERG Peter, RYBERG Robert. Graphic production manual. Recipes GG (Gustavo Gili). ISBN: 84-252-1739-3.

AMBROSE Gavin, HARRIS Paul. Formato.Colección "Bases del diseño" Parramón Ediciones, 2004. ISBN: 84-342-2673-1

AMBROSE Gavin, HARRIS Paul. Impresión y acabados.Colección "Bases del diseño" Parramón Ediciones, 2007. ISBN: 9788434229099

AMBROSE Gavin, HARRIS Paul. Image. "Bases of design" collection. Parramón Ediciones, 2006. ISBN: 8434228548

CAT Mark. Listo para imprenta.Index Book, 2005. ISBN: 84-96309-30-4.

FAWCETT-TANG Roger. Finished printing and editing of brochures and catalogs. Rotovision, Index Book. 2006. ISBN: 2-940361-23-1

FORMENTÍ Josep, REVERTE Sergio. The graphic image and its reproduction Guidelines for the correct realization and reproduction of originals in the graphic production Ediciones CPG. ISBN: 978-84-931329-4-1

WELL Raphael. Graphic design and production. CPG editions. ISBN: 978-84-931329-3-4

HASLAM Andrew. Creation, design and production of books. Publisher Blume. Naturart, SA ISBN: 9788498011463

Content: 5

Brief Description:

Understanding space through the materials that make it up and the construction techniques used to move from design to material execution.

Learn which material or group of materials to use, in relation to its properties, its use process, paying attention to aspects such as durability, efficiency and sustainability.

Understand what technology involves the use of certain materials or others.

Training Objectives:

The subject aims to transmit the necessary knowledge that technology can bring to interior design, to understand space and so that the designer can successfully carry out their project.

Construction systems and technological criteria will be discussed so that the student develops an understanding of general technology, an idea of the language of technology.

The objective is to learn about the possibilities and limits of construction, so that the student can use their knowledge in any project or assignment.

Recommendations

Know, understand and master the fundamental quantities of length, surface area and volume of space.

Mastering minimal mathematical calculations.

Know how to graphically represent a space or element of a space, on a scale plan.

Mastery of scale drawing is essential.

Have passed the technical drawing subject of the previous year.

Contents and Methodology

Brief Description:

The course material will be structured into 3 thematic blocks:

- Block 1: Construction systems in architectural space: techniques and materials

A wide selection of construction systems and materials is shown.

It starts from traditional construction technologies from which the student must be able to understand more complex high technologies that they will encounter in their professional life.

Weekly exercises will be carried out on given situations, applied to a space with uses such as housing, work or any other use.

Different topics will be discussed in order to understand how they are formed: enclosures, partitions, transposed walls and wall coverings, floors and ceilings. Carpentry and glass.

- Block 2: Materials, sustainability and regulations.

Sustainability concepts applied to construction materials and systems will be discussed: eco-labeling of materials and environmental certifications.

Materials and their impact on the environment and on the health of users.

Minimum concepts of CTE regulations will be explained in relation to the selection and proposal of materials in a space.

- Block 3: Design for comfort in the interior space (thermal comfort and acoustic comfort).

We will analyze and explain the criteria and techniques for good control of different types of comfort indoors: hygrothermal comfort and acoustic comfort, as a starting point for the design of healthy spaces.

Minimal calculation concepts will be taught.

The student must be able to make proposals to resolve the adaptation of an empty space to a specific use, through passive design techniques and the use of appropriate materials, to achieve a comfortable, efficient and healthy space.

Concepts such as thermal insulation, insulation and acoustic conditioning will be discussed.

Teaching methodology:

- Theoretical classes and visualization of examples to illustrate the contents of the subject.

- Practical classes related to the techniques explained: individual development of exercises in relation to the contents of the theoretical sessions.

- Practical assignments and periodic written checks of the content taught in classes.

Training activities:

- Development and practical resolution of construction details - blocks 1 and 3.

- Theoretical follow-up controls at the end of each topic.

- Preparation and participation in joint corrections and other proposed activities.

- Viewing practical examples and visiting a work site (if the calendar allows).

- Class attendance.

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.

Both practical exercises to resolve construction details will be required each week, as well as theoretical checks of the material taught once each topic has been completed.

In principle, 3 graded practical assignments and 3 graded theoretical tests are planned (any changes will be announced in advance), in order to evaluate the student.

The average of the practical exercises must be equal to or greater than 4 to be averaged with the rest of the grades for the subject.

Similarly, the average of the 3 theoretical tests that can be scored must be equal to or greater than 4 to be averaged with the rest of the grades for the subject.

If you do not reach a 4 in these parts, you will not be averaged between them, nor with the monitoring and participation grades to obtain the final grade, and you will have to go for a reassessment.

Dedication and continuous and constant work from the student is required, from the beginning of the subject, as each week the knowledge acquired will have to be put into practice, solving an exercise arising from the theoretical class that will be corrected in the following practical class.

* Evaluation criteria:

45% of the grade in the evaluation will be given by the practical resolution and graphic representation on a detailed scale of 3 of the exercises proposed weekly in the different blocks (the average of the 3 will be this 45% of the final grade).

40% of the grade in the evaluation will be obtained from the different theoretical controls of the

subject taught, at the end of each topic (3 theoretical controls will be carried out, the average of the 3 will be this 40% of the final grade).

15% of the grade in the evaluation will be obtained from class attendance, monitoring of the subject and participation in practical corrections.

In the event of not passing the subject, you may opt for re-evaluation.

The reassessment will consist of a single mainly practical exam with resolution of constructive details, where the theoretical knowledge acquired in the subject taught in the course must also be demonstrated.

The grade obtained in the reassessment will replace the rest of the grades obtained previously. The maximum grade that can be obtained in the reassessment will be 6.

Review process

At any time, the student can request the review of a completed assignment or test.

Bibliography and Resources

* Bibliography

Magazines:

Tectonics

Constructive

Details

Detail Praxis (monographic, wood, stone, concrete...)

Books:

"Manual of construction details of interior design". W. Nutsch. Ed. GG

"Thermal and acoustic insulation". Miguel Payà – Monographs Ceac de la Construcción.

"The construction of architecture". Ignacio Paricio. ITEC

- vol.1- The techniques

- vol.2- The elements

- vol.3 The composition

"Basic guide to sustainability". Brian Edwards. Ed. GG

"Architecture as a technique 1. Surfaces" R. Araujo. ATC Editions. Madrid 2007

"Ecological architecture". D. Gauzin-Müller. Ed. Gustavo Gili, Bcn 2002

"Bioclimatic architecture in a sustainable environment". F.Javier Neila González. Ed. Munillalería

"Constructive architectural techniques of environmental conditioning" Cesar Bedoya Frutos, Fco. Javier Neila González. Ed. Munillalería

* Resources:

"Visual Dictionary of Construction": from the website of the Department of Territory and Sustainability of the Generalitat.

https://territori.gencat.cat/ca/01_departament/documentacio/general/terminologia_tecnica/diccionari_visual

Regulations "Technical Building Code" (CTE)

<https://www.codigotecnico.org/>

Audiovisuals from the website SUSTAINABLE CONSTRUCTION AGENDA

<https://www.csostenible.net/>

<https://www.cateb.cat/sostenibilitat-i-edificacio/>

MATERFAD Materials Center of Barcelona

<https://www.fad.cat/materfad/es>

Content: 6

Brief Description:

This subject is interpreted from the technological side of design, with the intention of introducing students to the different technical typologies aimed at the formal solution of graphic design projects.

Through the contents taught during the course, it is intended to make known and reinforce the different aspects that revolve around the production of graphic projects, their variables and the multiple construction routes. This area of production is surrounded by a complex world that revolves around materials, printing systems, printing supports, finishes, among others.

Training Objectives:

The objectives of the subject are the following:

- Know the different processes that make up a design project, and understand the relationship of dependency that exists between them.
- Understand and know the professional relationship that exists between the graphic designer, technicians and suppliers.
- Discover the various aspects that make up graphic production processes (the operation of the different printing techniques, the specific language of each specialty and basic technical knowledge, for better optimization of the project conceptualization process).
- Develop the best option for preparing originals for reproduction.
- Learn to work with order, discipline and neatness.
- Achieve student self-management in the design of printed products.
- Visits to suppliers to develop and strengthen communication skills with professionals in the sector.

Recommendations

Contents and Methodology

Brief Description:

The subject addresses graphic production from the technological aspect of design, with the aim of providing the student with the technical knowledge necessary for the formal resolution of graphic projects. The processes, materials, systems and printing supports, as well as finishes, are studied from an applied and professional perspective.

The methodology combines theoretical sessions, case analysis, practical exercises and projects, promoting the autonomy and technical rigor of the students. The course is complemented by the participation of invited professionals and possible external visits to delve deeper into the various areas of graphic production.

Teaching methodology:

Theoretical presentations by the teaching staff

Carrying out exercises and projects related to graphic production

Analysis and discourse of graphic pieces

External visits from professionals from different fields.

Training activities:

1.- Typometry (10%)

Analysis of a printed product

2.- Research and analysis of originals (25%)

Prepare a map of printed materials. (semester)

3.- Color management and inks (5%)

Color modulations (hue and saturation of the sample)

4.- Postcard design (10%)

Creation of a line of postcards. Images and closed format.

5.- Design of a commercial stationery. (10%)

Develop a proposal for commercial stationery, starting from the format. Utilization of paper.

6.- Expandable. Programming.(10%)

Layout a spread with the program of a festival. Emphasis on the synthesis of information and placement of text. Work with tabs.

7.- Adaptations (15%)

Design an institutional A3 (Barcelona City Council). Change the proposal between the students. Make the relevant adaptations, in relation to CAP05 (City Council Style Guide).

8.- Packaging. (15%)

Creation of a die cut and visual proposal for a pack.

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 student must submit all the exercises set in the different sessions of the subject, taking into account the continuous assessment. Emphasis will be placed on the aesthetic and formal quality of the proposals, as well as on the final models/prototypes.

Review process

The review will be carried out according to the academic calendar, following the academic regulations of the Degree in Design.

Bibliography and Resources

JOHANSSON Kaj, LUNDBERG Peter, RYBERG Robert. Graphic production manual. Recipes GG (Gustavo Gili). ISBN: 84-252-1739-3.

AMBROSE Gavin, HARRIS Paul. Formato.Colección "Bases del diseño" Parramón Ediciones, 2004. ISBN: 84-342-2673-1

AMBROSE Gavin, HARRIS Paul. Impresión y acabados.Colección "Bases del diseño" Parramón Ediciones, 2007. ISBN: 9788434229099

AMBROSE Gavin, HARRIS Paul. Image. "Bases of design" collection. Parramón Ediciones, 2006. ISBN: 8434228548

CAT Mark. Listo para imprenta.Index Book, 2005. ISBN: 84-96309-30-4.

FAWCETT-TANG Roger. Finished printing and editing of brochures and catalogs. Rotovision, Index Book. 2006. ISBN: 2-940361-23-1

FORMENTÍ Josep, REVERTE Sergio. The graphic image and its reproduction Guidelines for the correct realization and reproduction of originals in the graphic production Ediciones CPG. ISBN: 978-84-931329-4-1

WELL Raphael. Graphic design and production. CPG editions. ISBN: 978-84-931329-3-4

HASLAM Andrew. Creation, design and production of books. Publisher Blume. Naturart, SA ISBN: 9788498011463