Eina Centre Universitari
Fundació Eina
Disseny Art Barcelona

Passeig Santa Eulàlia 25
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MAQUETES I PROTOTIPS

Pablo Saiz Del Rio

Group: 5

Code: 200652

Credits: 6 ECTS

Course: 2

Semester: 1

Typology: Obligatory

Subject: Technology

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Teaching Guide Index

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Subject Presentation

Brief Description:

The course is divided into two areas of knowledge. A theoretical part that defines the basic concepts about the materials and technologies that can be used and a practical part where the production and post-production techniques of the models are developed within the context of the design. These two areas are complemented by the tool of drawing and photography, both during the process phases and the final presentation.

During the course we will work on two types of models, which will help us develop the project and present it respectively:

• Working models, which are made with materials that are easy to manipulate and execute. They are used as a thinking tool within the design process of a project and allow: expressing concepts, working with spaces, proportions and shapes in an effective way, allowing for critical thinking and using the model as a work tool.
• Presentation models, which are made with more complex materials and techniques and are slower to execute. They represent in a descriptive manner a project that is considered finished in the design phase and is therefore in the executive project phase. They are usually used as a presentation and communication tool for projects, complementary to renders and ceilings.

Training Objectives:

• Represent spatial design project concepts using manual tools, mainly to generate 3D volumes, without forgetting the drawing tool.
• Acquire skills in different techniques and tools to be able to execute models with different visual styles.
• Application of artistic direction in projects, combining manual techniques with digital processes, such as photography or digital post-production and layout, in order to represent ideas.
• Interpret plans for external projects and produce execution plans.
• Learn the processes and production times to carry out a project.

• Be able to define a list of measurements and a budget of materials to carry out the model.

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Recommendations

As this is a completely practical subject, students are recommended to attend all the classes led by the teaching staff. Unjustified absence on the part of the student may make it difficult to follow the exercises correctly.

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Contents and Methodology

Brief Description:

1. Flat materials: Paper, Cardboard, Wood
• Introduction to working models
• Technique of handling flat materials
• Transformation of a flat element into a volumetric element. Scale: free choice
2. Casting materials: Plaster
• Basic conceptual exercise: Working model
• Design of a volumetric element with geometry guided by the student
• Making a lost plaster mold to make the production of a piece
3. Rigid materials and new technologies: Laser Machine
• Project design through working models
• Learning how to use the laser machine and the tolerance of materials such as wood or methacrylate
• Finishing techniques
4. Intangible materials: Light and other environmental effects
• Project design through storytelling
• Working model as a laboratory: Transmit with lighting, sound, humidity, etc.
• Production of presentation model. Scale 1:20
• Representation of finishes
• Photography and post-production of the most representative perspectives of the model
5. Presentation mockup
• Project design through working models
• Representation of the project with a presentation model. Scale 1:20
• Representation of details: Furniture, sanitary elements or vegetation
• Photography and post-production of the most representative perspectives of the model
6. Final project (to be confirmed)
• Presentation and development of your own project for the subject of projects 3. Scale: free choice.
• Combination of the knowledge acquired throughout the course described in the other

projects

Teaching methodology:

• The classes are eminently practical in nature, in which the basic techniques for reproducing and representing objects and spaces within the context of the design process will be learned.
• The technology content will be specific to the knowledge of the materials and their work processes for the correct handling and use for the representation and presentation of the exercises. The constant reference to the project represented will foster the technical knowledge necessary to make the leap to the different scales.
• For each project, students will prepare a presentation that must graphically document the technical processes used to produce the model. The portfolio will be consulted by the teacher to monitor the students' work and must be submitted once the project has been physically delivered for evaluation.
• The different representation techniques (not necessarily models and prototypes) will be evaluated in parallel (photography, post-production, presentation layout, artistic direction and oral presentation).
• The course is designed so that students acquire creative and productive autonomy as they progress through the course. It begins with guided projects and ends with projects with creative and technical freedom.
• The subject is mainly practical, but there may be tutorials that are carried out online.

Training activities:

Theoretical Classes
ECTS: 10%
Teaching/learning methodology: Lectures and problem solving in combined groups.
Competencies: CE3, CE7, CE8, CE11.
Experimental practices
ECTS: 15%
Teaching/learning methodology: Classroom exercises and experimental demonstrations.
Competencies: CE3, CE7, CE8, CE11.
Workshop work
ECTS: 20 %
Independent work: Independent or group work for the development of the class exercise. Theoretical, conceptual or research work
Competencies: CE3, CE7, CE8, CE11.
Workshop work
ECTS: 45 %
Independent work: Completion of the project in the representation phase, in a working

or presentation model

Competencies: CE3, CE8, CE11.

Tutoring

ECTS: 10%

Teaching/learning methodology: Tutorials to monitor and correct independent work.

Competencies: CE3, CE7, CE8, CE11.

Directed activities

Masterclasses

Hours: 8h

Learning outcomes: CE3.1, CE7.3, CE7.4, CE7.5, CE8.4, CE11.4, CE11.5

Supervised activities

Statement and resolution of scheduled exercises.

Hours: 38h

Learning outcomes: CE3.1, CE7.3, CE7.4, CE7.5, CE8.4, CE11.4, CE11.5

Monitoring and partial corrections of independent exercises.

Hours: 32h

Learning outcomes: CE3.1, CE7.3, CE7.4, CE7.5, CE8.4, CE11.4, CE11.5

Self-employed activities

Development of exercises outside the classroom.

Hours: 62h

Learning outcomes: CE3.1, CE7.3, CE7.4, CE7.5, CE8.4, CE11.4, CE11.5

Solving analysis exercises.

Hours: 10h

Learning outcomes: CE3.1, CE7.3, CE7.4, CE7.5, CE8.4, CE11.4, CE11.5

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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.

Exercise 01: 20%
Exercise 02: 35%
Exercise 03: 45%

Review process

The review can be requested from the corresponding teaching staff and will be carried out during the week indicated in the academic calendar.
Revaluation process
General regulations
• Reassessment systems are not contemplated in the cases of external internships, TFGs, and subjects/training activities that, due to their eminently practical nature, do not allow it.
• To participate in the re-evaluation, students must be previously evaluated in a set of

activities whose weight is equivalent to a minimum of two thirds of the total grade for the subject.

Specific regulations of the subject

In order to be able to re-evaluate, all projects must have been previously submitted and the student must not have exceeded the number of absences in the subject.

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Competencies and Learning Outcomes

- CE1 Analyze objects, graphic communications and living spaces to detect design problems, provide alternative solutions and evaluate its social, technological and economic viability.
- CE3 Synthesize the knowledge and skills of plastic expression, representation techniques and materials and technologies productive that allow design projects to be proposed and developed.
- CE7 Demonstrate that you understand materials, their qualities, processes and manufacturing costs.
- CE8. Demonstrate basic knowledge of the sciences and auxiliary disciplines of the design project, such as anthropometry and physiology of the visual perception, ergonomics and use evaluation methods, marketing, prospecting technique, etc.
- CE11 Demonstrate that you understand the functioning of the economic, business and institutional environment in which they are hired and developed professionally design projects and activities.
- CT13 Guide design action based on values of respect for the environmental environment and sustainability criteria.

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