

Course Syllabus for Degree in Design

Name of the subject	Models and Prototypes
Year	3rd
Mention	Product
Teaching staff name	Ivan Merino
Number of credits ECTS	4
Language of instruction	English

Description of the subject / Objectives

The subject deals with concepts of model making, types and functions: Volume models (to work on oneself), static models (to present a project). Study and resolution of volume, control of the most common and easily acquired materials, depending on the shape and desired results, until reaching real physical formal representations. Use of typical tools for the elaboration of shapes (cutting machines, lathe, thermoforming... etc) and molding for multiple reproductions.

Prerequisites established in the Study Plan

None

Necessary prior knowledge

Just know basic processes about Product Design and materials.

Competences and Learning Outcomes

Students will know the material as a base for the execution of any product design project.
To know the different processes shaping the material.
To know the different strategies to cover a model or prototype: take measurements, provide volume, achieve complex shapes, give finishes.
Understanding the model and the prototype as one more tool in the methodological process of a project.
Be decisive and efficient.
Be organized and methodical.
Be neat and detailed.

Content

The model: a three-dimensional volume.

Practices with materials and their finishes (wood, foam, polymers...)

Conceptual, study and presentation models.

Thermoformed.

Turned.

Silicone molds.

Teaching methodology

The subject is conceived as an eminently practical instrumental matter. In it, the theoretical contents are immediately applied in the elaboration of the Models. In every session, theoretical moments and face-to-face work sessions in real time will be combined, where the teaching activity takes on the nature of a workshop.

Students will have the opportunity to work individually and in teams depending on the respective exercises.

The essential method of the subject is the physical configuration and three-dimensional elaboration of representative models of objects, where the experimentation and use of various materials and tools will be the hierarchical component.

EVALUATION- Training activities

What is evaluated?

Attendance and tasks in every lesson, knowledge acquired, good attitude, concentration, effort, initiative. Every presentation must be day by day. Homework required.

4 required deliverables:

1. Foam practice.
 2. Silicone mold with multi reproductions in Diplast.
 3. Sneaker's model (PVC foam + extra materials).
 4. Packaging model (cardboard and paper). Printed
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Ordinary and Extraordinary Calls

Evaluation in ordinary call (continuous evaluation)

Weight of continuous assessment activities:

- Task 1..... **FOAM**20 %
- Task 2..... **SILICON**.....20 %
- Task 3**SNEAKER**.....40 %
- Task 4 **PACK KIT**.....20 %

According to the school's general evaluation regulations, in order to pass the course, all assessable elements must be submitted and must obtain a minimum grade of 4 to be averaged. If any element is not submitted, its grade will be an NP ("no presentado" not submitted) and the final grade for the regular exam period will also be an NP.

If any of the assessable elements do not reach a grade of 4, the final grade for the course will be evaluated as an NA. In both cases, the course cannot be passed during the regular exam period, and the student will have to take the extraordinary exam period according to the following point.

Evaluation in extraordinary call

Students who do not pass the course in the regular session at the end of the class period may present themselves for the extraordinary recovery session, the dates of which are indicated in the academic calendar.

In extraordinary examinations, the professor will personally decide the assessment method for each student, based on the circumstances that have prevented them from passing the subject in the ordinary examination period. However, two main cases can be identified:

- a. Students who have attended class more or less regularly, for whom the instructor can attest to an acceptable level of engagement with the course material and who have submitted a portion of the required assignment: In this case, the student will need to complete the missing assignments or improve them to pass the course. In the case of written exams, if these have been failed, the student will need to retake them. The instructor may decide to change the content of the assignments to ensure that the student demonstrates a minimum level of knowledge of the course material.
- b. Students who have not attended class or whose attendance has been irregular and who have practically not submitted any assignments during the course and therefore the teacher cannot attest to a minimum follow-up and knowledge of the contents: In this case, in addition to completing the required submission during the course (with modifications to avoid plagiarism or not) and possibly having to do some extraordinary task, the student will have to compulsorily take a level test (written or oral exam, workshop practical test, etc.) to pass the subject. The student will have to do an oral test and a projected presentation with slides explaining all the practices carried out and must also hand in the General report of the two projects with the required documentation in a single PDF document. A collection of photographs of the work process of the two projects will be requested.

- Task 5 (extra) **General Memory of the Course** 100%

The weighting percentages and minimum grades to be obtained for each assessable element will be defined by the professor in each case. The professor will detail in writing to the affected parties the assessment method for the extraordinary call.

Class attendance and general regulations

Students are obligated to attend classes. Failure to comply with this rule may result in the loss of the right to continuous assessment (regular exam period) for the course.

In this course, the general regulations indicated in the ESDI academic guidelines apply. In particular, regarding class attendance, please note the following:

- The minimum attendance percentage to maintain the right to continuous assessment is 80%. This means that students can have a maximum of 20% unexcused absences.**
- In the case of excused absences, even if there are a large number of excused absences, this does not exempt students from having to take the courses and continuous assessment properly. This means that they must submit the tasks required by the teacher and take the scheduled exams.**
- When the total number of absences, including excused and unexcused absences, reaches 30%, the student may also lose the right to continuous assessment.**
- The teacher will consult with the tutor or academic coordination before taking and communicating the decision to lose the right to continuous assessment for a student.**

The punctuality at the start of the classes is important: after 10 minutes from the start of a class, exam, or assignment submission, students will not be allowed to enter the classroom unless they can justify their tardiness with a valid document. Renfe Cercanías delay certificates are not considered valid documents to justify being late. Due to the frequent delays of Renfe, it is necessary to plan trips in advance to allow enough time to arrive to class on time.

Attendance at a class is considered complete if the student attends the entire class from the beginning to the end. Students who leave the class before the end without speaking to and justifying their absence to the instructor will receive an absence for the entire class. Communicating with the instructor does not necessarily mean that the student will not have an absence; this decision is at the discretion of the instructor based on the reason for the student's absence.

The use of technological devices (computers, tablets, mobile devices, etc.) may be restricted or even prohibited by the professor if misuse is evident. Specifically, if they are used in the classroom to perform tasks unrelated to the subject being taught. This rule may be applied individually or collectively.

Sources of information

Knoll, Wolfgang y Hechinger, Martin. (2005) *Maquetas de Arquitectura, Técnica y construcción*.

Barcelona. Ed. Gustavo Gili.

Hallgrimsson, Bjarki (2012) *Diseño de producto: maquetas y prototipos*. Ed. Promopress.

ISBN: 978-84-92810-52-9

Jackson, Paul (2013). *Técnicas de Corte y Plegado para Diseñadores* (128 pag.). Editorial Promopress.

ISBN: 978-84-92810-81-9

Shimizu, Yoshiharu (1991) *Models & Prototypes*. Graphic-sha Publishing Co.Ltd. ISBN4-7661-0617-2

Other information

Basically, students will work with some materials and tools to make models and prototypes ...clay, foam, wood, cardboard, glue, sand paper...etc.

* *Most of these materials must be bought by students.*