



Eina Centre Universitari  
Fundació Eina  
Disseny Art Barcelona

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## MODELATGE D'OBJECTES

Jordi Esteve Pastor, Andres Pe?uela Betancur

Supervising Teacher: Andres Pe?uela Betancur

Group: 1

Code: 200663

Credits: 6 ECTS

Course: 3

Semester: 2

Typology: Obligatory

Subject: Applied Computing

Schedules:

| Group | Schedules | Teacher |
|-------|-----------|---------|
|-------|-----------|---------|



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## Subject Presentation

### **Brief Description:**

Computer technology in product design has become an essential tool for both the designer and the recipient of the project.

The designer's knowledge of modeling programs gives us the possibility of studying the volumes and surfaces of a design, prior to the manufacture of a prototype, model or final product.

### **Training Objectives:**

- Achieve the ability to represent advanced volumes and surfaces in 3D, using computer media.
- Acquire mastery of the following computer programs: SolidWorks and Keyshot. Know how to discern the value of each of them both for the generation of the CAD model, as well as know how to complement them in order to create virtual images and better represent the contents of a project. Control the file extensions of the programs worked on and the export and import relationships of documents.
- Introduce students to advanced modeling through the use of Nurbs surfaces and curves.
- Acquire the ability to perform animations and movement simulations of the components of a product -or several elements- to study their behavior.
- Be self-taught in learning and researching new tools and computer applications that can be useful for our work process.
- Work on presentation techniques and complement computer tools with our communication and speech skills.

## Recommendations

Have completed and passed the Digital Representations applied to the design of space and volume subject. Have an intermediate level in the use of SolidWorks. Be accustomed to the use of CAD programs.

## Contents and Methodology

### **Brief Description:**

### **Teaching methodology:**

The integration of theoretical and practical knowledge will be carried out with an explanation at the beginning.

of each session where the contents and techniques with which to achieve will be presented the objectives of each session. (videos are made explaining the content, which are then will be shared with students)

The knowledge will then be applied in a training activity of variable duration.

Each activity will be accompanied by the relevant explanations. The activities

they can be developed during the course of the class (guided activities) or

require independent work from the student outside the classroom (supervised and independent activities).

There will be a final work of its own and individual nature that will be carried out as an activity supervised and autonomous, and which will be delivered at the end of the course.

### **Training activities:**

- Theoretical Classes

ECTS: 10%

Teaching/learning methodology: Lectures: key concepts and general procedures of applied computing.

- Program video tutorials

ECTS: 10%

Teaching/learning methodology: Introduction to the specific characteristics of each computer program and guidelines for self-learning

- Workshop

ECTS: 30%

Teaching/learning methodology: Classroom exercises with assistance and resolution of difficulties in the application of the different resources used.

- Performing exercises

ECTS: 50%

Teaching/learning methodology: Independent work: carrying out exercises on the application and synthesis of computer processes

## 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.

Practice 1 - 25%

Practice 2 - 25%

Final Project - 50%

### **Review process**

Upon obtaining the grade for each scorable activity, these will be reviewed with the student during school hours in order to be able to reevaluate activities if desired.

It can be reassessed:

Practice 1

Practice 2

## Learning outcomes of the degree program

### Knowledge

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

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

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

### Competencies

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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## Bibliography and Resources

<https://www.solidworks.com/>

<https://www.keyshot.com/>

<https://www.3dcontentcentral.es/>

<http://www.solidworkstutorials.com/>