

## 25874 - Artistic Expression II

### Syllabus Information

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**Academic Year:** 2020/21

**Subject:** 25874 - Artistic Expression II

**Faculty / School:** 110 - Escuela de Ingeniería y Arquitectura

**Degree:** 558 - Bachelor's Degree in Industrial Design and Product Development Engineering

**ECTS:** 6.0

**Year:** 2

**Semester:** First semester

**Subject Type:** Basic Education

**Module:** ---

## 1.General information

### 1.1.Aims of the course

The main objective of this course is for the student to acquire and exercise the necessary techniques to be able to represent the different proposals related to the product concept through the use of open software tools adopting an artistic criteria. Several sketching methods, 3D modeling techniques and traditional human mannequins and sculptures are reviewed in this course. The student must be able to integrate the digital visual tools with the aforementioned all of them and acquire experience in the effective and harmonious representation of the product and its relationship with the user. It has a specific impact through the production render views with artistic quality, digital sculptures, sustainable / virtual models and 3D aesthetic characters.

These approaches and objectives are aligned with some of the Sustainable Development Goals, SDGs, of the 2030 Schedule (<https://www.un.org/sustainabledevelopment/en/>) and certain specific goals, in such a way that the acquisition of the Learning outcomes of the subject provide training and competence to the student to contribute to a certain extent to their achievement:

- **Goal 9:** Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation.
  - **Target: 9.4:** By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities
- **Goal 12:** Ensure sustainable consumption and production patterns.
  - **Target 12.5:** By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse

### 1.2.Context and importance of this course in the degree

Artistic Expression II is basically instrumental, facilitating the representation of the industrial product and the human figure, through the use of diverse digital techniques, styles of plastic representation and volumetric constructions and 3D modeling.

This subject aims to make the student more prepared to successfully deal with other subjects of the Degree that address the digital representation of the product as well as the design of physical models or models of products and users.

### 1.3.Recommendations to take this course

The knowledge and skills dealt with in this subject are based on those acquired in the subjects Artistic Expression I and Design Workshop I, for which it is recommended to have completed and passed these subjects.

## 2.Learning goals

### 2.1.Competences

#### BASIC COMPETENCES

CB01. Students have demonstrated knowledge and understanding in a field of study that is part of the general secondary education curricular, and is typically at a level which, although it is supported by advanced textbooks, includes some aspects

that involve knowledge of the forefront of their field of study.

CB02. Students can apply their knowledge to their work or vocation in a professional manner and have competences typically demonstrated through devising and defending arguments and solving problems within their field of study.

CB03. Students have the ability to gather and interpret relevant data (usually within their field of study) to inform judgments that include an important reflection on social, scientific or ethical issues.

CB04. Students can communicate information, ideas, problems and solutions to both specialist and non-specialist audiences.

CB05. Students have developed those skills needed to undertake further studies with a high degree of autonomy.

## GENERAL COMPETENCES

GC01. Able to acquire basic knowledge of the profession of industrial design, to combine that generalist knowledge and expertise with those who generate innovative and competitive proposals.

GC04. Ability to organize time effectively and coordinate activities to acquire new knowledge quickly and perform under pressure.

GC05. Capacity to collect, manage, analyze and synthesize information from various sources for the development of design projects and product development. Capacity to use this documentation to obtain conclusions aimed at solving problems and making decisions with initiative, creativity and critical thinking, in order to generate new product concepts, new ideas and solutions.

GC06. Ability to generate the necessary documentation for the proper transmission of ideas through graphics, reports and technical documents, models and prototypes, oral presentations in Spanish and other languages.

GC07. Ability to use and master techniques, skills, tools and techniques and communication and others specific of design engineering needed for design practice.

GC08. Ability to learn continuously, to develop autonomous learning strategies and to work in multidisciplinary groups with motivation and determination to achieve goals.

GC09. Knowing the industries, organizations, regulations and procedures and other elements to be considered in industrial design projects.

GC10. Ability to plan, budget, organize, direct and control tasks, people and resources.

## SPECIFIC COMPETENCES

SC05. Ability to conduct effective and professional presentations through drawing and digital technologies using visual skills to communicate ideas and concepts quickly and efficiently, by selecting the most appropriate media and content.

SC17. Ability to make models and prototypes using workshop techniques and tools. Know and master three-dimensional representation techniques traditional and digital as well as its tools and materials.

## 2.2.Learning goals

The student, to pass this subject, must demonstrate the following results ...

1. Ability to work with digital tools or artistic media on mobile devices.
2. Ability to make digital models or models with virtual workshop technology.
3. Ability to represent users.

By achieving these student learning outcomes ...

- He is able to apply expressive character to the digital graphics resources of sketching in the conceptual stage of product design and has skills in digital graphic sketching techniques that provide different communicative aspects in the perception of the product.
- Develops alternatives in formal exploration in the conceptual design stage of the product through digital tools based on conventional sketches.
- He is able to use realistic representation techniques through the support of digital tools.
- Can use visual resources that integrate the user and the context of the product.
- He possesses abilities in the handling of the expressive possibilities in the elaboration of models choosing the suitable materials and the constructive technique 3D according to the type of product.
- It is able to represent users consistent with the product and with the considerations of use.

## 2.3.Importance of learning goals

The learning outcomes of the subject are fundamental since they provide the student with basic knowledge regarding digital graphic representation techniques, user representation and the elaboration of models that can be used in subjects that carry the product design and that are presented in the scope of the Degree in Industrial Design Engineering and Product Development.

## 3.Assessment (1st and 2nd call)

### 3.1. Assessment tasks (description of tasks, marking system and assessment criteria)

**A/ The student must demonstrate that he has achieved the expected learning outcomes through the following assessment activities.**

The subject will be evaluated on 10 points, according to the following proportion:

**A/ Realization and presentation of supervised works,**

These supervised works are broken down into two parts:

- **Individual works** that will be done by the student during the course and that will be presented at the indicated date and time. In these the content dealt with in the subject will be developed. Your valuation will be 80% of the final grade. It will be rated from 0 to 10, and the student must obtain a minimum grade of 4.0. These works will be done by all the students.
- **Module Project.** It is a project included in the supervised practices, as if it were another job. Your valuation will be 20% of the final grade. It will be rated from 0 to 10, and the student must obtain a minimum grade of 4.0. This project will be carried out by all students.

To pass the subject the student must obtain a final grade of no less than 5.

**B/ Overall evaluation (optional)**

Following the regulations of the University of Zaragoza in this regard, in the subjects that have systems of continuous or gradual evaluation, a test of global evaluation will also be scheduled for those students who decide to opt for this second system.

## 4. Methodology, learning tasks, syllabus and resources

### 4.1. Methodological overview

The methodology followed in this course is oriented towards the achievement of the learning objectives. This is a 6 credit subject corresponding to 150 hours of student work. A wide range of teaching and learning tasks are implemented, such as:

Lectures 20

Lab 40

Carrying out a practical application or research work 55

Teacher-student tutoring 10

Study and autonomous work 15

Assessment tests 10

To facilitate the learning of the contents covered in the subject, theoretical classes and computer practices will be alternated, which will be taught in a conditioned room to use the student's laptop.

### 4.2. Learning tasks

The course includes the following learning tasks:

- **1. Theoretical and practical classes.** 3 contact hours per week will be dedicated to theoretical and practical classes. The lecture will combine the use of slate and computer, in which the theoretical contents and resolution of digital graphic activities will be presented without an explicit separation between them. Students were provided with theoretical explanations with clarifier examples.
- **2. Computer practices.** Practical computer sessions of 3 hours each one will be realized that will be taught in a diaphanous room with capacity so that the student uses his personal laptop and his mobile devices. Software that will allow students to carry them out will be used. This software will allow the development of the proposed activities and will help in the understanding of the proposed learning outcomes. The students will work individually.
- **3. Supervised projects.** These works are developed both individually and in groups.
- **4. Workshop practices.** They are distributed throughout the semester and their assessment will be part of the final grade of the subject. The training in representation techniques of 3D models is carried out both with classroom work, computer classroom for the management of associated programs and work in the laboratory to acquire the knowledge and management of the necessary tools and machines.
- **5. Independent work of the student.** The student will apply content rights treaties to solve the proposed work. This activity is essential in the learning process and overcoming evaluation activities.

### 4.3. Syllabus

The course will address the following topics: :

- Topic 01: Graphic styles and visual tools in the different design stages.
- Topic 02: Digitization of sketches. Conversion of raster bit apps to vector graphics. Alternatives and complimentary digital tools for mobile devices.

- Topic 03: Contour drawing. Line modulation Construction of axes, symmetries, unseen parts, kinetic lines, etc. Hybrid 3D techniques for drawing sketches using libraries and CAD models.
- Topic 04: Light and artistic render. Alternative representation styles. Application of color ranges to the product. Design of backgrounds and environments. Artistic filters
- Topic 05: Human figure I. Anatomical synthesis and mannequins. Digital alternatives
- Topic 06: Human figure II. Movement and representation of the kinematics. Emotional expressions and choreography of the visual composition with human figures. Garments and props.
- Topic 07: Composition of visual projects of sketches and images. Narrative tools with images.
- Topic 08: Definition of model and prototype. Typologies of models.
- Topic 09: Materials and equipment for the realization of physical models and execution techniques. Modeling and creative sculpture through scratch build work. Sustainable models
- Topic 10: Virtual models. Definition, use, and typologies. From the virtual model to the physical model. Techniques of execution of virtual models.

#### **4.4.Course planning and calendar**

The calendar of theory classes and computer practice sessions will have the schedule established by the School of Engineering and Architecture, which can be consulted on its website. They will also be announced on MOODLE.

The tasks must be presented according to the calendar in the dates that the students decide, making it compatible with their other subjects, existing a deadline of delivery that the student will know in advance.

Each teacher will inform of their classroom tutoring schedules in the office. The MOODLE tutoring will be adjusted to the academic schedules of the Center.

In the official academic calendar are reflected the class periods and deadlines for the presentation of tasks. The theoretical and practical classes, as well as the places to impart them, are reflected in the schedules of the website of the School of Engineering and Architecture (EINA.unizar.es ).

The relevant information will be communicated to the students through the MOODLE teaching assistance platform that will serve as organizational support and work team environment.

#### **4.5.Bibliography and recommended resources**