



PRODUCT.

Educational programme



Pro- duct- de- sign

We could say that in Product Design we design the human aspect of objects that form our environment: from personal objects to the packaging of our everyday objects, as well as lighting and furniture; from the items we use for personal hygiene to accessories we use for leisure, work or sport; from the objects that shape public spaces to the areas we use to cook, store or present food.

WHAT DOES IT MEAN TO DESIGN?

To design means responding to three different fields of requirements: It means knowing how to interpret the assignment in hand; knowing how to respond to functional, aesthetic and conceptual requirements, adding value and providing innovative solutions; creating a user experience geared towards quality and the way in which the user will benefit from the experience.

In this sense, the specialisation of Product Design has put together a training programme that covers the essential areas of projects, drawing and digital languages, materials, production processes and manufacturing, history and culture, marketing and communication.

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Habitat
Leisure
Lighting
Personal Hygiene
Packaging
Accessories for work,
sport, transport, etc.
Services

Edu- catio- nal pro- gram- me

1 st & 2 nd SEMESTER	ECTS
DESIGN BASICS	4
BASIC PROJECTS	8
DRAWING AND GRAPHIC TECHNIQUES	6
SPACE AND VOLUME	6
SYSTEMS OF REPRESENTATION	6
DIGITAL LANGUAGES AND TECHNIQUES	6
PHOTOGRAPHY AND AUDIOVISUAL MEDIA	6
SCIENTIFIC PRINCIPLES OF DESIGN	6
PRINCIPLES OF DESIGN HISTORY	6
DESIGN AND BUSINESS	4
TOTAL	60

3 rd & 4 th SEMESTER	ECTS
TECHNICAL DEPARTMENT PROJECTS	6
DESIGN STUDIO PROJECTS	6
MODELING & PROTOTYPING	6
INDUSTRIAL DRAWING	4
MATERIALS	6
STRUCTURES AND SYSTEMS	8
MANUFACTURING PROCESSES	6
BIONICS AND ERGONOMICS	6
HISTORY AND CULTURE OF PRODUCT DESIGN	6
CULTURE OF DESIGN	6
TOTAL	60

5th & 6th SEMESTER	ECTS
SELF-MANAGED PROJECTS	6
RESEARCH AND PROPOSAL PROJECT	6
PACKAGING PROJECTS	6
PROJECT PRESENTATION & COMMUNICATION WORKSHOP	6
DIGITAL TECHNOLOGY APPLIED TO PD	8
AESTHETICS & CONTEMPORARY TRENDS IN PD	4
PRODUCT DESIGN MANAGEMENT	6
MARKETING AND COMMUNICATION	6
WOOD WORKSHOP	6
SCALE-MODEL WORKSHOP	6
TOTAL	60

7th & 8th SEMESTER	ECTS
OPTIONAL SUBJECTS	30
WORK PLACEMENT	12
FINAL PROJECT	18
TOTAL	60

1st & 2nd semester

DRAWING AND GRAPHIC TECHNIQUES

This course provides students with an introduction into the theory and practice of techniques, methods and procedures that will enable them to represent three dimensional objects in a two dimensional plane using conventional drawing techniques. Students will develop their ability to graphically define ideas, images, objects and spaces, whether real or of their own invention.

This subject fulfils two roles: it is based on students' ongoing work under the guidance of the teacher, as it is an essentially practical and experimental course, and it acts as a basic introduction to graphic expression applied to design.

DESIGN BASICS

The main role of this subject is to equip students with the basic resources for creation in terms of form, composition and colour, through creative and

experimental learning processes, building on students' existing skills and knowledge.

The content of this course is taught according to concise learning processes, which help students to assimilate the principles of visual language, providing them with a solid base of knowledge and skills in complex visual processes.

DESIGN AND BUSINESS

This subject provides students with basic knowledge on the workings of the economy and companies.

Decision-making, internal company practices and the relationships that businesses make with the market, as well as the protection of designers' rights, are key areas of knowledge for future designers to be able to successfully apply and exercise their technical and creative skills in the professional world.

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SPACE AND VOLUME

Space and Volume is a pivotal subject for students to understand and develop their visual language in a physical, three-dimensional context by learning specific, volume-related procedures and how to handle physical components. These tools bring students closer to understanding the tangible and sensitive aspects of forms and as a result, to the physical experience of the creative process from an intuitive and unique perspective.

PHOTOGRAPHY AND AUDIOVISUAL MEDIA

Photography and Audiovisual Media (PAM) is a practical and workshop-based subject. After starting off by looking at concepts, students then get to grips with the subject through practical projects, showing them that photography

and audiovisual media are the tools by which modern designers can universally exhibit their creations. In this approach, the contents of PAM have not only been created for students to learn to use these tools for audiovisual creation and distribution (vimeo, youtube, etc.) but also to integrate photography and audiovisual media into design itself.

At present, 100% of design knowledge and promotion is carried out by means of a photo or a video. Based on this reality, the aim is to turn photography and video into more than just a tool, into another element of the designer's work, thereby converting this tool of photographic and videographic distribution into a tool for creation and design. In other words, in PAM, students gain technical and practical skills in the use of cameras, lighting and video and photo-editing software, but integrated in the design process.

SCIENTIFIC PRINCIPLES OF DESIGN

This subject provides the scientific tools students need to be able to later approach the technological contents of the Product Design specialisation. The course is a combination of theory and practice, and is prepared according to the artistic specialisation in order to adapt the scientific techniques to the student's profile. They will learn to correctly apply calculation tools, interpret the necessary physical and chemical phenomena, and analyse the behaviour of the different elements that constitute a Product Design project, whilst being aware of the need to conserve the environment.

PRINCIPLES OF DESIGN HISTORY

Principles of Design History is a basic subject that forms part of the Art and Design History area. Each teaching unit gives a detailed view of design history and links it to examples of contemporary art and architecture.

The subject provides future professionals with essential training in styles, movements, trends and designers. In this regard, the course contents support and add to the technical education of designers by asking them to critically consider the historical-conceptual context.

SYSTEMS OF REPRESENTATION

In the Systems of Representation course, students will build on their knowledge and learn different communication and information languages. They will learn to develop a spatial perspective of objects, incorporating logic into the drawings and constructions that they propose, which must always centre on the need to communicate. This will be in addition to other specific languages that will help to clarify ideas and the aesthetic, technical and formal information of the item in question.

Finally, students will approach any technical representation issues that may arise in Design studies.

They will learn the following representation systems: Orthographic projections, Axonometric and Conical projections, and sketching.

DIGITAL LANGUAGES AND TECHNIQUES

The aim of this subject is for students to learn the importance, relevance and application of IT tools in the product design sector and to gain the necessary skills to use basic procedures used in computer-based drawing and design. In short, students will use new technologies as a technique in their creative and productive process and as a tool for communication and management.

BASIC PROJECTS

This subject initiates students in project work and teaches them the basic resources and criteria necessary to successfully carry out and resolve projects in later years.

Students will become familiar with project techniques, tools and skills by combining different knowledge and skills.

By carrying out a specific, basic project, students will work combining theory and practice, like a game between experiences and skills, which will help them in the art of designing. While carrying out the project, students will be able to apply and gain practical experience of the information learnt in the subject; they will be able to experiment and try out techniques and tools to learn new skills.

The methodology followed in this subject could be described as an open system that enables students to structure a design project according to the conditions imposed by the product to be designed, identifying: its phases, its procedures, actions, etc.



3rd & 4th semester

CULTURE OF DESIGN

In today's society there is a growing need for information about and communication with one's most immediate environment and with the world in general. Following the process of globalisation and the constant changes facing social groups, there is a need to study human beings and the cultural manifestations that surround them and determine their reality. A designer must be able to understand all these phenomena, be able to adapt to the circumstances and decide what they are designing, and how and why they are doing it.

Through *Culture of Design* students will become familiar with and understand the meaning of design in contemporary societies, with the aim of being able to effectively communicate with the support of semiotics, aesthetic and the theory of form, function and structure.

In short, when a designer enters the professional world of work, he or she

will need to intuitively sense and understand cultural, social and artistic changes to plan well-suited and responsible solutions in their cultural and social context.

Culture of design focuses its study on the tangible and intangible aspects of everyday life. On one hand it is structured around images, words, forms and spaces; but on the other, it combines discourses, actions, beliefs, structures and relationships. The concepts of value, creation and practice that make design an object of study are also processes that refer to designers, production and consumption, respectively.

MATERIALS

Product designers must be able to approach the extensive range of materials available today and understand which will best adapt to the final characteristics they are looking for in a product. This is a scientific subject and will equip students with the necessary knowledge to make these decisions.

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STRUCTURES AND SYSTEMS

This subject provides students with the necessary foundations to know how to solve and calculate structures, which is vitally important in the field of product design.

Product designers need to learn these skills in order to improve and guarantee the stability of their designs.

MANUFACTURING PROCESSES

Choosing a material or a manufacturing process is a rational and objective exercise, but there is almost always more than one solution to create a form, structure or an aesthetic, as well as ways to reduce costs.

This subject studies product design, focusing on the manufacturing processes that currently exist on the market. It provides students with information on moulding, plastic deformation, material removal and bonding pieces made of different materials. It aims to be a tool for students to be able to assess the potential of their ideas and decide which manufacturing process would be the most suitable to carry out on an industrial scale.

It is crucial for designers to know the correct manufacturing process for each design as the initial investment needed for large-scale industrial manufacturing can be considerable.

BIONICS AND ERGONOMICS

Ergonomics is an essential factor for success both in product design and in occupational design. It is something that has to be considered in the first stages of the design process.

Bionics offers a different focus when approaching design, looking at nature with a new perspective.

This subject aims to provide students with the information they need to carry out designs according to ergonomic and bionic criteria.

TECHNICAL DEPARTMENT PROJECTS

This type of project is one that could occur in professional situations when a designer is working in a company's Design Department.

In this case, the design of a product will be carried out according to strict, pre-established project conditions (work order), proposed by the Design Department.

Even though students will carry out all the phases of the project, they will focus on the technical phase, meaning that they will become familiar with the technical language, standards and technical communication.

This type of project is highly structured in terms of information input and output, with little room for freedom and risk, and is highly defined.

The technical communication and standards are set out according to:

1. Report, which will include the Background Report; the Objectives Report (of the project); the Design Criteria Report, (conceptual or supporting report), and the Descriptive Report.
2. Appendices.
3. Plans compliant with standards, with an overview plan and detail plans.

This standardised, technical communication may be used with the same structure in different countries, taking into account the technical standards in place in each country.

DESIGN STUDIO PROJECTS

In Design Studio Projects, students will work on areas of design with a highly-structured input of information and a highly varied output. In this type of project, there is a moderate level of freedom, risk, and definition.

The setting for these projects could occur in professional situations in which the designer is working on an assignment ordered by a specific company in areas such as innovation, idea contributions, tenders, or trend proposals to make potential developments that are qualitatively innovative to provide solutions for types, materials, uses and production arising from new approaches, etc. These are jobs in which the demand, proposal or assignment may be defined by a brief or pre-established project conditions.

The project process and the creation of alternative proposals will be subject to how the client responds and their acceptance. During the project process, students will gain experience in finding, processing, organising and simplifying information; and in working with systems, organising and simplifying that information.

The approval of decisions will be established by means of:

1. Assessment criteria and techniques
2. Selection of alternatives
3. The result of critical sessions
4. Limitations set by the client

MODELLING AND PROTOTYPING

Creating models and prototypes is essential during the process of a product design project. These are very useful both in the physical and tangible visualisation phases and in the final checks before the industrial production of the product.

The conceptual or experimental scale-models, the volume, ergonomics, and presentation models, and quick, virtual prototypes etc. are three-dimensional representations that make it possible for the designer to clearly visualise the product and understand the formal, functional and symbolic configuration of the object being designed.

This subject initiates students in conceptual and three-dimensional design, making it possible to physically and/or virtually represent their initial ideas and verify specific aspects of the product being developed.

The contents related to modelling materials and processes will qualify these future professionals to independently carry out three-dimensional visual configuration projects.

HISTORY AND CULTURE OF PRODUCT DESIGN

Building on the contents studied in the Principles of Design History, this subject is more specifically linked to the specialisation of Product Design. The aim of the course is to define and update the theoretical field known as the History of Industrial Design.

The main mission of this subject is to organically link events that have determined the development of product design with leading design theories and how these can be seen in the various artistic languages of everyday objects.

INDUSTRIAL DRAWING

Industrial Drawing offers students the communication tools they need to convey the graphic documents that make up a design project, using plans that are compliant with current standards, making it possible to manufacture and mass produce objects and their parts.

The contents of the course comprise a study programme in which communication and creative development converge into a single project process and are reflected in the various sections that make up the graphic documentation of the project.

The standards, graphic symbology, finishes and presentations form part of the visual language that we refer to in the learning process.





5th & 6th semester

AAESTHETICS AND CONTEMPORARY TRENDS IN PRODUCT DESIGN

This subject is the culmination of the History of Product Design courses, as it focuses on the theoretical and aesthetic analysis of contemporary product design and its relationship with political and cultural, social and economic, environmental and technological phenomena that are constantly transforming the daily life of society.

This course will consist of assessing design products that have appeared since the emergence of postmodernism and the multiple trends and structure that it has taken on after the turn of the century, with the challenges of today and the trends of tomorrow.

The aim is not only for students to learn about the latest trends in product design but also to receive training in research techniques and methods that are inherent to this specialisation.