

# Bachelor's degree in Industrial Design and Product Development Terrassa School of Industrial, Aerospace and Audiovisual Engineering (ESEIAAT)

On the **bachelor's degree in Industrial Design and Product Development** you will train to be a qualified professional who will carry out industrial design activities and create new products, concepts and services that add value to the production process. You will acquire the necessary experience in design to plan and develop the entire lifecycle of a product, as well as key competencies in establishing and developing operational, functional, technical, constructive, aesthetic and communicative aspects of production and commercialisation. You will learn to generate virtual and physical models and prototypes, use manual and computer tools for calculation and artistic and industrial expression, process graphic information, and analyse and assess the social and environmental impact of technical solutions.

#### **GENERAL DETAILS**

#### **Duration**

4 years

#### Study load

240 ECTS credits (including the bachelor's thesis). One credit is equivalent to a study load of 25-30 hours.

#### **Delivery**

Face-to-face

### Language of instruction

Check the language of instruction for each subject (and timetable) in the course guide in the curriculum.

Information on language use in the classroom and students' language rights.

## Fees and grants

Approximate fees per academic year: €1,107 (€2,553 for non-EU residents). Consult the public fees system based on income (grants and payment options).

#### Location

Terrassa School of Industrial, Aerospace and Audiovisual Engineering (ESEIAAT)

# Official degree

Recorded in the Ministry of Education's degree register

# **ADMISSION**

#### **Places**

60

## Registration and enrolment

What are the requirements to enrol in a bachelor's degree course?

## Legalisation of foreign documents

All documents issued in non-EU countries must be legalised and bear the corresponding apostille.

#### **DOUBLE-DEGREE AGREEMENTS**

#### Double-degree pathways at a single school

- Bachelor's degree in Industrial Design and Product Development Engineering / Bachelor's degree in Mechanical Engineering
- Bachelor's degree in Industrial Design and Product Development Engineering / Bachelor's degree in Textile Technology and Design Engineering

## **PROFESSIONAL OPPORTUNITIES**

# **Professional opportunities**

- Analysis and diagnosis of products and processes in companies in any industrial sector; technical, design, research and project departments; and new product development departments.
- Market analysis and identifying opportunities for new products; diagnosis in business innovation and strategy.
- Composition and formal analysis; modelling, simulation and development of models and prototypes.
- Ergonomics and aesthetics of industrial products and processes.
- Consultancy and advice.
- Freelance work: provision of consultancy and advisory services in design companies.
- Public administration.
- Teaching and research.

### **ORGANISATION: ACADEMIC CALENDAR AND REGULATIONS**

#### Academic calendar

General academic calendar for bachelor's, master's and doctoral degrees courses

## **Academic regulations**

Academic regulations for bachelor's degree courses at the UPC

## Language certification and credit recognition

Queries about language courses and certification

Terrassa School of Industrial, Aerospace and Audiovisual Engineering (ESEIAAT)

## This bachelor's degree is also taught at

• Vilanova i la Geltrú · EPSEVG · Show degree

# CURRICULUM

Subjects	ECTS credits	Туре
FIRST SEMESTER		
Chemistry	6	Compulsory
Environmental Technologies and Sustainability	6	Compulsory
Graphic Expression in Engineering	6	Compulsory
Mathematical Methods I	6	Compulsory
Physics I	6	Compulsory
SECOND SEMESTER		
Economics and Business Administration	6	Compulsory
Foundations of Computing	6	Compulsory
Materials Science and Technology	6	Compulsory
Mathematical Methods II	6	Compulsory

Physics II         6         Compulsory           THIRD SEMESTER         6         Compulsory           Basic Design         6         Compulsory           Graphic Representation Techniques         6         Compulsory           Mechanical Systems         6         Compulsory           Probability and Statistics         6         Compulsory           FOURTH SEMESTER         Compulsory           Asethetics and Design         6         Compulsory           Control and Guidance of Mobile Robots         6         Compulsory           Control and Systems         6         Compulsory           Elesticity and Strength of Materials         6         Compulsory           Elestronic Systems         6         Compulsory           Elestronic Systems         6         Compulsory           Elestronic Systems         6         Compulsory           Electronic Systems         6         Compul	Subjects	ECTS credits	Туре
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Introduction to Reverse Engineering         3         Optional           Leadership and Professional Development in Engineering         3         Optional           Lightweight Materials for Engineering Applications         3         Optional           Manufacturing Processes         6         Compulsory           Mathematical Models in Engineering         3         Optional           Mathematics and Computing Engineering         3         Optional           Mobile Programming         6         Optional           Motorbikes Design and Secrets         3         Optional           Motorbikes Design and Secrets         3         Optional           Product Design II         6         Compulsory           Product Presentation         6         Compulsory           Product Presentation         6         Compulsory           Professional Communication for Engineers Through Virtual Reality         3         Optional           Real-Time Programming and Database Systems         3         Optional           Rebotics and Automation         3         Optional           Safety Robotics and Automation for Industry 4.0         3         Optional           Surface Chemistry for Industrial Applications Design         3         Optional           Technology, Society and Glo	Introduction to Forensic Expert for Technique Dispute Resolution	3	Optional
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Material Selection in Industrial Design 6 Optional	Integral Design Management	6	Compulsory
·	Internship	12	Optional
Modelisation, Complexity and Sustainability 6 Optional	Material Selection in Industrial Design	6	Optional
	Modelisation, Complexity and Sustainability	6	Optional

Subjects	ECTS credits	Туре
Practical Design of Goods and Equipment	6	Optional
Programming of Mobiles Android	6	Optional
Project Oriented Methodology	6	Compulsory
Textiles for Product Design	6	Optional
Workshop in Plastic Objects Design	6	Optional
EIGHTH SEMESTER		
Agrivoltaics: Photovoltaic Solar Energy for Sustainable Development	3	Optional
Basic Robotics	6	Optional
Digitalization Applied to Energy Systems	3	Optional
Electrical Project Design with Eplan	3	Optional
Hydrogen'S Future: Technologies and Applications	3	Optional
Integral Design of Product	6	Optional
International Projection of Design	6	Optional
Introduction to Robotics and Automation	3	Optional
Numerical Methods for Engineers	6	Optional
Photonics. Optics Applied to Engineering	6	Optional
Professional Communication for Engineers Through Virtual Reality II	3	Optional
Technological Projects I	6	Optional
Technological Projects II	6	Optional
Bachelor's Thesis	24	Project

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