

# 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.

This bachelor's degree is taught at [The School of Industrial, Aerospace and Audiovisual Engineering of Terrassa. ESEIAAT](#)

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### GENERAL DETAILS

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#### 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

#### Fees and grants

Approximate fees per academic year: €2,551 (€3,826 for non-EU residents). [Consult the public fees system based on income \(grants and payment options\)](#).

#### Official degree

[Recorded in the Ministry of Education's degree register](#)

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### ADMISSION

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#### 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](#).

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### DOUBLE-DEGREE AGREEMENTS

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#### 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

[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	Type
<b>FIRST SEMESTER</b>		
Chemistry	6	Compulsory
Environmental Technologies and Sustainability	6	Compulsory
Graphic Expression in Engineering	6	Compulsory
Mathematical Methods I	6	Compulsory
Physics I	6	Compulsory
<b>SECOND SEMESTER</b>		
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
<b>THIRD SEMESTER</b>		
Basic Design	6	Compulsory

<b>Subjects</b>	<b>ECTS credits</b>	<b>Type</b>
Electric Systems	6	Compulsory
Graphic Representation Techniques	6	Compulsory
Mechanical Systems	6	Compulsory
Probability and Statistics	6	Compulsory
<b>FOURTH SEMESTER</b>		
Aesthetics and Design	6	Compulsory
Design Methodology	6	Compulsory
Elasticity and Strength of Materials	6	Compulsory
Electronic Systems	6	Compulsory
Engineering Graphics	6	Compulsory
<b>FIFTH SEMESTER</b>		
Artistic Expression	6	Compulsory
Computer-Aided Design	6	Compulsory
Graphic Design and Communication	6	Compulsory
Mechanism Design	6	Compulsory
Product Design I	6	Compulsory
<b>SIXTH SEMESTER</b>		
Advanced Programming Oriented Towards Goals	3	Optional
Characterization Techniques for Metallic Alloys	3	Optional
Creative Programming with Processing	3	Optional
Decision Criteria - Engineer as Employee or Engineer as Entrepreneur	3	Optional
Ecodesign	6	Optional
Economic Factors and Marketing	6	Compulsory
Electromobility and Electrical Aircraft Systems	3	Optional
Energy Efficiency Systems	3	Optional
Energy Storage and Conversion Application	3	Optional
Experimental Design	3	Optional
Experimental Design Workshop Product	6	Optional
Finite Elements in Structural Analysis	3	Optional
Fundamentals of Robotics	3	Optional
Highly Automated Production Systems	3	Optional
Information and Communication Technology	3	Optional
Introduction to Object-Oriented Programming	3	Optional
Introduction to Reverse 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

<b>Subjects</b>	<b>ECTS credits</b>	<b>Type</b>
Product Design II	6	Compulsory
Product Presentation	6	Compulsory
Real-Time Programming and Database Systems	3	Optional
Robotics and Automation	3	Optional
Safety Robotics and Automation for Industry 4.0	3	Optional
Smart Materials and User Experience	3	Optional
Technology, Society and Globalization: the Sustainability Challenge in the XXith Century	6	Optional
Uav Generative Design	6	Optional
Web Applications	3	Optional
Written Academic Skills for Engineering	3	Optional
<b>SEVENTH SEMESTER</b>		
Advanced Programming	6	Optional
Applied Robotics	6	Optional
Initiation to Paper and Graphic Industrial Tecnologies	6	Optional
Integral Design Management	6	Compulsory
Internship	12	Optional
Material Selection in Industrial Design	6	Optional
Modelisation, Complexity and Sustainability	6	Optional
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
<b>EIGHTH SEMESTER</b>		
Basic Robotics	6	Optional
Creative Lab	6	Optional
Integral Design of Product	6	Optional
International Projection of Design	6	Optional
Numerical Methods for Engineers	6	Optional
Photonics. Optics Applied to Engineering	6	Optional
Bachelor's Thesis	24	Project