

Bachelor's degree in Textile Technology and Design

On the **bachelor's degree in Textile Technology and Design** you will build on the common industrial engineering component and come to understand the fundamentals of textile materials and processes, the integral development of textile products and industrial garment making, linear textile structures and non-woven fabrics (technical and smart fabrics), processing and finishing operations, biopolymers, and global textile business logistics and management. When you complete it, you will be capable of understanding, selecting and using textile products and materials, including technical and smart fabrics; designing, optimising and developing technologies related to textile products and processes; and supervising and managing textile companies.

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

Fees and grants

Approximate fees per academic year: €1,660 (€2,490 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

270

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

PROFESSIONAL OPPORTUNITIES

Professional opportunities

- Design; management; commercial organisation and management of textile companies that develop their own technology and basic manufacturing companies; sales and logistics companies; and research centres.

- Design, implementation, operation and management of textile products, processes and facilities. Product development and production and quality management.
- Execution and management of industrial projects, consulting and services.
- International trade.
- Environment protection.
- 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)

CURRICULUM

Subjects	ECTS credits	Type
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		
Electric Systems	6	Compulsory
Fluid Mechanics	6	Compulsory
Mathematical Methods III	6	Compulsory
Mechanical Systems	6	Compulsory
Production Organisation	6	Compulsory
FOURTH SEMESTER		
Control and Guidance of Mobile Robots	6	Optional
Electronic Systems	6	Compulsory
Industrial Automation and Control	6	Compulsory

Subjects	ECTS credits	Type
Materials for Textile Design	6	Compulsory
Probability and Statistics	6	Compulsory
Thermal Engineering	6	Compulsory
Uav Research & Development	3	Optional
Uav Research & Development Project	3	Optional
FIFTH SEMESTER		
Bleaching and Dyeing Design Colorimetry	6	Compulsory
Colouring Agents and Auxiliary Materials	6	Compulsory
Design of Laminar Mesh Structures	6	Compulsory
Design of Laminar Net Structures	6	Compulsory
Design of Non-Woven Linear and Laminar Structures	6	Compulsory
SIXTH SEMESTER		
Advanced Programming Oriented Towards Goals	3	Optional
Air Pollution and Treatment Technologies	6	Optional
Big Data Tools and Applications	3	Optional
Characterization Techniques for Metallic Alloys	3	Optional
Clothesmaking with Textile Structures	6	Compulsory
Creative Lab	6	Optional
Creative Programming with Processing	3	Optional
Critical Thinking for 3D Printing	6	Optional
Decision Criteria - Engineer as Employee or Engineer as Entrepreneur	3	Optional
Design of Dyeing, Printing and Coating Processes	6	Compulsory
Dressing and Finishing Processes	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
Fundamentals of Robotics	3	Optional
Highly Automated Production Systems	3	Optional
Hospital Engineering	6	Optional
Information and Communication Technology	3	Optional
Integral Development of Textile Products	6	Compulsory
Introduction to Big Data	3	Optional
Introduction to Dynamical Systems and Ergodic Theory	3	Optional
Introduction to Forensic Expert for Technique Dispute Resolution	3	Optional
Introduction to Object-Oriented Programming	3	Optional
Introduction to Reverse Engineering	3	Optional
Mathematical Models in Engineering	3	Optional

Subjects	ECTS credits	Type
Mathematics and Computing Engineering	3	Optional
Mobile Programming	6	Optional
Real-Time Programming and Database Systems	3	Optional
Robotics 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 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
SEVENTH SEMESTER		
Advanced Programming	6	Optional
Evaluation of Tissue Quality	6	Optional
Initiation to Paper and Graphic Industrial Tecnologies	6	Optional
Innovation Project Management	6	Compulsory
Internship	12	Optional
Jacquard Design	6	Optional
Modelisation, Complexity and Sustainability	6	Optional
Polymers in Engineering	6	Optional
Programming of Mobiles Android	6	Optional
Project Oriented Methodology	6	Compulsory
Treatment and Reuse of Blackwater	6	Optional
EIGHTH SEMESTER		
Basic Robotics	6	Optional
Numerical Methods for Engineers	6	Optional
Photonics. Optics Applied to Engineering	6	Optional
Waste Management and Treatment	6	Optional
Bachelor's Thesis	24	Project