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: €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

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
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**
<table>
<thead>
<tr>
<th>Subjects</th>
<th>ECTS credits</th>
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<tbody>
<tr>
<td>Electronic Systems</td>
<td>6</td>
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</tr>
<tr>
<td>Industrial Automation and Control</td>
<td>6</td>
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</tr>
<tr>
<td>Materials for Textile Design</td>
<td>6</td>
<td>Compulsory</td>
</tr>
<tr>
<td>Probability and Statistics</td>
<td>6</td>
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<td>Thermal Engineering</td>
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**FIFTH SEMESTER**

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<tr>
<th>Subjects</th>
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<tbody>
<tr>
<td>Bleaching and Dyeing Design Colorimetry</td>
<td>6</td>
<td>Compulsory</td>
</tr>
<tr>
<td>Colouring Agents and Auxiliary Materials</td>
<td>6</td>
<td>Compulsory</td>
</tr>
<tr>
<td>Design of Laminar Mesh Structures</td>
<td>6</td>
<td>Compulsory</td>
</tr>
<tr>
<td>Design of Laminar Net Structures</td>
<td>6</td>
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</tr>
<tr>
<td>Design of Non-Woven Linear and Laminar Structures</td>
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**SIXTH SEMESTER**

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<tr>
<td>Advanced Programming Oriented Towards Goals</td>
<td>3</td>
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<tr>
<td>Air Pollution and Treatment Technologies</td>
<td>6</td>
<td>Optional</td>
</tr>
<tr>
<td>Characterization Techniques for Metallic Alloys</td>
<td>3</td>
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<tr>
<td>Clothesmaking with Textile Structures</td>
<td>6</td>
<td>Compulsory</td>
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<tr>
<td>Creative Programming with Processing</td>
<td>3</td>
<td>Optional</td>
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<tr>
<td>Decision Criteria - Engineer as Employee or Engineer as Entrepreneur</td>
<td>3</td>
<td>Optional</td>
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<tr>
<td>Design of Dyeing, Printing and Coating Processes</td>
<td>6</td>
<td>Compulsory</td>
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<tr>
<td>Dressing and Finishing Processes</td>
<td>6</td>
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<tr>
<td>Electromobility and Electrical Aircraft Systems</td>
<td>6</td>
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<tr>
<td>Energy Efficiency Systems</td>
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<tr>
<td>Energy Storage and Conversion Application</td>
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<td>Experimental Design</td>
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<td>Fundamentals of Robotics</td>
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<tr>
<td>Highly Automated Production Systems</td>
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<td>Information and Communication Technology</td>
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<td>Integral Development of Textile Products</td>
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<td>Introduction to Object-Oriented Programming</td>
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<td>Introduction to Reverse Engineering</td>
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<td>Mathematical Models in Engineering</td>
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<td>Mathematics and Computing Engineering</td>
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<td>Real-Time Programming and Database Systems</td>
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<td>Robotics and Automation</td>
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<td>Safety Robotics and Automation for Industry 4.0</td>
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<td>Technology, Society and Globalization: the Sustainability Challenge in the XXith Century</td>
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<td>Web Applications</td>
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<td><strong>SEVENTH SEMESTER</strong></td>
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<tr>
<td>Advanced Programming</td>
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<td>Evaluation of Tissue Quality</td>
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<td>Initiation to Paper and Graphic Industrial Tecnologies</td>
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<td>Innovation Project Management</td>
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<td>Internship</td>
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<td>Jacquard Design</td>
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<tr>
<td>Modelisation, Complexity and Sustainability</td>
<td>6</td>
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<tr>
<td>Polymers in Engineering</td>
<td>6</td>
<td>Optional</td>
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<tr>
<td>Programming of Mobiles Android</td>
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<td>Project Oriented Methodology</td>
<td>6</td>
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<td>Treatment and Reuse of Blackwater</td>
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<td><strong>EIGHTH SEMESTER</strong></td>
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<td>Basic Robotics</td>
<td>6</td>
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<td>Creative Lab</td>
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<td>Numerical Methods for Engineers</td>
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<td>Photonics. Optics Applied to Engineering</td>
<td>6</td>
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<td>Waste Management and Treatment</td>
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<td>Bachelor's Thesis</td>
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