



THE SWEDISH SCHOOL  
OF TEXTILES  
UNIVERSITY OF BORÅS

**PACE:**  
100 % full-time studies

**LOCATION:**  
Campus in Borås

**CREDITS:**  
180 ECTS credits

**LANGUAGE:**  
English

**APPLY AT:**  
[universityadmissions.se](http://universityadmissions.se)

**MORE INFORMATION:**  
Follow the QR code to learn more about prerequisites, tuition fees, course content, and more.



## *Textile Production and Innovation*

### **BACHELOR'S PROGRAMME**

The textile industry needs to change – and for that, we need innovative developers and leaders who can think in new ways. You and your ideas can transform the textile industry into a sustainable and circular industry. The Textile Production and Innovation educational programme gives you the tools and mind-set, but it is you who will move forward and take responsibility for a sustainable textile industry.

## *Textile Production and Innovation*

### **BACHELOR'S PROGRAMME**

#### **THE PROGRAMME IN SHORT**

This programme is designed based on the current and future needs in the textile industry, where technical textiles, a digital transformation of the industry, compliance with regulations and laws regarding textile products, as well as innovations at the material, product, and process levels are key areas to enable more local and flexible production. You will be working in an international environment.

#### **WORK WITH INNOVATIONS AND SUSTAINABILITY**

Textile Production and Innovation suits those of you with an interest in the technical side of things and it prepares you to work with innovative products and processes, as well as sustainability aspects in the textile industry.

#### **PROGRAMME STRUCTURE**

The programme comprises three years of full-time studies corresponding to 180 credits, where the main field of study Textile Technology is a permeating element of all three years. This means that introductory textile courses in fibre and yarn technology, knitting, weaving and non-woven techniques, dyeing and finishing, as well as assembly and processing form the basis for the broad textile competencies on which the programme is based. These introductory courses are what make your education unique, not only in Sweden but throughout Europe. You will gain an understanding of textile processes that few other graduates can claim.

During the course of the programme, you will have many practical courses where theory and practice are combined in order for you as a student to gain an understanding of the subject and achieve the goals set by the programme. In addition, theoretical and practical knowledge are applied in the project courses where you are trained to bring together all the parts necessary for a specific textile material and product to be put into production. The products and the processes around them will then be considered and analysed from several sustainability aspects.

This programme offers flexibility for you as a student by allowing you to choose between two specialisation tracks with elective courses in textile innovation in the third academic year. These specialisation tracks are Materials Innovation and Product Innovation. The specialisation in Materials Innovation aims to give you more in-depth knowledge at the fibre level, in textile functionalisation, and in smart textiles. The specialisation in Product Innovation gives you the opportunity to deepen your knowledge of the development and creation of innovative and technical products.

The degree project is the last course within the programme and is an independent project (termed degree project) comprising 15 credits. The project topic will be rooted in business and industry or research and the implementation and examination follow the academic requirements regarding method and report writing. In this way, you will gain an understanding of the needs of the business and industry community as well as of what you as a new graduate will be able to contribute.





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## Textile Engineering

### MASTER'S PROGRAMME

The starting point of this programme is textile fibres: what do they consist of? What significance do they have, and what could be done with them? This educational programme links together and specialises in different elements that develop both theoretical and practical knowledge. It is a modern programme that includes recurring elements such as digitisation, recyclability, and a sustainability perspective.

## Textile Engineering

### MASTER'S PROGRAMME

This educational programme is the only one of its kind in Scandinavia and one of few in Europe. It has a strong focus on research and development, providing a deep understanding of technology and chemistry, i.e., how to truly make that work. It is designed for students with a Bachelor's degree in the engineering field who are motivated to work and explore in a laboratory or manufacturing environment. To make the most of the programme, you need good skills in mathematics, textile manufacturing methods, textile material technology, and textile chemistry. During the educational programme, you will develop your knowledge, skills, and assessment ability in textile technology.

#### WELL-EQUIPPED LABORATORIES

The Swedish School of Textiles has well-equipped laboratories, both industrial-scale and small-scale research labs. The latter facilitate exploratory proof-of-concept studies before moving to a larger scale. The staff's competence is unique and provides a strong research basis for the education.

#### SUSTAINABLE DEVELOPMENT

The essence of textile engineering is to maintain textiles' tactile feel even as they obtain new abilities and interactivity through different technical processes. This is why the programme emphasises polymers, fibres, yarns, and fabrics, as well as process thinking and advanced functionalisation of textiles at the beginning. During the second year, its research foundation becomes particularly pronounced. The students will work with state-of-the-art machinery and instruments and practice their

scientific writing and communication skills. To address the challenges of the textile world today and in the future, the programme contributes to digitalisation, circular processes, and sustainable development, which are also decisive driving forces for the Faculty's research.

#### PROGRAMME STRUCTURE

The educational programme follows the different scales of textiles' composition. The course on Polymer Technology deals with the materials at the atomic and molecular levels, followed by the course Fibre and Yarn Technology. This is further followed by courses in Advanced Textile Structures and Textile-Based Composites.

In the Textile Chemistry course and the Wearable Textile Electronics course, students develop tools to manipulate and functionalise textiles. The courses in Product Development and the Project Course in Advanced Textiles offer opportunities to study applications, just as the course in Ethics in the Textile Value Chain course puts technology into context.

During the project course, students' knowledge of the theory of science and research methodology is founded. Further specialisation in the course Advanced Textile Chemistry followed by Advanced Finishing and Printing and the course in Smart Textiles supports the students to be well prepared to show their multitude of skills and abilities in their degree project.



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## Technical Textile Innovation

### MASTER'S PROGRAMME

The transition to a circular textile industry calls for students who have new ways of thinking about innovation and product development.

## Technical Textile Innovation

### MASTER'S PROGRAMME

#### THE PROGRAMME IN SHORT

This educational programme equips you with the tools to analyse future conditions and to transform contemporary products and processes for future needs in a global perspective. You acquire a profound textile technological understanding and get the chance to explore its potential in transdisciplinary contexts, with a specific emphasis on advancing textile innovation.

#### PROGRAMME STRUCTURE

Discover the perfect blend of textile innovation and sustainable development. This programme is designed with a strong foundation in textile technology and methodology in design, product development, sustainability, and innovation. These core pillars are seamlessly integrated to fuel creativity and drive innovation within textile production and technology.

#### EXPERIENCE LEARNING IN MULTIDISCIPLINARY SETTINGS

Immerse yourself in a vibrant learning environment where you will collaborate with students from our Master's programmes in Textile Engineering as well as Resource Recovery. Together, you will learn as you tackle real-world challenges and explore cutting edge concepts. Through joint courses in Textile Technology, Ethics in the Textile Value Chain,

Product Development, Circular Economy and Life Cycle Assessment, you will gain a solid foundation and technical expertise.

As you progress, dive into programme-specific courses such as Creative Design Processes, Textile Product Design-Construction and Joining Technology, Advanced Finishing and Dyeing, and Innovative Textile Product Development.

In the final stages of each year, you'll have the opportunity to apply your expertise in project courses that focus on advanced textiles and sustainable development in close collaboration with industry professionals and researchers. These project courses will also deepen your understanding of scientific theory and research methods, equipping you with invaluable skills for your future career.

#### WELL-EQUIPPED LABORATORIES

The Swedish School of Textiles has well-equipped laboratories, both industrial and small-scale research labs, where you will have the unique opportunity to develop hands-on laboratory skills through assignments and projects that materialise ideas into proof-of-concept mock-ups. The staff's expertise is exceptional and forms the strong research foundation of the educational programme.



**IZABELL GUSTAFSSON**

"I am interested in the environmental impacts of the textile industry and although it is a complex area, I have found tools on how to look at the problems and potentially one day tackle them."



# Overview of Textile Programmes

## Bachelor's in Textile Production and Innovation

### Courses

#### Courses, year 1:

- Introduction to Textile Production and Innovation, 2.5 ECTS credits
- Textile Basics, 5 ECTS credits
- Textile Science I, 7.5 ECTS credits
- Fiber and Yarn Technology, 5 ECTS
- Weaving Technology, 5 ECTS credits
- Knitting Technology, 5 ECTS credits
- Textile Science II, 7.5 ECTS credits
- Technical Textile Product Development, 7.5 ECTS credits
- Nonwoven Technology, 5 ECTS credits
- Dyeing and Finishing, 5 ECTS credits
- Textile Product Manufacturing, 5 ECTS credits

#### Courses, year 2:

- Textile Structures, 7.5 ECTS credits
- Textile Innovation, 7.5 ECTS credits
- Textile Assembly Techniques, 5 ECTS credits
- Quality Assurance and Textile Testing, 5 ECTS credits
- Digital Tools for Communication, 5 ECTS credits
- Design Thinking and Rapid Prototyping, 7.5 ECTS credits
- Digital Textile Transformation, 7.5 ECTS credits
- Project Management and Global Communication, 7.5 ECTS credits
- Sustainable Business and Product Development, 7.5 ECTS credits

#### Courses, year 3:

- Compliance for Textile Production, 7.5 ECTS credits
- Elective Course I, 7.5 ECTS credits
- Elective Course II, 7.5 ECTS credits
- Elective Course III, 7.5 ECTS credits
- Textile Technology Project with Scientific Methods, 15 ECTS credits
- Thesis Project, 15 ECTS credits

## Master's in Textile Engineering

#### Courses, term 1:

- Polymer Technology, 7.5 ECTS credits
- Advanced fibre and yarn technology, 7.5 ECTS credits
- Textile Chemistry, 7.5 ECTS credits
- Textile product development, 6 ECTS credits
- Ethics in the textile value chain, 1.5 ECTS credits

#### Courses, term 2:

- Advanced textile structures, 7.5 ECTS credits
- Textile and Wearable Electronics, 7.5 ECTS credits
- Project course in advanced textiles, 15 ECTS credits

#### Courses, term 3:

- Advanced Textile Chemistry, 7.5 ECTS credits
- Textile-based Composite Technology and Additive Manufacturing, 7.5 ECTS credits
- Advanced Finishing and Printing, 7.5 ECTS credits
- Smart Textiles, 7.5 ECTS credits

#### Courses, term 4:

- Thesis Project, 30 ECTS credits

## Master's in Technical Textile Innovation

#### Courses, term 1:

- Creative design processes, 7.5 ECTS credits
- Advanced fibre and yarn technology, 7.5 ECTS credits
- Textile product design - construction and joining technologies, 7.5 ECTS credits
- Textile product development, 6 ECTS credits
- Ethics in the textile value chain, 1.5 ECTS credits

#### Courses, term 2:

- Advanced textile structures, 7.5 ECTS credits
- Innovative textile product development, 7.5 ECTS credits
- Project course in advanced textiles, 15 ECTS credits

#### Courses, term 3:

- Advanced finishing and dyeing technologies, 7.5 ECTS credits
- Life cycle assessment, 7.5 ECTS credits
- Project course in sustainable development, 10 ECTS credits
- Circular economy (RR), 5 ECTS credits

#### Courses, term 4:

- Thesis Project, 30 ECTS credits

## Bachelor's in Textile Production and Innovation

### Prerequisites

General entry requirements + Civics 1b or Civics 1a1 +1a2 and Mathematics 2a or Mathematics 2b or Mathematics 2c.

- English 6 is required.

### Career opportunities

After graduation, there are many job opportunities. For example, roles such as project and innovation coordinator, production manager, compliance coordinator and material, trim, or product developer.

You can also pursue further studies. Our Master's programme in Technical Textile Innovation is a perfect match for further studies in the field.

## Master's in Textile Engineering

Bachelor's degree of 180 ECTS credits in:

- Science in Engineering or applied science with enough science competence as described below
- 15 ECTS credits in mathematics
- 7.5 ECTS credits in chemistry (with at least half in organic chemistry)
- 7.5 ECTS credits in materials engineering (with at least 3 in polymeric materials)
- and a total of at least 15 ECTS credits in yarn, weaving, knitting, textile joining and/or non-woven technology.
- English 6 is required.

After graduation, several career paths open up. Students can work in various research and development-oriented industrial positions or in production and quality assurance roles, eventually advancing into specialist or managerial positions.

Perhaps further specialisation in textile technology through doctoral studies will be of interest.

## Master's in Technical Textile Innovation

Bachelor's degree of 180 ECTS credits in:

- Textile technology
- English 6 is required.

After graduation, you'll have a wide range of career paths to explore. You can pursue leading positions such as product development manager, innovation and sustainability manager, or you can start your own innovation agency.

With your extensive knowledge and experience, you'll be well equipped to excel in these roles within various textile industries. Alternatively, you can choose to continue your academic journey by pursuing a doctorate, opening doors to cutting-edge research opportunities.

### How to apply

#### Step 1:

Complete the formal application on the national website: [www.universityadmissions.se](http://www.universityadmissions.se)

Read more about the application and admission process:

