



TEXTILHÖGSKOLAN
HÖGSKOLAN I BORÅS

Dear prospective student,

- If you are truly interested in the science, processes and technology
- If you would like to join to establish the digital-, sustainable- and circular transformation of the textile industry
- If you would like to master your knowledge and lead scientific progress in the textile materials, chemistry and processes
- If you would like to keep your career path open in both to industry and academia

Our programme at the University of Borås might interest you

Msc program in Textile Technology and Engineering

2-year program, 120 hps

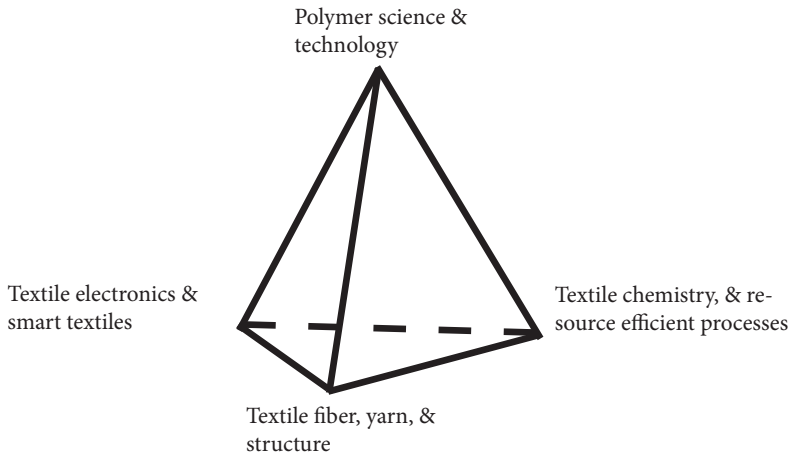
Application code: HB-4254A

Application period: 2023-10-16 to 2024-01-15

Starts on Aug, 2024

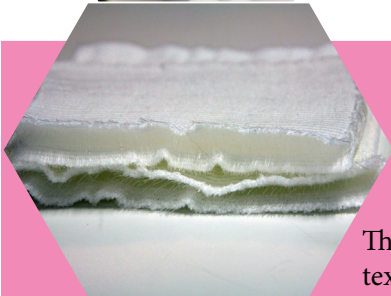
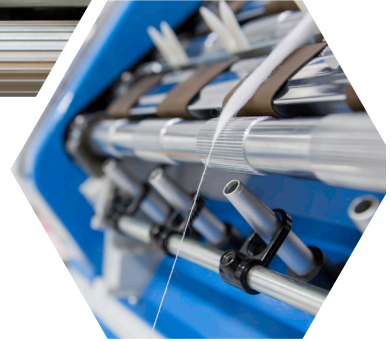
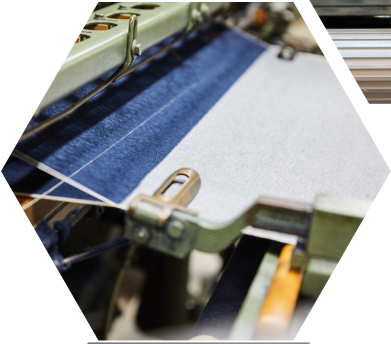
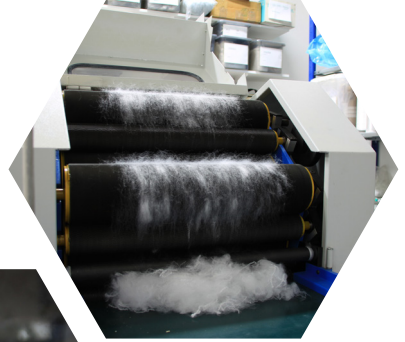


The programme is built on four pillars with in the textile technology, as sketched below. The programme highlights the content on textile materials, chemistry, electronics, functional textiles and processes.

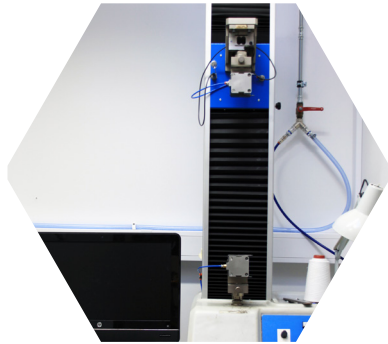
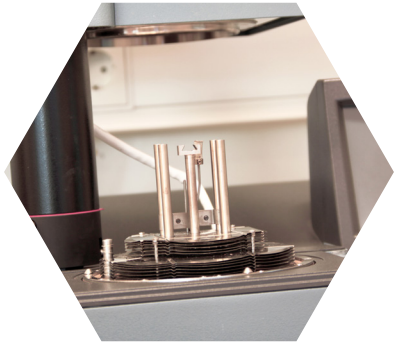


Bachelor of Science in Engineering or applied science, with:

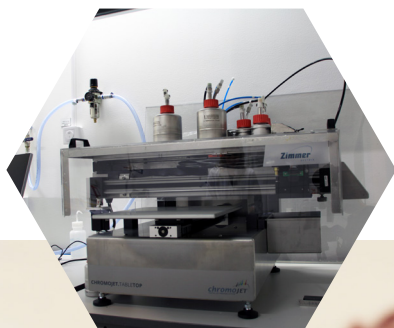
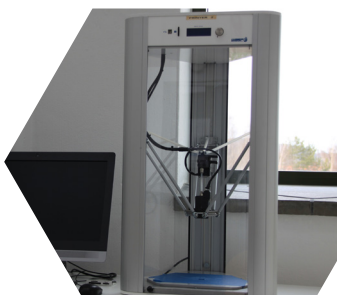
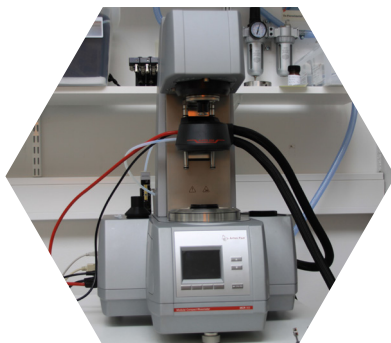
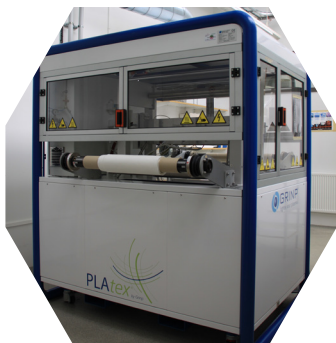
- 15 credits in mathematics,
- 7.5 credits in chemistry (at least half in organic chemistry),
- 7.5 credits in materials engineering (at least 3 credits in polymer materials)
- 15 credits in textile technology such as yarn, weaving, knitting, textile joining and/or non-woven technology
- English 6 is required



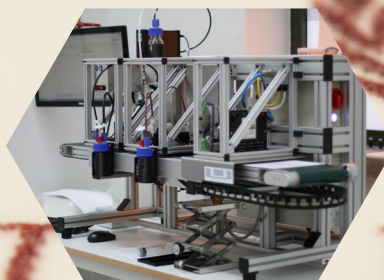
The student works with textile fibers, yarns and textile structures. The student has hands on with needle punching, carding, roving, and spinning processes in the Advanced Fibre and Yarn Technology course. The student learns 3D knitting (flat, circular, warp), 3D weaving as well as complex structures (braiding and narrow textiles), and advanced nonwovens in the Advanced Textile Structures course.

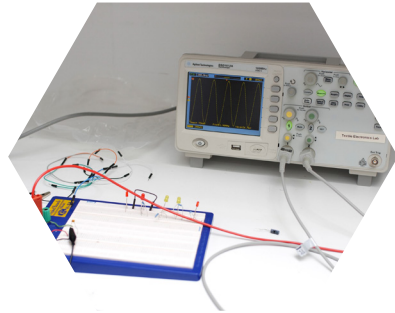
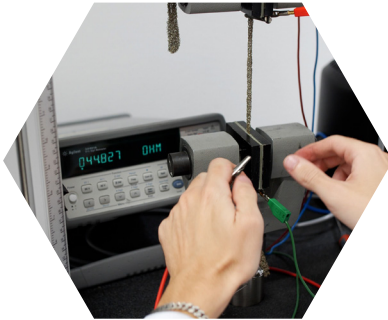
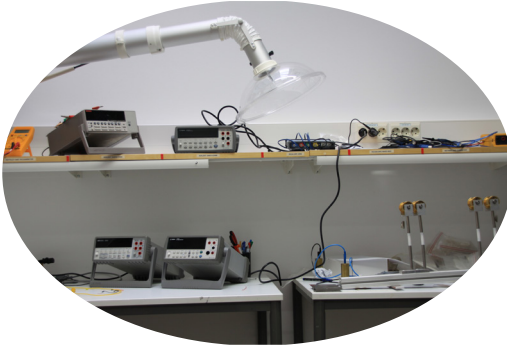


The textile material is investigated at molecular level. The concepts of polymerization, glass transition, melting, crystallization, the polymer chemistry and physics as well as its processing builds the foundation for Polymer Technology course. The student exercises their product development process skills in the Textile Product Development course. The textile-based solutions with an articulated user perspective are often created together with a company or other external parties.

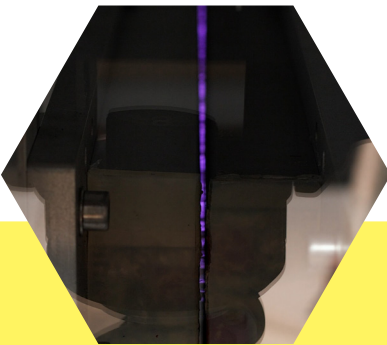
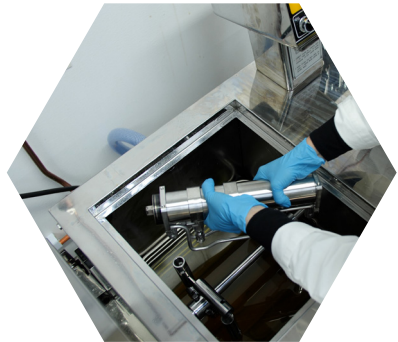
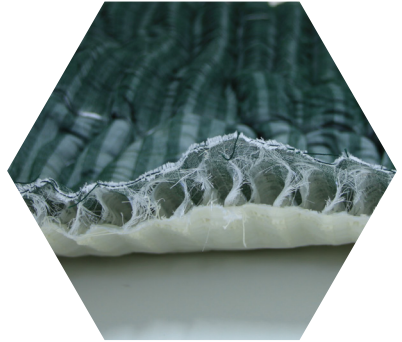


The programme built on the fundamental understanding of chemistry in textile in the Textile Chemistry course. The Advanced finishing and printing course focuses on digital and resource efficient textile processes. The student works on dry processes such as plasma pre-treatment, inkjet printing, 3D printing and the supercritical CO₂ process to enable the transformation of a more resource efficient and sustainable textile industry.





The Textile and Wearable Electronics course teaches the theoretical basis for the analysis and synthesis of electronic circuits. The Smart Textile course is based on knowledge in Textile and Wearable Electronics, which is further investigated on various aspects of functional and smart textiles. The laboratory- and project work in the course includes electrical characterization, conductive functionalization of textiles, design and characterization of textile sensors, and integration of electronics for smart textiles prototyping.



The Project Course in Advanced Textiles and final Thesis Project foster the programme learning outcomes in a practical or theoretical project. The student practices their knowledge and skills in Project Course in Advanced Textiles and finally concentrates on solving a chosen scientific challenge in a semester's time.

Appendix: Course overview of the Msc program in Textile Technology and Engineering

	P1, Aug-Nov	P2, Nov-Jan		P3, Jan-Mar	P4, Mar-Jun
1 st year	Polymer Technology (7.5 credits)	Textile Chemistry (7.5 credits)		Advanced Textile Structures* (7.5 credits)	Project Course in Advanced Textiles* (15 credits)
	Advanced Fibre and Yarn Technology* (7.5 credits)	Textile Product Development* (6 credits)	Ethics in the Textile Value Chain* (1.5 Credits)	Textile and Wearable Electronics (7.5 credits)	
2 nd year	Advanced Textile Chemistry (7.5 credits)	Advanced Finishing and Printing (7.5 credits)		Thesis Project (30 credits)	
	Textile-based Composite Technology and Additive Manufacturing (7.5 credits)	Smart Textiles (7.5 credits)			

*Shared courses with Master Programme (Two Year) in Technical Textile Innovation



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