



Textile product development

Textil produktutveckling

7.5 credits

Ladok Code: AT2TP1

Version: 2.0

Established by: Committee for Education in Technology 2017-12-12

Valid from: Spring 2018

Education Cycle: Second cycle

Main Field of Study (Progressive Specialisation): Textile Engineering (A1N)

Disciplinary Domain: Technology

Prerequisites: Admitted to the master's program in textile technology.

Subject Area: Textile Technology

Grading Scale: Seven-degree grading scale (A-F)

Content

This course will provide students with the technical knowledge and practical experience of textile product engineering in textile manufacturing.

Students will learn to identify the Textile Product Development process, technical requirements, product appearance and performance. They will research new technologies and equipment available (type, capability, capacity) and raw materials. They will produce/source trial samples to required product engineering criteria and evaluate efficiency of the manufacturing process.

Learning Outcomes

Upon completion of the course, the student should be able to, with regard to,
Knowledge and understanding

- 1.1 Describe the various stages in the textile product development process
- 1.2 Understand the relationship between user needs and product requirements
- 1.3 Explain the different product concepts

Skills and Abilities

- 2.1 Develop new textile product concepts that focus on a specific user category
 - 2.2 Identify research for sustainable and recycled materials for textile products
 - 2.3 Analyze how technical problems can be effectively solved in a textile company
 - 2.2 Evaluate textile products regarding technical performance, environmental impact and raw material requirements
- Valuability and Approach
- 3.1 Critically analyse and argue for a selected product from the viewpoint of ecology, sustainability and technology
 - 3.2 Select and argue for the chosen concept in connection with concept development

Forms of Teaching

Lectures, seminars, group discussions, case studies, projects work and laboratory work.

The language of instruction is English.

Forms of Examination

The course is examined through the following examinations

Submission: Project work

Learning Objectives: 1.1-3.2

Credits: 4.5

Grading scale: ECTS

Assignment and documented presentation

Learning Objectives: 1.1-1.3, 2.2-2.4, 3.1

Credits: 3

Grading scale: Fail or Passed

The grade of course is, as a percentage: A (90% or higher); B (80-89%); C (70-79%); D (60-69%); E(50-59%); F (Less than 50%)

The project work determines the final grade of the course, provided that the other examined part have been graded G (pass).

The student's rights and obligations for examination are in accordance with guidelines and regulations at the University of Borås

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Literature and Other Teaching Materials

Horne, L. (2012). New Product Development in Textiles: Innovation and Production [Elektronisk resurs].

Nakajima, T. (1994). Advanced fiber spinning technology [Elektronisk resurs]. Woodhead Publishing

Lawrence, Carl (red.) (2010). Advances in yarn spinning technology [Elektronisk resurs]. Cambridge: Woodhead Publishing Limited

Hearle J.W.S., Hollick L. and Wilson D.K. (2001) Yarn Texturing Technology,[Elektronisk resurs]. Woodhead Publishing

Choogin V., Bandara P. and Chepelyuk E., (2012) Mechanisms of Flat Weaving Technology [Elektronisk resurs]. Woodhead Publishing

Lord P.R. and. Mohamed M.H., Weaving (Second Edition) (1982) Conversion of Yarn to Fabric [Elektronisk resurs]. Woodhead Publishing

Ray S. C., 2011, Fundamentals and Advances in Knitting Technology [Elektronisk resurs]. Woodhead Publishing

Chapman R. (2010)Applications of Nonwovens in Technical Textiles [Elektronisk resurs]. Woodhead Publishing

Student Influence and Evaluation

Students' opinions are collected systematically and regularly through written evaluation after completing the course. Once per semester, student representatives evaluate courses completed with the director of studies and the course leader. Otherwise, refer to the university's policy for course evaluations and documents issued by the board of directors, the director of studies and the course coordinator.

Miscellaneous

The course is primarily a program course for Master's Program in Textile Technology.

This syllabus is a translation from the Swedish original.