

Design processes and prototyping **Designprocesser och prototypframtagning**

7.5 credits

Ladok Code: AT1DE1

Version: 1.0

Established by: Committee for Education in Technology 2025-05-09

Valid from: Autumn 2025

Education Cycle: First cycle

Main Field of Study (Progressive Specialisation): Textile Technology (G1F)

Disciplinary Domain: Technology 60%, Design 40%

Prerequisites: Course Technical Textile Product Development

Subject Area: Textile Technology

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

Content

The aim of the course is to introduce and practice design methodology and rapid prototyping methods. The course begins with a theoretical background introduction of the design process iteration between analysis, synthesis and evaluation. The theoretical introduction is followed up by a series of workshops adapted for analysis, synthesis and concept development. The conceptual idea is further processed using prototyping methods, where simple materials and rapid assembly methods are used to visualise and concretise conceptual ideas. The concept idea is evaluated and transformed in the final part of the course into a first product specification for the selected prototype level. The course is practice-based with step-by-step presentations as a form of examination.

Learning Outcomes

After completing the course, the student will be able to:

Knowledge and understanding

- 1.1 Describe the basic concepts of the different stages of the design process,
- 1.2 Describe different types of rapid prototyping methods, physical as well as computer aided.

Competence and skills

- 2.1 Apply methods for transition from analysis to synthesis
- 2.2 Communicate concepts in different phases of the design process
- 2.3 Apply methods for rapid prototyping
- 2.4 Evaluate a concept idea supported by a prototype
- 2.5 Communicate a first prototype concept in a product specification

Judgement and approach

- 3.1 Reflect on the strengths and weaknesses of the executed process in relation to the finished concept idea

Forms of Teaching

The course teaching consists of:

- Lectures
- Workshops

The language of instruction is English.

Forms of Examination

The course will be examined through the following examination elements:

Written report

Learning outcomes: All learning outcomes

Credits: 3

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

Presentation 1

Learning outcomes: 1.1-1.2

Credits: 1

Grading scale: Fail (U) or Pass (G)

Presentation 2

Learning outcomes: 1.1-1.2, 2.1-2.3

Credits: 1.5

Grading scale: Fail (U) or Pass (G)

Presentation 3

Learning outcomes: All learning outcomes

Credits: 2

Grading scale: Fail (U) or Pass (G)

The final grade of the course is determined by the written assignment, which is issued when all examination components have been passed. The number of examination opportunities is limited to two per course instance.

If the student has received a decision/recommendation regarding special pedagogical support from the University of Borås due to disability or special needs, the examiner has the right to make accommodations when it comes to examination. The examiner must, based on the objectives of the course syllabus, determine whether the examination can be adapted in accordance with the decision/recommendation.

Student rights and obligations at examination are in accordance with guidelines and rules for the University of Borås.

Literature and Other Teaching Materials

Course materials are provided through the university's learning platform.

The course literature is in English.

Student Influence and Evaluation

The course is evaluated in accordance with current guidelines for course evaluations at the University of Borås in which students' views are to be gathered. The course evaluation report is published and returned to participating and prospective students in accordance with the above-mentioned guidelines, and will be taken into consideration in the future development of courses and education programmes. Course coordinators are responsible for ensuring that the evaluations are conducted as described above.

Miscellaneous

This syllabus is a translation from the Swedish original.

The course is primarily intended for students in the Bachelor's programme Textile Production and Innovation.