UNIVERSITY OF BORÅS

Project Course in Advanced Textiles
Projektkurs i avancerade textilier
15 credits

Ladok Code: AT2AV1
Version: 4.0
Established by: Committee for Education in Technology 2022-12-19
Valid from: Spring 2023

Education Cycle: Second cycle
Main Field of Study (Progressive Specialisation): Textile Technology (A1F)
Disciplinary Domain: Technology
Prerequisites: Admitted to Master Programme in Textile Technology
Subject Area: Textile Technology
Grading Scale: Seven-degree grading scale (A-F)

Content
This project-based course offers opportunities for the students to apply their pre-existing knowledge and what they have learnt during their advanced level studies so far. Through the project-based learning they become more aware of their knowledge gaps and their learning processes. They go hands-on with the different textile technologies, structures from fibre to textile, functionality and interactivity and the options offered from textile chemistry, i.e. a true multidisciplinary approach. To generate tangible artifacts to support the intellectual process in the highly iterative conceptual development movement, which is also taught in form of product development methodologies. Research gaps are identified, connected to literature and industrial relevance.

The project will embrace several domains of textile technology starting from real-life societal and industrial challenges considering agenda 2030.

Learning Outcomes
Upon completion of the course, the student should independently be able to,

Knowledge and understanding
1.1 demonstrate and apply technical textile knowledge including, fundamental processes and material, knowledge for advanced applications, considering their compatibility with The 2030 Agenda for Sustainable Development, and
1.2 demonstrate methodological knowledge about current technology research and development work in advanced textiles.

Skills and Abilities
2.1 use their acquired textile knowledge and skills for project work,
2.2 communicate project results orally, visually and in writing to peers, scholars and other stakeholders, and
2.3 demonstrate efficient project and time management,
2.4 demonstrate abilities to critically select appropriate methodologies and use this knowledge in project realisation, and
2.5 identify and mitigate knowledge and competence gaps and take responsibility to fill these gaps.

Critical judgement and evaluation
3.1 reflect on project results and proposals for further work in the light of sustainable development.

Forms of Teaching
Lectures, seminars, group discussions, case studies, project work and lab work.

The language of instruction is English.

Forms of Examination

The course will be examined through the following examination elements:

Essay
Learning outcomes:
Credits: 1.5
Gradingscale: Fail (U) or Pass (G)

Pilot study report
Learning outcomes:
Credits: 6
Gradingscale: Fail (U) or Pass (G)

Project report with presentation
Learning outcomes:
Credits: 7.5
Gradingscale: Seven-degree grading scale (A-F)

The final grade is determined by the project report which is granted when all examination steps are cleared.

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

Horne, L. (2012) New product development in textiles innovation and production. Oxford: Woodhead Pub. Ltd.

El Mogahzy, Y. E. (2009) Engineering textiles: integrating the design and manufacture of textile products. Cambridge, England: Woodhead Publishing Limited.

Supplementary material related to the actual projects is identified and selected during the course in discussions between staff and project groups.

Additional hand-outs, scientific papers, lab-PM is provided through the UB learning platform.

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 admitted to the Master Program in Textile Engineering and Master Program in Technical Textile Innovation.