HÖGSKOLAN I BORÅS

Masters Degree in Textile Technology
Magisterutbildning i textilteknologi
60 credits

Ladok Code: DMATE
Version: 7.1
Level: Second cycle
Approved by: The Teaching Committee 2011-10-21
Valid from: Autumn 2011
Valid for:

General Objectives

Second level education shall essentially build on the knowledge that students acquire in first level education or corresponding knowledge. Second level education shall involve a deepening of knowledge, skills and abilities relative to first level education and, in addition to what applies to first level education, shall

- further develop the students' ability to independently integrate and use knowledge,
- develop the students' ability to deal with complex phenomena, issues and situations, and
- develop the students' potential for professional activities that demand considerable independence or for research and development work.

(The Higher Educations Act, Chapter 1, Section 9)

Objectives

1. Knowledge and understanding
For a one-year master's degree, students must:
1.1 be able to demonstrate and apply broad technical knowledge of textile materials, processes and applications, including both basic materials and manufacturing engineering theories and methods, and deeper knowledge of the design, construction, manufacture and adaptation of advanced textile products.
1.2 demonstrate deeper technological and methodological knowledge within at least one such field of textile engineering, as well as an insight into current research and development work.
1.3 be able to describe in depth, and demonstrate an understanding of, sustainable development.

2. Skills and abilities
For a one-year master's degree the student must
2.1 demonstrate an ability to integrate knowledge and to analyse, assess and deal with complex textile engineering phenomena, issues and situations, even in cases where limited information is available.
2.2 independently be able to plan and employ appropriate methods to carry out advanced tasks within given timeframes, quickly obtain new technical knowledge and apply this to textile-related development and renewal.
2.3 demonstrate an ability to independently identify different technical solutions, and to develop and design textile products, processes and systems, taking human conditions and needs and society's goals for economically, socially and ecologically sustainable development into account.
2.4 demonstrate an ability to clearly present and discuss their conclusions and the knowledge and arguments behind them, in dialogue with both industry representatives and laymen, orally and in writing.
2.5 demonstrate the skill required to participate in research and development work or to work in other advanced activities.

3. Judgment and approach
For a one-year master's degree the student must
3.1 demonstrate an ability to work in a social context and an organisational context, which involves being able to make assessments, taking into account relevant scientific, social and ethical aspects, and demonstrate an awareness of ethical aspects of research and development work.
3.2 demonstrate an insight into the opportunities, limitations and problems of science and technology, their role in society and people's responsibility for how they are used.

3.3 demonstrate an ability to identify their need for further knowledge and to take responsibility for developing their own knowledge.

4. Independent work (degree project)
For a one-year master's degree, students must have completed an independent degree project in textile engineering, within the framework of the course requirements.

Content

Teaching takes place in the form of lectures, exercises, laboratory sessions, seminars and project work with individual supervision. The courses at second-cycle level are planned in order to be well balanced and relevant to challenging technical work or research.

The subjects listed below are included in the textile engineering programme. They fall into two categories: advanced textile materials engineering, and textile construction and manufacturing. Both these categories and their component courses provide further depth in textile engineering and a logical deepening following a bachelor's degree.

Study period 1: Advanced textile materials engineering

Polymer engineering (7.5 credits) Objectives 1.1, 1.3, 2.1-2.4
Fibre engineering I (7.5 credits) Objectives 1.1, 2.1-2.2, 2.4

Study period 2: Advanced textile materials engineering

Surface chemistry and chemical treatment (10.5 credits) Objectives 1.1, 1.3, 2.1-2.4
Fibre engineering II (4.5 credits) Objectives 1.1, 2.1-2.2, 2.4

Study period 3: Textile construction and manufacturing

Textile technology (7.5 credits) Objectives 1.1, 1.2, 2.1-2.4
Textile construction and product development (7.5 credits) Objectives 1.1, 1.2, 2.2, 2.4, 2.5, 3.1-3.2

Study period 4: Textile engineering

Degree project (15 credits) Objectives 1.1-3.3

Admission Requirements

Bachelor's degree in textile engineering or equivalent qualifications. "Equivalent qualifications" means that the applicant should have completed a three-year engineering course including at least 15 credits in mathematics, 7.5 credits in chemistry (with at least half in organic chemistry), 7.5 credits in materials engineering (with at least half in polymer materials), and 15 credits in textile production methods. A qualification in English corresponding to En B is also required.

Degree

Master of Science (One Year) with a major in Mechanical Engineering with specialisation in Textile Technology.

Degree certificates are issued upon application in Ladok for students. More information is available at www.hb.se.

Student Influence and Evaluation

Heads of the education are responsible for obtaining the students' opinions of the education. The results of the evaluation lay the groundwork for the design of the education. Once a year the whole education is evaluated and the students' results and opinions, along with the composition/realization of the education are thoroughly examined in order to constantly improve the education and retain its modernity.

For single subject courses the head of each respective course is responsible for collecting the students' opinions of the course. The results of these evaluations lay the groundwork for the design of the course. Once per term, the courses are evaluated by the head of the education along with the director of studies and student representatives in order to continually improve the courses.

Through the educational councils, where student representatives along with the representatives of the teachers and the representative of the business world discuss, among other things, questions concerning current and future educational plans, the students are given the possibility of exercising influence over their education.

For other matters, a reference is made to the University College's policy for course evaluation and documents issued by the director of studies, the head of the course and the institutional board.

Miscellaneous

This programme is conducted in English.

The courses during study periods 1 to 3 are studied together with the master's degree in textile engineering.

The Swedish document is the original. In the event of any uncertainty in connection with translations into other languages, the Swedish version shall apply.

The language of instruction is English.