

Handlingsplan för kvalitetsarbetet för Textilingenjörsutbildning

Sektionen för Textilteknologi

Denna handlingsplan har sin grund i den utvärdering som genomförts enligt *Handläggningsordning för utvärdering och utveckling av utbildning vid Högskolan i Borås* (dnr 286-19). Utvärderingen har sin grund i några kvalitetskriterier, beslutade av FoU-nämnden. Till dessa kriterier har bedömargruppen förhållit sig vid granskning, diskussion och utvärdering av utbildningen. Kvalitetskriterierna är desamma oberoende om utbildningen bedrivs på en grund- eller avancerad nivå, dessa är:

1. Utbildningen håller hög kvalitet inom huvudområdet avseende vetenskaplig/konstnärlig bredd och vetenskapligt/konstnärligt djup och beprövad erfarenhet.
2. Utbildningens utformning, innehåll och genomförande ger studenterna förutsättningar att nå examensmålen.
3. Studenternas utbildning och utbildningsmiljö
 - a. har en nära koppling till forskning och
 - b. beaktar jämställdhet.Vidare främjas inom utbildning
 - c. internationalisering,
 - d. hållbar utveckling samt
 - e. samverkan med arbetsliv och omgivande samhälle.
4. Det sker ett kontinuerligt uppföljnings- och utvecklingsarbete som inbegriper ett aktivt studentinflytande för att stärka utbildningens kvalitet.

Handlingsplanen skall samla och synliggöra sektionens åtgärder för framhållen kritik med syfte att förbättra kvalitén på enskilda program men även för att stärka hela sektionens ställning inom utbildning, forskning samt dessas långsiktiga påverkan för ett hållbart samhälle. Handlingsplanen diskuterats i en grupp bestående av utbildningsledare och sektionschef, den har sedan diskuterats xxx ??.

Handlingsplanen är strukturerad per kriterium (totalt åtta) och inleds med bedömargruppen övergripande kommentarer för kriteriet. Sektionen responderar till både kriterium och kommentarer genom att sätta upp mål, för varje mål finns en handlingsplan (åtgärder) lämpliga för att uppnå målet. Kopplat till åtgärderna presenteras ansvarig/-a, tidsplan och ev. nödvändiga resurser, det finns även utrymme för kommentarer. Åtgärderna har medvetet inte beskrivits i detalj. Detaljplaneringen görs i anslutning till åtgärdens implementering. En uppföljning av handlingsplanen kommer att göras efter ungefär ett år.

Kriterium 1

Utbildningen håller hög kvalitet inom huvudområdet avseende vetenskaplig/konstnärlig bredd och vetenskapligt/konstnärligt djup och beprövad erfarenhet.

Bedömarens kommentarer

The summary assessment of degree projects was the scientific quality of degree projects was overwhelmingly positive. The projects were innovative with relevant issues in areas where valuable knowledge of both high social and industrial importance is included however; there was variation between the essays and signs of certain weakness (Dnr 813-19, 2020, page 2).

Mål 1.	Treating and assessing the projects as academic scientific work not only company assignment				
Åtgärder för att nå målet	Ansvarig	Resurs	Startdatum	Kommentar	Status
A) Revising thesis template	Course coordinator	-	2021-02-15	Aims to contribute to goal fulfillment by following a common thesis template in which important information are included.	Commenced
B) Preparing Bachelor's thesis handbook	Course coordinator/ Program coordinator	-	2021-03-01	Aims to contribute to goal fulfillment by guiding the students through preparing their manuscripts and creating a uniform and visually clear document, with information on all needed requirements to receive approval from the School. It will include details about: <ul style="list-style-type: none"> - basic manuscript preparation, - how to arrange content, - school's specific style requirements and more. 	Not commenced
C) Actors involved in a supervision process and their space of interaction	Course coordinator/ Program coordinator		2021-04-01	The purpose is to contribute to goal achievement by: <ul style="list-style-type: none"> - Reviewing the supervisor's role and conditions as coach 	Not commenced

				<p>(guiding, motivating, monitoring, and advising the student according to certain supervisory standards and regulations)</p> <ul style="list-style-type: none"> - Reviewing the industrial supervisor's responsibilities and conditions - Reviewing the examiner's role as the quality evaluator and assessor (assessing the student's achievement) - Reviewing the student's responsibilities (committed to carry out a project to achieve some learning outcomes) - Reviewing the expected and current relationship between supervisor, student and examiner - Communicating more clearly with industrial partners regarding degree project's contents and structure as a scientific work 	
D) Including scientific methodology course in the program				Scientific Methodology within Textile Technology (7.5 hp)	Completed
E) Improve student's academic writing skill	Program coordinator	Course coordinator	2020-11-19	<p>The action contributes to fulfilling the goal by:</p> <ul style="list-style-type: none"> - Providing adequate linguistic feedback on student's writing 	Commenced

				<p>report during education (implemented by examiners earlier in the education when the student make written assignments) in order to minimize existed linguistic shortcomings and incorrect use of terms in their degree projects.</p> <ul style="list-style-type: none"> - Incorporate lectures and workshops in courses in a logical progression throughout the program 	
F) Evaluating the possibilities of revising the allocated hours for supervision	Director of Studies		2021-12-01	<p>The purpose is to contribute to goal achievement by:</p> <ul style="list-style-type: none"> - Increasing tutoring's hour since the students need more supervision 	Not commenced
G) Involve more PhD active researcher as supervisor in bachelor program	Program coordinator/Course coordinator		2021-03-01	The senior lecturers who are active in research should be involved more in bachelor program both in teaching and project supervision which strengthen the supervision quality	Commenced
Mål 2. Increase scientific quality of the program and subsequently maintain the high scientific quality					
Åtgärder för att nå målet	Ansvarig	Resurs	Startdatum	Kommentar	Status
A) Involve more senior lecturers (PhD active researcher) in program	Director of Studies	-	2020-11-19	The senior lecturers who are active in research should be involved more in bachelor program both in teaching and project supervision which can strengthen the course and assay's quality	Commenced

B) Reviewing the structure and order of the courses	Program coordinator/ Director of Studies		2020-08-01	Even though the whole textile engineering program has been revised completely since 2019, still the program progression is updating continuously. See also action 3A.	Commenced
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Kriterium 2

Utbildningens utformning, innehåll och genomförande ger studenterna förutsättningar att nå examensmålen.

Bedömarens kommentarer

The assessment group believed that there are good conditions to achieve the degree objectives. However, there are still rooms for improvement. Certain courses and specializations required to integrate applied courses are missing. According to the teachers, a course and program development is in progress (page 8).

Mål 3. Program development						
Åtgärder för att nå målet	Ansvarig	Resurs	Startdatum	Kommentar	Status	
A) Identify and implement necessary changes to the program	Program coordinator	-	2018	<p>Textile engineering program has been revised since 2019. The program was changed according to the following points:</p> <ol style="list-style-type: none"> 1. The progression between the subjects during the three years is unclear. 2. A relatively large proportion of students lag behind with the math courses. 3. The second year's approach is chopped up on many small courses and flows into different periods with extreme work peaks as a result <p>However, the program will be improved more by considering the following points as well.</p> <ol style="list-style-type: none"> 4. The co-reading with the other textile programs at school in basic textile engineering courses reduces 	Commenced and in progress	

				<p>the engineering level for textile engineers</p> <p>5. The mathematical and scientific application in the textile subjects is limited</p> <p>6. The exchange semester should offer more engineering subjects.</p>	
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Kriterium 3a

Studenternas utbildning och utbildningsmiljö har en nära koppling till forskning

Bedömargruppens kommentarer

The connection to the industry within the program was appreciated however, the bias towards industry mainly favors those students who intend to go directly into working life after graduation. Therefore, the connection to the section's own research needs to be strengthened in the program (page 5).

Mål 4.	Strong connection between education and the section's own research.				
Åtgärder för att nå målet	Ansvarig	Resurs	Startdatum	Kommentar	Status
A) Making closer contacts with academic environments and researchers	Program coordinator	-	2021-08-01	The action contributes to fulfilling the goal by: Involving more of the section's researchers including PhD students from different groups in courses and inform students about different ongoing/completed research projects.	Not commenced
b) Find the structure for sharing ongoing research with staff and students	SC	Research leader	2021-12-01		Not commenced

Kriterium 3b

Studenternas utbildning och utbildningsmiljö beaktar jämställdhet.

Bedömarens kommentarer

The assessment team recommended that a proper review of the understanding of gender equality among teachers, leaders and students needs to be performed. The gender quality issues need to be taken into account in the education (page 6).

Mål 5. High awareness of gender equality perspectives among both teachers and students					
Åtgärder för att nå målet	Ansvarig	Resurs	Startdatum	Kommentar	Status
A) Provide opportunity for the students where a gender perspective in general in society and specifically in the subject of textile technology is taught and discussed	Program coordinator	Course coordinator	2022-08-01	Could be a common opportunity for all textile programs.	Not commenced
B) Select existing group work steps in appropriate courses and add gender equality criteria where students discuss and reflect on gender equality perspectives.	Program coordinator/Course coordinator			- Could possibly be done within the framework of the Textilteknisk fördjupning course in year 3. - Could possibly be performed as a reflection exercise during Hållbar affärs- och produktutveckling course where students worked in project groups.	Commenced
C) Revising the course plans	Program coordinator/Course coordinator		2021-08-01	The course plans of two mentioned courses are needed to be revised accordingly.	Not commenced
D) Internal or external lecturers are invited to develop the competence of the education teachers within a gender equality perspective.	Program coordinator	PUF	2021-08-01	Provided course by PUF: Jämställdhetsintegrering i praktiken- Baskunskaper och vägledning för jämställd undervisning In this short course, staffs get basic knowledge about gender equality and	Not commenced

				gender as well as concrete examples and methods for gender equality teaching.	
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Kriterium 3c

Vidare främjas inom utbildning; internationalisering

Bedömargruppens kommentarer

One problem according to the program description is that students who study abroad lose courses. Internationalization seems to be a non-issue from a scientific perspective, with writings that one is in line with the university's policy. What does the section put into the concept? The research is international in nature, but internationalization of the education seems to be achieved through own initiatives where the students associate the concept with an understanding of the international market. The concept of internationalization and what is put into it, is also in need of a transparency (page 7).

Mål 6. Internationalization of the program					
Åtgärder för att nå målet	Ansvarig	Resurs	Startdatum	Kommentar	Status
A) Mobility of students				The action contributes to fulfilling the goal by: <ul style="list-style-type: none"> - Providing the opportunity for the students to study abroad during autumn term of the final year (The students have chance to study abroad in some specific universities that we have agreement with them. The list of the universities is updated annually) - Accepting exchange students to perform their internship in textile technology field at HB. 	Commenced
B) Staff mobility and training	Section manager/Director of Studies		2019-02-14	The action contributes to fulfilling the goal by: <ul style="list-style-type: none"> - Making agreement for staff training and staff mobility with different receiving universities 	Commenced
C) Hosting international students by offering	Programsansvarig/Director of Studies		2021-02-15	In autumn term, different courses will be given in English in textile	Commenced

<p>English course during autumn term</p>			<p>engineering program for exchange students. The suggestions for engineering packages are:</p> <ul style="list-style-type: none"> - Textile engineering package 1: <ul style="list-style-type: none"> • Nonwoven 7,5hp p1 • Textile Innovation 15hp p1+p2 • Textila sammanfogningstekniker 7,5hp p2 - Textile engineering package 2: <ul style="list-style-type: none"> • Nonwoven 7,5hp p1 • Textile product development 7,5hp p1 • Textila sammanfogningstekniker 7,5hp p2 • Textil provningsteknik påbyggnad" 7,5hp p2 - Textile engineering package 3: <ul style="list-style-type: none"> • Biopolymer 7,5hp p1 • Nonwoven 7,5hp p1 • Textil provningsteknik påbyggnad 7,5hp p2 • Textila sammanfogningstekniker 7,5hp p2 <p>This means that exchange students can choose to read one of the packages.</p>	
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Kriterium 3d

Vidare främjas inom utbildning; hållbar utveckling

Bedömargruppens kommentarer

According to the assessment group, the treatment of sustainability issues within the program is both too narrow and too basic. The assessment group requests a strategy regarding how more sustainability dimensions can be introduced and how the social sustainability perspective can be developed in the program (page 7).

Mål 7.	Consider and discuss different sustainability aspects in the courses/assignments				
Åtgärder för att nå målet	Ansvarig	Resurs	Startdatum	Kommentar	Status
A) Prioritization of the sustainability aspects in the courses.	Course coordinator		2020-10-15	When it comes to sustainability in textiles (industry) and clothing, it is usually noticed that only environmental impacts are in focus while the other two elements of sustainability namely social and economic are masked by the environmental impacts.	Commenced
B) Gather/provide competence material (seminars, documents, literatures, etc) for teachers within sustainability perspective.	Section manager		2021-08-01	Could be available through a common platform for all textile programs.	Not commenced

Kriterium 3e

Vidare främjas inom utbildning; samverkan med arbetsliv och omgivande samhälle.

Bedömarens kommentarer

According to assessment group, collaboration with professional life and the surrounding society has already been expressed as positive in terms of volume, but at the same time, it is quite one-sided and seems to take collaboration with industry as a starting point for streamlining production. The program has several industrial collaboration, but not interaction and collaboration with other sectors or organizations (page 7).

Mål 8.		Promote the interactions with other organizations			
Åtgärder för att nå målet	Ansvarig	Resurs	Startdatum	Kommentar	Status
A) Study visit to companies and Research Institutes of Sweden (RISE)	Course coordinator		-	The main objective of conducting a study visit for students is to reinforce experiential and context-specific learning. Study visits could be an approach of enhancing student's learning by making real world connections.	Completed

Kriterium 4

Det sker ett kontinuerligt uppföljnings- och utvecklingsarbete som inbegriper ett aktivt studentinflytande för att stärka utbildningens kvalitet.

Bedömarens kommentarer

Not any specific critic and input from reviewers!

- Student's views and experiences of the program

Since student evaluation is the important part of the quality assurance and enhancement of all University's program of study, a survey is conducted annually among 3rd year students at Bachelor Program in Textile Engineering on an anonymous basis. This evaluation gives our department vital feedback on the teaching, including where and how it could be improved.

Program council meeting is held annually with presence of external reviewers and at this meeting the student representatives from each year will attend to share their opinions.

- Course evaluation:

Students and teachers have a joint responsibility for the development of the educations at the University of Borås. Course evaluations are an important opportunity for students to participate in and influence this development. Students' feedback will be implemented to further develop the courses.