*Teknik 500*

**Interim Report Process 1 – Development of Future Educational Profiles in the Field of Technology and Engineering**

The project Teknik 500 was the result of an official request from the Vice-Chancellor to review the University’s technology and engineering programmes and propose ways to develop these. The goal is for there to be 500 new programme students by 2023, which would mean a doubling compared with figures from 2018.

The project includes three so-called processes, the first of which is to review the current programme portfolio at the University. This has now been completed. Choices and decisions on which programmes the University will offer in the future will be made in the spring of 2021.

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# Description of the Project

The field of technology and engineering is central to Dalarna University in terms of education at both the undergraduate level and the master’s level, as well as in terms of research. Currently, this field includes several engineering programmes and is of great interest to the regional business sector, with several important and strategic structures for collaboration.

## Background and History

There have been a number of reviews and development initiatives that have aimed both to map the success factors for why Dalarna University was at the forefront when it came to education in the field of technology and engineering as well as to establish what is required for it to regain that position.

If the past year is to be disregarded, the number of applications to all programmes at Dalarna University (first-choice applications) has remained largely unchanged. However, for programmes in the field of technology and engineering, the number of applications has declined by 50 percent. To some extent, this development over recent years can be explained by changes in what programmes are offered, which has resulted in an increased volume of students within other fields of study; however, it may also be explained by a decline in interest in and attractiveness of Dalarna University's technology and engineering programmes.

## The Project

In September 2019, the head of the then School of Technology and Business Studies was assigned the task of reversing this trend by increasing the interest factors of programmes within the field of technology and engineering (HDa Dnr 1.1-2019 / 1054, 2019-09-09).

The assigned task also involved proposals and an analysis regarding the following:

* The overall organisation of activities within the field and investigation of what was required for expansion so that it could include, for example, related programmes in the fields of microdata analysis, computer science and IT.
* Short- and long-term changes in the University’s programme portfolio so as to increase interest in the technology and engineering programmes and make them both more attractive and better suited to meet current and future external challenges.
* Development and qualitative initiatives in terms of the learning environment and educational approach, which included strategic recruitment and acquisition of professional competence.
* Estimate of interim financial resources for the above.

Work and investment in this field began as a project in February 2020 and had the same name Teknik 500.

## Project Organisation

Making up the project organisation are the commissioner of the project, the project owner, the project manager, a steering group, a workgroup (that changes according to the stage in the process) and three reference groups.

Commissioner of the Project

* Vice-Chancellor Martin Norsell

Project Owner

* Patrick Kenger, Head of School

Project Manager

* Tobias Mårtensson

Steering Group

* Patrick Kenger, Head of School
* Jonas Tosteby, Pro-Vice Chancellor, Education
* Eva Wäckelgård, Professor of Energy Engineering, Head of Research / Elected Member of IL
* Mikael Olsson, Professor of Materials Engineering, Head of Research
* Monika Vinterek, Professor of Educational Work, Head of Research / Elected Member of IL
* Arend Hinze, Professor of Microdata Analysis
* Astrid Alnås Widén, Director of Department (until 30/6 - 21)
* Anna Klerby, Director of Department ​ (until 30/6 - 21)
* Kristina Englund, Director of Department
* Emma Grubbström, Director of Department (from 1/9 - 21)
* Robert Bjöör, Director of Department
* Christer Sundin​, Director of Finance
* Tobias Mårtensson, Project Manager

Workgroup – Process 1

* Mats Rönnelid, Professor of Energy Engineering
* Jonn Are Myren, Associate Professor, Construction Engineering
* Therese Olsson, Lecturer, Construction Engineering
* Hans Ersson, Development Officer, Energy Engineering
* Jesper Engström, Lecturer, Mechanical Engineering
* Matias Hautamäki, Lecturer, Physics
* Carl Olsmats, Associate Professor, Industrial Economics
* Roger Nyberg,Fil. Dr., Information Sciences
* Pär Eriksson, Lecturer, Information Sciences
* Tom Edoff, Dalarna’s Student Union
* Sofia Reyier Österling, Research and Education Strategist
* Susanne Corrigox, Internationalisation Coordinator
* Johan Borg, Senior Lecturer, Medical Science
* Johan Sonne, Project Manager, Teknikerjakten
* Debora Egenvall, Deputy Director of Marketing and Communication
* Emma Norman, Communications Officer
* Michael Oppenheimer, Development Manager
* Madelaine Johansson, Director of Department, former Educational Development Officer, NGLC

Reference Groups

* Reference Group Business and Public Activities
* Reference Group Doctoral Students
* Reference Group Current and Former Students

## Links to Current Development Initiatives and Delimitations

The project aligns with several current development initiatives at Dalarna University, including the Dalarna University Strategy 2020–2026. Teknik 500 has a firm basis in the strategy and in such a way contributes to the building of a more robust higher education institution that continues to be dynamic and innovative.

The push for a new generation of technology and engineering programmes creates even better conditions for cohesive academic environments, where there are clear ties between research and education from the undergraduate level to the master’s level. The long-term goal is to work across academic borders to meet the technical challenges of the future. The implementation of the Strategy involved the establishment of a new organisation as of January 1, 2021, which developed from identified existing and cohesive academic environments, one of which was technology and engineering, and computer sciences / IT.

Links exist to the current Project 07, the aim of which is to identify, prioritise and develop measures that can improve student satisfaction and increase the quality of education within the various departments of the School. The Project 07 initiative came about as a result of somewhat negative feedback in the student surveys of 2012, 2014, 2016 and 2018. The student surveys made it clear that a lot needed to be done to increase student satisfaction with the programmes. The three focus areas with the highest priority factors are as follows: the teaching skills of the lecturers; information before the start of a programme; and planning and administration during courses/programmes.

The results of and lessons learned from Project 07 have ties with Teknik 500 as a result of the work in process two.

In March 2021, the University submitted its doctoral programme application within the field of technology and engineering to UKÄ. Doctoral students have had a natural place in the organisation as a result of doctoral studies in microdata analysis, whereas others have been active at Dalarna University while being registered at other higher education institutions, such as KTH and Uppsala University. Currently, there are about fifteen doctoral students active. If the University had its own doctoral programme in the field of technology and engineering, this would further strengthen the link between research and education at all levels.   
  
The development of programmes and courses at the undergraduate level and master’s level, which is the aim of Teknik 500, is expected to build up the entire environment through the interaction between research and education. An increased number of students at the undergraduate level and master’s level would also constitute a recruitment basis for future doctoral students and, by extension, a recruitment basis for doctoral staff to the University.

In parallel with Teknik 500, the construction of a new campus in Borlänge is currently underway. The fields of academic specialisation that the project arrives at may affect the design of the campus building.

## Project Implementation

By specifically investigating the possibility of offering flexible teaching methods, the student is central in all the work – for example, in analyses of previously conducted questionnaires and detailed interviews with future students. In addition, the project group has been responsive in terms of both societal relevance, international perspectives, sustainability perspectives and opportunities to develop collaboration in new ways.

## Project Plan

Based on the above description and directives, work in the project has involved three processes. Reports at various stages are presented on an ongoing basis to the steering group. This report refers to the reporting of development work and results in process 1.

The work plan in the project has been to implement the aforementioned development processes. In each development process, activities were carried out to ensure a broad foothold, primarily internally but also externally, with important stakeholders and partners.

### Process 1 – Review of the Programme Portfolio

*Review of what programmes are offered. Review and identify the fields of study of the programmes, collaboration and research fields.*

*Process 1 deals with the following areas according to the request from the Vice-Chancellor:*

1. Examine what is required to expand the field of education to include, for example, related programmes in the disciplines of microdata analysis, computer science and IT.
2. Change the programme portfolio to increase interest and attractiveness.
3. Establish a clearer approach to addressing external challenges.
4. Arrive at an estimate of what the changes will cost.

*Completed Work:*

About thirty interviews have been conducted with employees, heads of research and heads of the departments of Data and Information Management, Industrial Technology and Construction, and Energy Technology at what was previously called the School of Technology and Business Studies. In addition, reviews of reports and investigations have been carried out in the field, both external investigations and previously conducted investigations, which shed light on the University's technology and engineering programmes.

A review of what programmes the University currently offers has also been conducted. To gain an understanding of what students think about the University, student surveys have been analysed by the Office of Education and Research (UFK). In addition, detailed interviews with upper-secondary school students took place with a focus on the new programme proposals identified in the project.

In five whole-day workshops, the project group worked together on several issues: these are presented in Appendix 1. Representatives from both the private and public sectors were invited on two occasions to be part of discussions on their future skills needs and views on the University's technology and engineering programmes.

In addition, an external analysis was conducted with a focus on external challenges, megatrends, regional areas of strength and international perspectives. The project group also examined other higher education institutions to find out what programmes they offer and what profiling they have.

### Process 2 – Strengthen Learning Environments

*Develop and strengthen learning environments.**Qualitative strengthening of learning environments and education.*

Prior to the work in process 2, the workgroup from process 1 had a change in membership. Sarah Ramsay and Johan Heier joined the group. Johan Heier was previously involved in the analysis and development work of Project 07.

Project 07, which was carried out at the School in 2019 to 2020, was based on a review of the student surveys over the years 2012 to 2020. The surveys resulted in the three focus areas having the highest priority factor: i.e., areas students think are most important to focus on so as to increase student satisfaction. The project analysed which needs and initiatives are important within each focus area. These needs and initiatives will be highlighted in the work in process 2 – qualitative strengthening of learning environments and education.

Focus areas with the highest priority factor were as follows:

* Information before the start
* Planning and administration during courses / programmes
* The teaching skills of the lecturers

Part of the analysis shows that when it comes to the teaching ability of lecturers, teaching content and development in the School should be given more focus. One of the most important points that stands out in the survey when it comes to increasing student satisfaction is the teaching skills of lecturers.  
   
Some efforts have been made to improve things in this area and continue to be made today within the focus area of the School; however, an educational model is lacking, as is a long-term and structured plan that affects all teaching staff. One part of this that should receive focus is teachers' feedback, which the survey also makes clear is an important factor. The educational issues should therefore permeate all activities within the School, with each subject and department working continuously and in a structured manner to improve teaching competence.

Information before programmes start, as well as planning and administration of current courses / programmes are focus areas that relate to each other, where the measures in the project's action plan highlight several factors that students are dissatisfied with. These include the fact that their timetables are posted too late; the fact information about course literature is posted too late; the fact the learning management system Learn appears disorganised; the fact communication with students needs improvement; the fact communication between the teachers within a course in various courses needs improvement; and so on.

Process 2 is expected to be completed in October 2021.

### Process 3 - Overall Organisation

Overall organisation. Background, needs and competence increase.

The work in process 3 will start in August 2022. The initial work in process 3 will be based on and proceed from the decision on what programmes the University will offer.

Process 3 is expected to be completed in January 2023.

## Aim of the Project

The aim of the project is to reverse the trend in terms of the number of applicants who choose Dalarna University as their first preference and the number who start programmes in the field of technology and engineering. Both the attractiveness of and the number of students in the field of technology and engineering must increase and the number of students must double from current levels. This means that Dalarna University will then be at the level of 500 programme beginners in the field of technology and engineering – hence the name of the project, Teknik 500. In the work being carried out in Teknik 500, the aim is to improve the quality of programmes through a review of all programmes in the field of technology and engineering.

The Dalarna University 2020-2026 Strategy forms the basis of this work. When it comes to increasing the attractiveness of programmes in the field of technology and engineering, the most important factors, in accordance with the Strategy, are that our courses and programmes are of high quality and are highly relevant in the job market.

There must be a constant readiness to improve the content and implementation of courses and programmes. To reverse the current trend, our programmes need to be relevant, and we must be innovative in how we make constant improvements. When courses and programmes are in the developmental stage, undergraduate education and research must be closely linked. To strengthen the attractiveness of courses and programmes, learning environments and educational approaches must also be developed and improved.

# Results Process 1 – Review of the Programme Portfolio

## Analysis of the Current Programme Portfolio

In the work reviewing the current programme portfolio, the project group in process 1 placed great emphasis on the analysis of student satisfaction, the increased quality of programmes, and the way we can create better conditions and opportunities for students so that they improve their performance. In the work with the review of the programme portfolio and the analysis of the current programme portfolio, the project group has worked on ways in which the programmes currently offered by the University can be adapted in terms of the proposed new educational profiles, the connection to master’s level education, and the way we create synergy effects.

The project group also worked on how and in what way we can create, improve or clarify flexibility in today's programmes, something that the students say is important. The development of net-based learning, the opportunity for cross-programme studies within the School and alternative degree opportunities are examples of flexibility that will enable the University to realise the new programme portfolio.

Within the framework of the project, the project manager also carried out an in-depth analysis (sections 2.1.1-2.1.7) of existing programmes in relation to student data, student satisfaction, degrees awarded, annual performance equivalents, ties to research, societal relevance, and financial results and conditions. These factors have been discussed in the steering group and in frequent dialogue with the head of school.

### Student Data

#### **Analysis of the Student Survey 2020**

#### For Teknik 500, UFK was commissioned to carry out an analysis of the annual student survey (2020) to develop an understanding of what

* *underlies students’ satisfaction with their programme.*
* *attracts students.*
* *is considered by students to be good quality from their perspective.*

The analysis shows that it is not the form of teaching itself – that is to say, the fact studies are net-based or campus-based – that can explain student satisfaction; rather, it is the flexibility, the structure, the planning and the quality of teaching. In addition, this analysis shows that net-based students are more satisfied than campus students with the structure of their education, with a statistically significant difference. One theory for this is that net-based students are more satisfied with their courses/programme precisely because these have a better structure.

#### **Detailed Interviews with Upper-Secondary School Students**

In the spring of 2021, detailed interviews were conducted with prospective students as a complement to previously conducted student surveys. The purpose was to hear what they viewed as essential in their choice of technology and engineering programmes, and to also discuss the proposals for newly identified programmes. The upper-secondary school students were in agreement when they described their choice of programme: they base their decision on its content and do not attach as much importance to the place of study. However, it was important to them that their future programme has close collaborative ties with the business community because they felt this would probably make it easier for them to find a job immediately after graduation. The fact there were ties with research was considered a positive factor but not a decisive factor. In addition, the upper-secondary school students talked about the importance of student life and about how what the University was planning to offer was timely.

#### **Student Interviews / Surveys**

A written survey was conducted in the spring of 2020 with a sample group of our current students with questions that were specifically about their current programme, both what is good about it and what can be improved. In addition, the students had to answer a number of questions about what they think is the most important aspect they would like to see improved at the University and what programmes they would like to see offered. The questions were also about future career choices, and what their thoughts were when it came to choosing to study at Dalarna University. They also had to express their thoughts about a more flexible programme design. The answers to all the questions were consistent with the answers from other analyses and interviews.

### Student Satisfaction

Student satisfaction is an important starting point for an analysis of what programmes the University currently offers. A holistic view of the student is one of the University's hallmarks; as such, Teknik 500 has taken into account the commitment and interest of current students in helping to develop existing programmes.

In the analysis of what the University currently offers, the NKI value (satisfied customer index) and the NPS value (net promoter score) for each programme has been closely examined. The NKI value is the same as the NSI value in the survey (Satisfied Student Index). Teknik 500 has also involved looking at the results of Project 07, which also included student satisfaction. See the table in appendix 2.

### Degrees Awarded

The number of graduates from current programmes has been documented: see the table in Appendix 2. The figures are based on the proportion who graduated in relation to those who started the programme as well as the number who graduated.

### Annual Performance Equivalent

State remuneration is based on the number of registered students (calculated as full-time equivalents) and the number of credits the students complete (calculated as annual performance equivalents). The number of students who pass the courses in the programme is therefore of utmost importance. See table, appendix 2.

### Research Ties

Ongoing research is linked to the programme where students learn about the latest research findings and results.

### Social Relevance

This is assessed on the basis of the workforce needs in both the public and private sectors regionally, nationally and internationally.

### Financial Results and Conditions

These are the financial conditions that allow the programmes to maintain quality and undergo development and improvement.

## Identified Programmes for the Future

In process 1, Teknik 500 reviewed and identified future programmes and areas for collaboration. The work is the result of previously completed reports and investigations, interviews with employees (research leaders, department heads, subject coordinators and programme coordinators), workshops with the project group, reviews of what other higher education institutions offer and their programme portfolios. In addition, there have been discussions and workshops with the business community.

The following points were considered at the initial stage of identifying future programmes:  
  
*How we educate our students:*  
- Offer flexibility   
- Create a common educational model

*Consider our strengths:*  
- Student contact / relationships  
- Business contacts  
- Net-based learning (at the forefront)  
- Research and research contacts

#### **Opportunities for Students To Study Cross-Programme**

Using an educational model, the project sees collaboration opportunities with joint courses for all technology and engineering programmes: these are developed further in process 2.

1. Scientific method
2. Sustainability
3. Leadership
4. Programming
5. "Engineer's tools"

#### **Flexibility in the Future Programme Portfolio**

* Net-based learning
* Blended learning
* Cross-programme studies
* Two admission rounds per year
* Degree (engineering, bachelor's, university degree other universities)
* Synergy effects and opportunities (existing and new programmes)
* Master’s level education

### Artificial Intelligence (AI) Programmes

AI Engineering is one of the proposed fields of education that the steering group has chosen to proceed with in the work with the new programme portfolio. Currently, the following departments have teachers who are qualified to teach in this field: Data and Information Management, Industrial Technology, and Construction and Energy Engineering. In 2020, two new professors were employed by the newly named School of Information and Engineering.

The field of Artificial Intelligence is characterised by a high degree of interdisciplinary work and offers opportunities for cross-disciplinary collaboration with all education and research areas at Dalarna University.

The need for competence in AI is expected to be great. Automation in society is ongoing and is expected to continue, and jobs will be available in both the private and public sectors. Graduates can expect to work as data scientists, designers/developersof intelligent systems, automators (analysis, design, implementation, operation), system developers, and product and service developers – and after a few years of experience, as AI strategists or IT architects, project managers or business developers.

Three universities currently offer programmes that focus on AI and / or the *internet of things*. These are Linnaeus University, Örebro University and Halmstad University. For Dalarna University to offer an AI Engineering programme would make it unique in this area.

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| Uniqueness | Social Relevance | Competence within the School | Cross-Disciplinary | Research Ties | Interest |
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### Programme in Hyperautomation

The second proposed programme that has been selected to go ahead is a bachelor’s degree in Hyperautomation. Teaching competence for this exists in these departments: Data and Information Management, Industrial Technology, and Construction and Energy Engineering.

The field of Artificial Intelligence is characterised by a high degree of interdisciplinary work and offers opportunities for cross-disciplinary collaboration with all education and research areas at Dalarna University.

The programme will fill the need for competence in identifying and automating different processes at organisations (companies, public sector, associations). The focus with hyperautomation is how to understand, identify and chart all processes that can be automated, how activities within processes relate to each other, and how they can be combined and coordinated. Graduates can expect to seek a professional career as business developers with a focus on automation; data scientists; and developers of intelligent systems, and in service and product development and logistics.

Currently, four universities offer programmes in this field. These are Skövde University, University of Gävle, Örebro University and Mid Sweden University.

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| Uniqueness | Social Relevance | Competence within the School | Cross-Disciplinary | Research Ties | Interest |
|  |  |  |  |  |  |

### Programme – Assistive Technology

The third programme leads to a *teknologie kandidat* (degree of bachelor of science), Assistive Technology. Competence to teach in this field exists at Dalarna University in the Department of Health and Welfare and the Department of Technology and Data / IT.

Assistive Technology also offers a high degree of interdisciplinary opportunities. Assistive technology is about education and research in welfare and assistive technology, and is characterised by a high degree of interdisciplinary work. The programme offers the opportunity for cross-disciplinary collaboration between all fields of study and research profiles at Dalarna University. Related research is conducted within the research profiles Health and Welfare, and Complex Systems – Microdata Analysis, as well as at the Center for Clinical Research. The programme can be linked to research in other disciplines.

This programme is suitable for those who want to use their skills in an innovative and meaningful way to increase the quality of life for people with disabilities of all ages. Regardless of whether the technology is simple or advanced, it has significance.

Graduates can expect to work with, for example, product development, product management, accessibility issues, and implementation of technology in the private sector and public sector. Development of the programme will be in close collaboration with organisations within the branch. As a result of contact with Dalarna University, WHO has shown great interest in the development of a programme in Assistive Technology.

The number of people aged 80 and older in Sweden is expected to increase by 50 percent between 2017 and 2027 to almost 800,000. The welfare sector in Sweden needs to recruit 500,000 people between 2018 and 2026. New technology can reduce the need for recruitment by 70,000 people. The global welfare technology market is expected to grow from SEK 10 billion in 2017 to SEK 50 billion in 2021.

Programmes in Assistive Technology at the undergraduate level is available at only four Danish universities.

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| Uniqueness | Social Relevance | Competence within the School | Cross-Disciplinary | Research Ties | Interest |
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### Programme in Industrial Processes

The fourth programme is an engineering programme for the development of industrial processes.

This programme is characterised by a high degree of interdisciplinary work and offers opportunities for interdepartmental collaboration with all fields of education and research at Dalarna University. This programme includes systems science, energy engineering and mechanical engineering.

The need for expertise in the development of industrial processes is expected to be great. Here, cutting edge technical know-how is needed to support business development. In the development of this programme, there has been great interest from regional industry to participate in the development of a programme and collaboration in relation to the student throughout their studies.

The close collaboration with industry and the interdisciplinary focus could make the programme unique and give the student both a sound basis and sound ability to participate in and develop sustainable processes in regional industry. In the discussions that have taken place within the framework of the project, industry has shown great interest in being involved in offering and developing industrial laboratories on site during the study period.

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| Uniqueness | Social Relevance | Competence within the School | Cross-Disciplinary | Research Ties | Interest |
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## Recommendation for the Future Programme Portfolio

Based on the analyses presented above, the recommendation is to phase out two programmes and phase in four programmes according to the list below.

The reasoning behind the recommendation for what the University should offer in the future is based on all the factors presented in the report combined withthoughts that the project's steering group and reference groups have on thefuture.

To enable the implementation of the new programme portfolio, in terms of both successive phase-out of current programmes and development of new ones, all proposals need to be included in regular university planning.

Phase out:

* Mechanical Engineering
* E-services – intake to this programme can vary depending on the number of applicants to the new programmes.
* *Energy Engineering (already planned from autumn 2021)*

Phase in (start up in the near and long-term future):

* AI Engineer
* Hyperautomation, Bachelor's Degree
* Assistive Technology, Bachelor's Degree
* Process Engineer

In addition, the project recommends coordination of all current and future programmes in terms of students’ access to cross-programme studies: see section 2:2.

# Continuation and Next Step

After a decision has been made about the future programme portfolio (section 2.2), a plan for implementation will be drawn up. Any financial consideration will be taken into account when the development work takes place within the framework of the existing budget. The phasing in of new programmes therefore requires the phasing out of selected programmes.

All proposed programmes are to be developed at a general level. The next step after the decision is that a working group will develop a programme syllabus for each programme, give them a name and subsequently promote them.

The educational model that the project proposes within process 2 will need to be implemented at the departmental level, even if coordination will be carried out within the School’s regular planning of operations and activities.

Appendices

|  |  |  |
| --- | --- | --- |
| Nr | Dokumentnamn | Dokumentbeteckning/Id |
| 1 | Questions from Workshops with Project Group |  |
| 2 | A Cohesive Academic Environment – as defined in the Dalarna University Strategy 2020–2026 |  |

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* Ulf Magnusson 2014, Net Promoter Score Field of Technology.

Appendix 1

Questions from Workshops with Project Group

*To Generate:*

* Ideas about potential programmes
* Proposals for the design of a competitive programme portfolio, strengths, consideration for societal change

*To Specify:*

* Develop educational profiles
* The structure of the programmes – general
* What ties does the programme have to research?
* What collaboration does the programme have with the business community?
* What makes the University unique in terms of these programmes?
* Name of the educational profile?

*What is needed:*

Flexible programmes

How do we ensure that we have, and continue to develop, positive relationships with students and the business community?

*Add and evaluate:*

Relevance and demand

Student satisfaction (UFK)

Input – workshop with the business community

Input – steering group

The structure of the programme – specialisation

Which degree does the programme award?

What ties does the programme have to research?

*Programmes currently offered:*

Ways to completion – Degree

Windows of opportunity throughout the programme

Common courses for programmes

Proposals for interconnection with the proposals for new educational profiles

How can we make current programmes flexible?

What ensures the quality of an engineer at Dalarna University?

*In-depth study of the opportunities that will come with the new programme portfolio:*

How or in what way can we create, improve or clarify flexibility in terms of current programmes?

Net-based learning

Blended learning

Cross-programme studies

Windows of opportunity during the period of study (for example, for international studies)

Two admission rounds per year

Degree (engineer, bachelor’s, *högskoleexamen* other universities)

How is what the University currently offers adapted in terms of the proposed educational profiles?

Synergy effects and opportunities

Master’s level programmes

Appendix 2

A Cohesive Academic Environment – as defined in the Dalarna University Strategy 2020–2026

According to the Dalarna University Strategy, cohesive academic environments must be established where education and research strengthen each other. In such a cohesive environment, teachers / researchers in closely related subjects collaborate with complementary competencies based on the needs of research and education.

A cohesive academic environment is characterised by a sense of creativity and the ability to develop and improve, where analyses of what is happening in the world at large and a readiness to develop and innovate in relation to education, research and collaboration are important elements. The environment must have sound and well-established national and international contacts and well-developed collaboration with society at large, which contributes to strengthening and developing the quality of both education and research.

There must be close ties between education and research, which presupposes that the teaching has a sound scientific basis and that students acquire a scientific approach. The proximity that exists between different environments within Dalarna University will be used to develop innovative and inter-disciplinary research initiatives. Each research group must have a clear connection to one or more of the University's programmes at the undergraduate level, and must actively work to ensure that students have direct contact with the research environment and its activities.

In accordance with the Strategy, the fields of education that the University has prioritised must remain fixed, as must the main features of what the University currently offers. There must be a readiness to change what the University offers – including such changes that require the right to award other degrees – in response to pressing societal needs or demands from students and the University's collaborative partners.