



Programme syllabus

Industrial Wood Supply Management (MSc)

Skoglig råvaruförsörjning

120.0 hp

Programme code: SM011

Finalized by: Utbildningsnämnden, 2023-05-25

Valid from: Autumn semester 2024 (2024-09-02)

Programme board

The programme board for education in forestry

SLU ID

SLU.sfak.2023.3.1.1-210

Revised

2024-03-01

Revised by

The programme board for education in forestry

Entry requirements

To be admitted to the Master's Programme in Industrial Wood Supply Management (120 credits), the following criteria must be met:

general entry requirements: first-cycle (Bachelor's) qualification comprising a minimum 180 credits or equivalent degree from a higher education institution abroad

specific entry requirements: a minimum of 60 credits from specialist study within one of the following subjects or main fields of study or the equivalent:

- forestry science
- forest management
- forest science
- forest and wood engineering

15 credits within forest technology, wood science/wood technology, or equivalent

5 credits geographic information systems (GIS).

In addition, knowledge equivalent to the Swedish upper secondary course English 6 is required. This requirement is met by those holding a Degree of Bachelor (180 credits) from a Swedish higher education institution. There are specific rules for applicants from certain English-speaking countries.

The specific entry requirements stated above can also be met by someone who has obtained equivalent knowledge through a corresponding qualification from abroad, or in some other way.

There are specific entry requirements for each course included in the programme. These are described in the relevant course syllabus.

Objectives

General outcomes

The general outcomes for first and second-cycle courses and programmes are specified in Chapter 1, Sections 8–9 of the Higher Education Act.

Objectives for a Degree of Master (120 credits)

In accordance with the annex to the Ordinance for the Swedish University of Agricultural Sciences, for a Degree of Master (120 credits), the student shall have:

Knowledge and understanding

- demonstrated knowledge and understanding in the main field of study, including both broad knowledge of the field and a considerable degree of specialised knowledge in certain areas of the field as well as insight into current research and development work, and

- demonstrated specialised methodological knowledge in the main field of study.

Competence and skills

- demonstrated the ability to critically and systematically integrate knowledge and analyse, assess and deal with complex phenomena, issues and situations even with limited information,
- demonstrated the ability to identify and formulate issues critically, autonomously and creatively as well as to plan and, using appropriate methods, undertake specialised tasks within predetermined time frames and so contribute to the formation of knowledge as well as the ability to evaluate this work,
- demonstrated the ability in speech and writing both nationally and internationally to report clearly and discuss his or her conclusions and the knowledge and arguments on which they are based in dialogue with different audiences, and
- demonstrated the skills required for participation in research and development work or autonomous employment in some other qualified capacity.

Judgement and approach

- demonstrated the ability to make assessments in the main field of study informed by relevant disciplinary, social and ethical considerations and also to demonstrate awareness of ethical aspects of research and development work,
- demonstrated insight into the possibilities and limitations of research, its role in society and the responsibility of the individual for how it is used, and
- demonstrated the ability to identify the personal need for further knowledge and take responsibility for his or her ongoing learning.

Degree

Degree awarded upon completion of the programme

The Master's (120 credits) programme in Industrial Wood Supply Management leads to the Degree of Master with forestry science as the main field of study. A Degree of Master is a general qualification.

Students who fulfil the qualification requirements for a degree will be issued a degree certificate upon request, with the title Degree of Master of Science with a major in Forestry Science.

Other qualifications may be awarded provided that the requirements for them are fulfilled. See SLU's system of qualifications.

The programme contains courses which, depending on choice of courses and combination with previous studies in forestry at first-cycle level, may enable students to fulfil the requirements for the professional qualification Degree of Master of Science in Forestry, 300 credits. The outcomes for a Degree of Master of Science in Forestry are stipulated in the Ordinance for the Swedish University of Agricultural Sciences. The requirements for a Degree of Master of Science in Forestry are defined in SLU's system of qualifications.

Degree requirements

The Degree of Master of Science with forestry science as the main field of study will be awarded once 120 credits have been obtained, of which 90 must be from second cycle courses that meet the following requirements:

- a minimum of 30 credits from courses of specialised study within the main field of study forestry science (A1N; A1F);
- a minimum of 30 credits from a degree project/independent project within the main field of study forestry science (second-cycle level degree project A2E).

Additionally, students must have successfully completed a Degree of Bachelor, a professional qualification comprising a minimum of 180 credits, or have an equivalent qualification from abroad.

The Degree of Master of Science (120 credits) may contain a maximum of 30 credits from first-cycle courses, provided these credits were not included in a Degree of Bachelor or its equivalent. All courses included in a degree must be at university level, have been successfully completed and may not overlap/have similar content.

Content

Programme description

The Master's (120 credits) programme prepares students for a career in the primary process of forest management – efficient organisation of industrial wood supply. The programme aims to provide a comprehensive understanding and independent ability to manage, analyse and develop industrial wood supply systems. The programme develops several specialist abilities based on the way process management methods are applied throughout the supply chain. These methods are based on an understanding of the raw material requirements of both existing and new biobased industries (sawn timber, pulp and paper, energy and bio-refineries), in addition to the skills required for their quantitative analysis. Process

management skills primarily relate to i) the development of competitive supply strategies and ii) the application of methods for efficiently managing wood supply.

These three elements: raw material requirements, supply strategies, and operations control, form the basis of the programme's initial courses and are at the core of the discipline. They are followed by the opportunity to take elective courses and courses that provide specialist skills in processing digital data sources from remote sensing and internal supply chain sources. These form the basis of the final course during which students train their analytical skills for improved sustainability and competitiveness together with the ability to address uncertainties and unexpected events relating to supply.

The comprehensive material and payment flows of raw material supply mean that the part of the sector upon which the programme focuses lies at the forefront of digitalisation. Thus, the programme provides students with knowledge of the existing fully-digital architecture of both the timber trade and operations control. Additionally, great focus is placed on the ongoing digital transformation within the forestry sector and how its possibilities can develop the supply processes of raw materials.

The two-year programme prepares students for both academia and professional life. Students are trained for careers within management and specialised services in the wood supply chain, from forest to industry, with focus on areas such as sourcing, production or transport. The programme is developed and delivered in collaboration with industry representatives, ensuring its relevance to both the profession and academia.

Additional information

A successful study environment is characterised by openness, gender equality and inclusiveness. SLU works actively with gender equality and equal opportunities to promote a climate that draws upon the diverse backgrounds, lives and skills of students and staff.

SLU's profile focuses on knowledge of biological natural resources. Societal challenges such as the supply of raw materials, water and energy, and climate change tie in with our areas of responsibility. These challenges, and humankind's use and management of biological natural resources, form some of the UN goals for sustainable development.

The programme is taught in English.

Programme courses

Main fields of study: SV = Forestry science, BI = Biology

Course (main field of study, specialisation)

Year 1

Raw Material Properties and Refining Processes, 15 hp (SV, AIN)

Industrial Wood Supply Strategy, 15 hp (SV, A1F)

Operational Management of Industrial Wood Supply, 15 hp (SV, A1F)

Management Control Systems, 7,5 hp (SV, G1F)*

Advanced Spatial Modelling through GIS, 7,5 hp (SV, A1N)

Year 2

Remote Sensing and Inventory, 15 hp (SV/BI, A1N)

Sustainable Wood Supply Analysis, 15 hp (SV, A1F)

Master's Thesis in Forestry science, 30 hp (SV, A2E)

* also classified within the subject Leadership and organization

The courses offered may change during the programme. This may result in a new version of the programme syllabus containing transitional provisions. Decisions on the courses offered are taken well in advance of the next academic year.

For each course on the programme, there is a course syllabus which specifies the details of the course. Information on when the courses are offered is available on the SLU student web.

During certain study periods (parts of a semester), SLU offers several programme courses from which the student can choose. Students are guaranteed a place on one of these courses, provided they meet the admission requirements and have applied before the deadline.

Additional information about the programme

General regulations for first and second cycle courses and programmes

For more information on semester dates, examination, credit transfer and admission to the latter part of a programme, please refer to the Education Planning and Administration Handbook available on the SLU student web.

Possibilities for further study

Students who successfully complete the Master's (120 credits) Programme in Industrial Wood Supply Management and are awarded a degree have the opportunity to continue onto third-cycle (doctoral) studies.