Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences

SLUkurs

Horticultural Science - Master´s Programme

Version 3. Is valid from autumn 2022

DECISION

Programme code:
LM008

Scope:
120 ECTS

Date:
2017-10-11

Decision by:
Utbildningsnämnden

Revised by:
2021-12-08

Programnämnden för utbildning inom landskap och trädgård (PN - LT)

SLU Id:
SLU.ltv.2021.3.1.1-828

Board responsible:
Programnämnden för utbildning inom landskap och trädgård (PN - LT)

PRIOR KNOWLEDGE AND OTHER ENTRY REQUIREMENTS

Admission to the Horticultural Science - Master's Programme requires a first-cycle qualification in natural sciences or social sciences comprising at least 180 credits. Applicants with the equivalent qualifications obtained by means of a degree from another country, or with the equivalent knowledge obtained in some other way, may also be regarded as fulfilling the specific entry requirements.

The applicant must further have a level of English equivalent to upper secondary school English (Engelska 6). An applicant with a first-cycle qualification from SLU comprising 120 credits, or a first-cycle qualification from another Swedish university comprising 180 credits, automatically fulfils this requirement. The equivalent qualification may also be obtained in other ways, for more information see universityadmissions.se/antagning.se.

Specific requirements apply for admission to the individual courses included in the programme. These requirements are specified in the syllabus for each course.

INTENDED LEARNING OUTCOMES

General objectives

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

Objectives for a Degree in XX

In accordance with the appendix to the Ordinance for the Swedish University of Agricultural Sciences, for a Degree of Master of Science, the student shall have:

Knowledge and understanding

To obtain a pass for a Degree of Master, the student is required to
- demonstrate knowledge and understanding within the main area of the education, incorporating both broad knowledge of the area and essentially deepened knowledge within certain parts of this area, and a deeper insight into current research and development work, and
- demonstrate a deepened knowledge of methods within the main area of the education.

Skills and abilities

To obtain a pass for a Degree of Master, the student is required to
- demonstrate the ability to critically and systematically integrate knowledge and analyse, evaluate and manage complex phenomena, issues and situations, even with limited information,
- demonstrate the ability to critically, independently and creatively identify and formulate issues and to plan and, using adequate methods, execute qualified tasks within a given time frame and thus contribute to the extension of knowledge, and evaluate this work,
- demonstrate the ability to report and discuss in both national and international contexts, orally and in writing, their conclusions and the knowledge and arguments that form the basis for these in dialogue with different groups, and
- demonstrate the skills required to participate in research and development work, or to work independently in other qualified activities.

Evaluation ability and approach

To obtain a pass for a Degree of Master, the student is required to
- demonstrate the ability within the main area of the education to make evaluations with respect to relevant scientific, sociological and ethical aspects and demonstrate awareness of ethical aspects of research and development work,
- demonstrate an insight into the possibilities and limitations of science, its role in society and people's responsibilities regarding how it is used, and
- demonstrate the ability to identify their need for further knowledge and take

responsibility for developing their knowledge.

DEGREE

Degree awarded on completion of the programme

The Horticultural Science - Master´s Programme aims at a Degree of Master of Science degree, a general qualification. Other degrees may be awarded after completion of the programme, provided that the requirements for the degree are fulfilled. See local instructions.

Students who fulfill the qualification requirements for the Degree of Master of Science (120 credits) will be provided with a degree certificate upon request. The degree certificate will specify the qualification as Degree of Master of Science (120 credits) with a major in Horticultural Science.

Degree requirements

A Degree of Master of Science (120 credits) with a major in Horticultural Science will be awarded on completion of the course examinations (Pass grades) to the value of 120 credits, with the following requirements:

- a minimum of 30 credits courses shall concern in-depth study within Horticultural Science (A1N, A1F),
- a minimum of 30 credits shall concern independent work (degree project) within Horticultural Science (A2E),

A maximum of 30 credit courses at first cycle level.

There is additional requirement of a completed Degree of Bachelor, Professional Degree of a minimum of 180 credits or a corresponding overseas qualification.

CONTENT AND OUTLINE

Programme description

The Master´s (120 credits) programme Horticultural Science provides a holistic view of how we can manage and renew the knowledge of sustainable horticultural cropping systems, where horticultural products are represented in green environments, as food or as raw materials for technical products. Students on this programme gain advanced knowledge of how horticultural production and cultivation can contribute to a more sustainable society; students also learn the basics of innovative technology that facilitates pioneering new fields of use for plants.

The programme is interdisciplinary and the courses combine biology, technology

and business administration. The courses intend to develop and deepen the students´ knowledge of cultivation techniques, harvesting, handling and sale of fruit and vegetables as well as berries and plants for indoor and outdoor environments. The students study the horticultural sector from a global perspective, covering both local and global issues.

The programme starts with a joint semester, followed by elective courses with the option of a placement and exchange studies, and is completed with an independent project (degree project) in horticultural science or biology. The subjects covered, including relevant methodology, are product development, innovation, market analysis, environmental economics, applied plant physiology, plant protection and plant breeding.

Other important skills that students train on this programme are identifying and solving relevant and complex problems in the horticultural sector, searching and evaluating information in a critical way and communicating knowledge of horticultural science, both orally and in writing, to different target groups. An understanding of ethical issues related to the influence of the horticultural sector on biological systems and its relation to the individual, the environment and society locally and globally are also brought up in relevant contexts.

On completion of the programme, the student should have an understanding of the importance of and the relation between science and proven experience, particularly in the horticultural sector. This Master´s (120 credits) programme has clear links to current research as well as strong business links, providing good preconditions for employability both nationally and internationally after graduating.

This programme is taught in English.

Courses in the programme
Main field of studies: BI=biology, TD= Horticultural science, FÖ=Business administration; KE=Chemistry, LB=Agricultural science, LK=Landscape Architecture

First year:

Horticultural Systems and Future Challenges, 15 credits (BI/TD, A1N)
Product Development and Innovation Systems in Horticulture, 15 credits (FÖ/TD, A1N)
Microbial Horticulture, 15 credits (BI/TD, A1N)
Environmental Economics and Management, 15 credits (FÖ/LB, A1N)
Horticultural Production Physiology, 15 credits (BI/TD, A1N)
Project Management and Process Facilitation, 15 credits (LB/TD, AXX)

Second year:

• Integrated Pest Management in Sustainable Production Systems, 15 credits (BI/TD, A1N)
Applied Plant Biotechnology, 15 credits (BI/TD, A1N)
Scientific Methods, Tools and Thesis Writing, 15 credits (LB/TD, A1N)1
Environmental Issues in Crop Production, 15 credits (BI/TD, A1N)
Advanced Plant Breeding and Genetic Resources, 15 credits (BI/TD, A1N)
Hydroponic Systems in Horticultural Production and Public Environment, 15 credits (BI/TD, G2F)
Sustainable Agri-Food Value Chains and Bioeconomy, 15 credits (FÖ/TD, A1N)
Chemical Ecology for Sustainable Insect Pest Control, 15 credits (BI/KE, A1N)
Climate Change – Landscape in Transition, 15 credits (LK/BI, A1N)
Project based research training, 15 credits (LB/TD, A1F)
Independent project in Horticultural Science, A2E - Horticultural Science - Master´s Programme, 30 credits (TD, A2E)
Independent project in Biology, A2E - Horticultural Science - Master´s Programme, 30 credits (BI, A2E)
Independent Project in Horticultural Science, A2E - Horticultural Science - Master´s Programme, 60 credits (TD, A2E)

(1) The course is held every two years and will not be offered in the autumn semester of 2022.

Changes in the eligible courses may occur. Decisions on available eligible courses are taken before the coming academic year.

Every course in the programme has a course syllabus with specific content. Detailed information about when the courses are given, can be found on SLU:s student web.

TRANSITIONAL REGULATIONS AND OTHER REGULATIONS

Transitional regulations

Student can also apply for a professional degree (yrkesexamen): Degree of Master of Science in Horticulture if the requirements are fulfilled.

OTHER INFORMATION

General regulations for first- and second-cycle courses and programmes

For more information on semester dates, examination and credit transfer, see the

Regulations for education at Bachelor´s and Master´s level available on the SLU student web.

Possibilities for further studies
Students who complete the Horticultural Science - Master´s Programme and are awarded a degree have the possibility to continue their studies at doctoral level.