

# SLUkurs

## Horticultural Science Programme

Version 3. Is valid from autumn 2017

### DECISION

**Programme code:**

LY003

**Scope:**

300 ECTS

**Date:**

2017-02-15

**Decision by:**

Utbildningsnämnden

**SLU Id:**

SLU ua 2017.3.1.1-1054

**Board responsible:**

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

### PRIOR KNOWLEDGE AND OTHER ENTRY REQUIREMENTS

Admission to the Horticultural Science Programme requires, besides general eligibility, special eligibility as specified in field-specific eligibility A11:

- Biology 2
- Physics 1a or Physics 1b1+1b2
- Chemistry 2
- Mathematics 4

Grade requirements: in each individual course above, the applicant must have earned at least a pass grade.

There are more replacement possibilities for courses within the field-specific eligibility.

The requirements for special eligibility can also be fulfilled with corresponding qualifications from current or earlier Swedish education. The requirement can also be fulfilled if the corresponding knowledge has been acquired in some other way.

Admission to the different courses included in the programme is subject to individual eligibility requirements for each one.

## 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 in Horticulture, the student shall have:

- demonstrated the knowledge and skills required to work autonomously as horticulturist.

#### *Knowledge and understanding*

For a Degree of Master of Science in Horticulture the student shall have:

- demonstrated both broad knowledge of the field as well as substantial specialist knowledge in some aspects of the field, including insight into the multidisciplinary foundation of the field and awareness of current research and development work, and
- demonstrated understanding of the conditions that apply to the horticultural sector, its function and interaction with the environment and the community, both nationally and internationally.

#### *Competence and skills*

For a Degree of Master of Science in Horticulture the student shall have:

- demonstrated the ability to identify and formulate advanced problems relating to the complex system of resources and value adding processes in the horticultural sector autonomously as well as to implement and critically evaluate different solutions using appropriate measures and within predetermined parameters
- demonstrated the ability to integrate knowledge from relevant fields critically and systematically as well as to analyse, assess and deal with complex situations and use appropriate methods to analyse, implement and critically evaluate these solutions
- demonstrated the ability in speech and writing in both national and international contexts 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 to participate in research and development work or autonomous employment in some other qualified capacity in the horticultural sector or some neighbouring field and so contribute to the development of the profession and professional practice.

#### *Judgement and approach*

For a Degree of Master of Science in Horticulture the student shall have:

- demonstrated the ability to make assessments of the use of the horticultural sector for different purposes informed by relevant disciplinary, social, economic, environmental and ethical considerations and to weigh up the pros and cons of these aspects
- demonstrated the capacity for teamwork and collaboration with various constellations, and
- demonstrated the ability to identify the need for further knowledge and undertake ongoing development of his or her skills.

## **DEGREE**

### **Degree awarded on completion of the programme**

The Horticultural Science programme aims at a degree of Master of Science in Horticulture. 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 a vocational degree (300 credits) will be provided with a degree certificate upon request. The degree certificate will specify the qualification as Degree of Master of Science in Horticulture (300 credits).

### **Degree requirements**

Degree of Master of Science in Horticulture is awarded following completion of course requirements (passed courses) of 300 credits, including the following demands:

- 165 credits mandatory programme courses,
- 90 credits programme courses,
- 15 credits independent project within Horticultural Science or Biology (bachelor's project/G2E).
- 30 credits independent project within Horticultural Science or Biology (master's project/A2E).

## **CONTENT AND OUTLINE**

### **Courses in the programme**

The range of courses can alter during the education, which can lead to a new version of the programme syllabus where, if necessary, information about provisional regulations is given. Decision about range of courses will be made well in advance before upcoming academic year

Year 1 (compulsory courses)

Botany for Horticulture Students, 15 credits (biology/horticultural science, G1N)  
 Horticultural products and quality , 15 credits (biology/horticultural science, G1N)

Technology, Soil and Climate for Horticultural Production, 15 credits (technology/horticultural science, G1N)

The horticultural market, 15 credits (business administration/horticultural science, G1N)

Year 2 (compulsory courses)

Plant Protection, Basic Course, 7,5 credits (biology/horticultural science, G1N)

Horticultural Production Systems, 7,5 credits (biology/horticultural science, G1N)

Basic Course in Business Management, 15 credits (business administration/horticultural science, G1N)

Plant biochemistry, 15 credits (chemistry/biology, G1N)

Plant protection and microbiology, 15 credits (biology/horticultural science, G1F)

Year 3 (compulsory courses)

Ecology and statistics, 15 credits (biology/statistics, G1F)

Genetics and Plant Breeding, 15 credits (biology/horticultural science, G1F)

Plant Physiology, 15 credits (biology/horticultural science, G2F)

Bachelor project in Horticulture Science, 15 credits (horticultural science, G2E)

Bachelor project in Biology, 15 credits (biology, G2E)

*Year 4-5 (optional courses, compulsory Master's Thesis Project*

Integrated Pest Management in Sustainable Production Systems, 15 credits (biology/horticultural science, A1N)

Applied Plant Biotechnology, 15 credits (biology/horticultural science, A1N)

Environmental Issues in Crop Production, 15 credits (biology/horticultural science, A1N)

Insect Chemical Ecology, 15 credits (biology, chemistry, A1N)

Environmental Economics and Management, 15 credits (business administration/agricultural science, A1N)

Horticultural Crop Physiology, 15 credits (biology/horticultural science, A1N)

Climate Change – Landscape in Transition, 15 credits (landscape architecture/biology, A1N)

Advanced Plant Breeding and Genetic Resources, 15 credits (biology/horticultural science, A1N)

Online preparation course: Working with Local Natural Resource Management in Low Income Countries, 7,5 credits (biology/rural development, A1N)

Field course: Working with Local Natural Resource Management in Low Income Countries, 7,5 credits, (biology/rural development, A1N)

Practical Research Training, 15 credits, (biology/horticultural science, A1N)

Master's Thesis Project in Biology, 30 credits (biology, A2E) eller

Master's Thesis Project in Horticultural Science, 30 credits (Horticultural Science,

A2E)

Other programme course (optional)

Work Experience Course, 15 credits (horticultural science, GXX)

Detailed information about course dates can be found on SLU:s student web.

## **TRANSITIONAL REGULATIONS AND OTHER REGULATIONS**

### **Transitional regulations**

If courses are permanently cancelled, the demand for compulsory courses can be fulfilled through available programme courses, but each individual case will be tried for crediting.

## **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 programme and are awarded a degree have the possibility to continue their studies at doctoral level.