

# Master's Programme in Science for Sustainable Development

120 credits

Master's Programme in Science for Sustainable  
Development

F7MSU

Valid from: 2020 Autumn semester

**Determined by**

Board of the Faculty of Arts and Sciences

**Date determined**

2006-12-08

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## Introduction

The master's programme in Science for Sustainable Development is a two year, second cycle study program that leads to a master's degree in Environmental Science. This full-time programme provides a strong basis for a professional career related to issues regarding sustainable development and environmental change at international and national agencies, universities, municipalities, organisations and corporations. The programme also fulfils the students' eligibility for doctoral education in related fields.

The master's programme is designed to provide students with knowledge on environmental change and the challenges of creating a sustainable society. On completion of the program the students will have developed an independent and critical approach to environmental science and sustainability studies and have acquired skills and knowledge that will enable them to actively work in and contribute to developments in these fields, either as practitioners or researchers.

The students are given the possibility to:

- develop the capacity to understand, empirically and theoretically, implications of environmental change, as well as sustainability/environmental aspects,
- attain understanding of and skills to use a range of analytical tools for examining contemporary sustainability studies/environmental issues,
- acquire an in-depth understanding of sustainability studies/environmental issues,
- train their ability to critically approach current challenges for sustainable development from multidisciplinary perspectives,
- develop the capacity to conduct independent analyses of sustainability studies/environmental issues

## Aim

### **National Qualifications according to the Swedish Higher Education Act**

#### **Knowledge and understanding**

For a Degree of Master (120 credits) the student shall

- demonstrate knowledge and understanding in environmental science, 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
- demonstrate specialised methodological knowledge in environmental science.

#### **Competence and skills**

For a Degree of Master (120 credits) the student shall:

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

### **Judgement and approach**

For a Degree of Master (120 credits) the student shall:

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

## **Content**

Environmental issues are inherently complex and constantly changing. It is therefore essential to address the environmental issues by taking an interdisciplinary perspective. Core courses in the programme are designed to provide the students with interdisciplinary knowledge on questions and challenges related to sustainable development. The programme also provides students with opportunities to deepen knowledge in specific areas of environmental science and sustainable development. Students also learn how to use relevant analytical tools for studies of environmental change

We offer courses that introduce sustainable development as a political idea and an analytical concept. The courses bring up the historic development of environmental changes induced by human use and consumption of energy, water, food and land in relation to the challenges of assessing and managing resource use and environmental changes. Climate science and policy, sustainable resource management as well as the social, political, and biogeochemical components of environmental challenges are central themes in the programme. Students will also learn to critically evaluate common concepts and scientific approaches as well as implement and assess theoretical and methodological aspects commonly used within social and natural sciences. The programme provides possibilities to choose specialization courses within the fields of environmental science and sustainable development during the third semester and to carry out internship at a

chosen external organisation in Sweden or abroad. The final semester of the programme consists of a thesis project where students deepen their knowledge and skills within a selected area of specialization.

The heading 'Curriculum' contains a list of courses included in the programme. The course syllabuses for these describe in more detail contents, teaching and working methods, and examination.

## Teaching and working methods

Problem-oriented and real-life related environmental and sustainability issues, established concepts, novel strategies and proven models of research are incorporated in lectures, self-studies, seminars, workshops, experimental studies, computer laboratory work, role-play exercises and fieldwork.

Students have the opportunity to gain interdisciplinarity perspective, which entails understanding how different aspects of natural and social sciences can contribute to sustainable development.

Examination forms vary between courses, but in general, active participation in group works and seminars, written assignments and oral presentations are required. A description of the examination for each course can be found in the respective syllabus and studyguide. Students who have failed an examination are normally allowed to retake it on two additional occasions. Those who have passed an examination may not retake it to improve grades.

In the completed Master's thesis the student should demonstrate ability of independent and analytical thinking, logical reasoning about the results obtained and an ability to critically discuss these results in relation to relevant scientific theories and other empirical studies. The work should be well structured and illustrate the correct performance of methods and analyses and use of reference literature. Each student should present and defend the thesis work in an open seminar in the presence of an assigned opponent.

The course syllabuses describe in more detail the contents, teaching and working methods, and examination.

## Entry requirements

Bachelor's degree within natural sciences, social sciences, health sciences, humanities or engineering or equivalent, that relates to environmental, social or economic aspects of sustainable development, equivalent to a Swedish Kandidatexamen.

English corresponding to the level of English in Swedish upper secondary education (English 6/B). Exemption from Swedish 3.

## Threshold requirements

The student must have passed at least 45 ECTS credits of semester 1 and 2 (including the courses Critical Perspectives on Sustainable Development (7.5 ECTS), Environmental and

Resource Use Challenges (7.5 ECTS), and Climate Science and Policy (15 ECTS), in order to be admitted to the third semester of the programme.

The student must have passed at least 75 ECTS credits of the programme including the course Designing environmental studies (7.5 ECTS) in order to be allowed to start the Master's Thesis course.

## Degree requirements

The student will be awarded the degree of Master of Science (120 credits) with a major in Environmental Science, provided all course requirements are completed and that the student fulfils the general and specific eligibility requirements, including proof of holding a Bachelor's or a corresponding degree.

Completed courses will be listed in the degree certificate.

A degree certificate will be issued by the Faculty Board on application by the student. A diploma supplement will be included as an appendix to the degree certificate.

## Degree in Swedish

Filosofie masterexamen i miljövetenskap

## Degree in English

Degree of Master of Science in Environmental Science

## Specific information

### Transfer of Credits

Decisions about transferring credit are taken by the faculty board, or by a person designated by the board, after application from the student.

### Teaching language

The teaching language is English.

## Curriculum

### Semester 1 (Autumn 2020)

| Course code | Course name                                      | Credits | Level | Weeks          | ECV |
|-------------|--|---------|-------|----------------|-----|
| 746A80      | Critical Perspectives on Sustainable Development | 7.5     | A1X   | v202034-202038 | C   |
| 746A61      | Environmental and Resource Use Challenges        | 7.5     | A1X   | v202039-202043 | C   |
| 746A66      | Climate Science and Policy                       | 15      | A1X   | v202044-202103 | C   |

### Semester 2 (Spring 2021)

| Course code | Course name                                     | Credits | Level | Weeks          | ECV |
|-------------|---|---------|-------|----------------|-----|
| 746A63      | Analytical Frameworks in Sustainability Studies | 15      | A1N   | v202104-202113 | C   |
| 746A69      | Sustainable Resources Management                | 15      | A1N   | v202114-202123 | C   |

### Semester 3 (Autumn 2021)

| Course code | Course name  | Credits | Level | Weeks          | ECV |
|-------------|--|---------|-------|----------------|-----|
| 746A71      | Designing Environmental Studies in Sustainable Development | 7.5     | A1X   | v202134-202138 | C   |
| 746A77      | Internship in Environmental Science                        | 7.5     | A1X   | v202139-202143 | E   |
| 746A78      | Research skills in environmental science I                 | 7.5     | A1X   | v202139-202143 | E   |
| 746A88      | Visualizing Sustainability Challenges and Pathways         | 7.5     | A1F   | v202139-202143 | E   |
| 746A87      | Internship in Environmental Science                        | 15      | A1X   | v202139-202148 |     |
| 746A74      | Sustainability in the urban realm: city/neighbourhood/home | 7.5     | A1N   | v202144-202148 | E   |
| 746A77      | Internship in Environmental Science                        | 7.5     | A1X   | v202144-202148 | E   |
| 746A78      | Research skills in environmental science I                 | 7.5     | A1X   | v202144-202148 | E   |
| 746A79      | Research skills in environmental science II                | 7.5     | A1F   | v202144-202148 | E   |
| 746A87      | Internship in Environmental Science                        | 15      | A1X   | v202144-202203 | E   |
| 746A77      | Internship in Environmental Science                        | 7.5     | A1X   | v202149-202203 | E   |
| 746A78      | Research skills in environmental science I                 | 7.5     | A1X   | v202149-202203 | E   |
| 746A79      | Research skills in environmental science II                | 7.5     | A1F   | v202149-202203 | E   |

\* The course is divided into several semesters and/or periods.