

# Education plan

for

**Master's Programme in Hydrology, Hydrogeology and Water Resources**  
**Masterprogram i hydrologi, hydrogeologi och vattenresurser**

**120.0 Higher Education  
Credits**  
**120.0 ECTS credits**

<b>Programme code:</b>	NHHVO
<b>Valid from:</b>	Autumn 2021
<b>Date of approval:</b>	2008-09-24
<b>Changed:</b>	2024-10-16
<b>Department:</b>	Department of Physical Geography

## Decision

This syllabus has been approved by the Board of the Faculty of Science at Stockholm University on 24 September 2008 and revised by the Board of the Faculty of Science at 18 August 2017 and 17 August 2020.

## Prerequisites and special admittance requirements

To be eligible for this programme you must have knowledge corresponding to a Bachelor's degree, including at least 90 ECTS credits in Earth sciences or geography, or equivalent subjects within natural sciences or technical sciences. Further requirements include knowledge equivalent to Swedish upper secondary school course Mathematics D, as well as at least 7.5 ECTS credits in statistics. Also required is knowledge equivalent to Swedish upper secondary school course English B/English 6.

## Programme structure

The programme contains 45 higher education credits (HECs) of compulsory courses, which normally are taken during year 1. Year 1 includes 15 HECs of optional courses. Year 2 contains a degree project (30, 45 or 60 HECs) and 0-30 HECs of optional courses.

## Goals

The main field of study: Physical Geography and Quaternary Geology with specialisation of Hydrology, Hydrogeology and Water Resources.

For a Degree of Master (Two Years) students must

- demonstrate knowledge and understanding in their main field of study, including both broad knowledge in the field and substantially deeper knowledge of certain parts of the field, together with deeper insight into current research and development work;
- demonstrate deeper methodological knowledge in their main field of study;
- demonstrate an ability to critically and systematically integrate knowledge and to analyse, assess and deal with complex phenomena, issues and situations, even when limited information is available;
- demonstrate an ability to critically, independently and creatively identify and formulate issues and to plan and, using appropriate methods, carry out advanced tasks within specified time limits, so as to contribute to the development of knowledge and to evaluate this work;
- demonstrate an ability to clearly present and discuss their conclusions and the knowledge and arguments behind them, in dialogue with different groups, orally and in writing, in national and international contexts;
- demonstrate the skill required to participate in research and development work or to work independently in other advanced contexts;
- demonstrate an ability to make assessments in their main field of study, taking into account relevant

scientific, social and ethical aspects, and demonstrate an awareness of ethical aspects of research and development work;

- demonstrate insight into the potential and limitations of science, its role in society and people's responsibility for how it is used;
- demonstrate an ability to identify their need of further knowledge and to take responsibility for developing their knowledge.

### **Courses**

Compulsory courses:

1. Water Resources Sustainability, Advanced Level, 15 HECs\*
2. Hydrological Modelling, Advanced Level, 15 HECs\*
3. Water Management and Pollution, Advanced Level, 15 HECs\*
4. Degree Project in Physical Geography and Quaternary Geology, Advanced Level, 30, 45 or 60 HECs\*

Optional courses: 15-45 HECs.

\* The main field of study.

### **Degree**

Degree of Master (two years).

### **Misc**

Students who have been admitted to the programme but not completed it during the scheduled two years can request to complete the program even after the programme syllabus no longer applies. In such cases, the limitations stated in the course syllabus apply.

The degree project corresponds to the independent work that is required for a Master's degree, as specified by the Higher Education Ordinance.

The extent of first level (bachelor level) courses allowed within the programme is limited to a maximum of 30 higher education credits.

Regarding optional courses: limitations expressed in the course syllabi, determine if courses may be included in a master's degree.