

# Education plan

for

**Bachelor's Programme in Oceanography**  
**Kandidatprogram i oceanografi**

**180.0 Higher Education**  
**Credits**  
**180.0 ECTS credits**

**Programme code:** NOCEK  
**Valid from:** Spring 2013  
**Date of approval:** 2012-10-24  
**Department:** Department of Meteorology

## Decision

This syllabus has been approved by the Board of the Faculty of Science at Stockholm University.

## Prerequisites and special admittance requirements

Swedish upper secondary school courses Physics B, Chemistry A and Mathematics D, or equivalent.

## Programme structure

Within the compulsory parts of the first two years of the programme, courses in Maths and Physics build the necessary foundation for applying Physics to the atmosphere. The first two years are identical to the other profiles in Physics. During the second semester an insight into the other profiles is possible through programme specific courses. The third year consists of Meteorology courses. In order to proceed to the third year the student has to achieve at least the grade E for at least 75% of the courses from the first two years of the programme.

## Goals

For a Bachelor's exam with main subject Meteorology the student must show: good knowledge and understanding of Meteorology, including knowledge about the scientific basis. Furthermore show advanced knowledge in Meteorology, being orientated in current research, being able to search for, collect, assess and critically interpret relevant information about a certain problem and critically discuss phenomena and topics within Meteorology. Show ability to independently identify, formulate and solve problems, as well as carry out tasks within given time frames. Show ability to orally and in writing account for and discuss information, problems and solutions in dialogue with other groups, abilities needed to being able to work independently within the subject, being able to make assessments with respect to relevant scientific, social and ethical aspects. Show insight into the role of Meteorology in society and about mans' responsibility for how knowledge in Meteorology is used. The student must show ability to identify the need for further personal knowledge and competence within the subject.

## Courses

Compulsory courses first year: Mathematics I, 30hp (MM2001), Mechanics, 12hp (FK3003)\*, Experimental methods in physics, 12hp (FK3001), programme specific courses with one of the following: Kvantfysikens grunder, GN, 6 hp (FK3002) Introduktion till galaxer och kosmologi, GN, 6 hp (AS3001) Klimatsystemets fysik, GN, 6 hp (MO3001)\* Datoranvändning inom fysiken, GN, 6 hp (FK4002). Second year: Mathematical analysis III, 7.5hp (MM5001), Mathematical analysis IV, 7.5hp (MM5002), Algebra II, 7.5hp, (MO5004), Numerical methods for physicists, 7.5hp (BE3002), Electromagnetism, 12hp (FK4010)\*, Optics and waves, 10.5hp (FK4009)\*, Thermodynamics and statistical physics, 7.5hp (FK4008)\*. Third year: Thermodynamics

of the atmosphere, 6hp (MO3003)\*, Atmospheric radiation and chemistry, 9hp (MO3004)\*, Fluid dynamics, 3hp (MO3005)\* Dynamic meteorology I, 12hp (MO3006)\*, Dynamic meteorology II, 7,5hp (MO3007)\* Climate and general circulation, 7,5hp (MO3008)\* Meteorology, degree project, 15 hp (MO6001)\* \*)Courses within the main subject.

**Degree**

Bachelor's degree.

**Misc**

In the programme are involved: the Department of Mathematics and the Physics department. Students may request to finish the programme according to this syllabus even after it has ceased to be valid. In that case the limitations stated in the syllabus for the courses within the programme apply.