Department of Statistics

Stockholm University

Education plan

for

Master's Programme in Statistics
Masterprogram i statistik

120.0 Higher Education Credits
120.0 ECTS credits

Programme code:	SSTAO
Valid from:	Autumn 2021
Date of approval:	2009-10-08
Changed:	2020-12-30
Department:	Department of Statistics

Decision

This study plan has been approved by the Faculty Board of Social Sciences, Stockholm University 2009-10-08. Decisions on revision have been made by the Faculty Board of Social Sciences, Stockholm University 2014-02-18 and 2020-xx-xx

Prerequisites and special admittance requirements

Bachelor's Degree, 180 HECs, including at least 90 HECs in Statistics or equal, and
English B or English 6 from the Swedish upper secondary education or equal.

Programme structure

The master's program aims to broaden and deepen the knowledge in statistics. After completing the master's program, the student is expected to be able to work independently with qualified statistical analysis in the private or public sector, or go on to postgraduate studies in statistics.

The program consists of 90 credits compulsory courses, of which 30 consist of a degree project, and by 30 credits optional courses according to the following structure:

Semester 1: compulsory courses in mathematics 7.5 HECs and statistics 22.5 HECs;
Semester 2: compulsory courses in statistics 30 HECs;
Semester 3: optional courses 30 HECs;
Semester 4: compulsory degree project in statistics 30 HECs.

The optional courses can be in statistics and/or other main areas at basic and/or advanced level, see below under Courses.

Teaching is given in the form of lectures, exercises, computer labs, seminars and supervision. Elements of online teaching with digital aids may occur.

To the greatest possible extent, students will work independently with various exercise materials.

The language of instruction for the program's compulsory courses in the main field of statistics is English.

Goals

Knowledge and understanding
For a Master's degree, the student should:

- demonstrate knowledge and understanding in Statistics, both broad know-how in the subject in general as well as substantial depth in some specific areas of the subject and deeper insight in current research and development,
- demonstrate a deep methodological know-how in the main field, statistics.

Skills and ability
For a Master's degree, the student should:
- demonstrate ability to critically and systematically integrate knowledge and analyse, evaluate and handle complex phenomena, problems and situations even in the light of limited information,
- demonstrate ability to critically, independently, and creatively identify and formulate research questions and plan as well as carry out qualified tasks using appropriate methods and within given time frames, and evaluate these - thereby contributing towards advancement of knowledge,
- demonstrate ability to present and discuss, orally and in writing, information, problems and solutions in dialogue with different groups nationally and internationally,
- demonstrate skills required in order to take part in research and development work or work independently in tasks that require qualified statistical competence.

Ability to make assessments and approach
For a Master's degree, the student should:
- demonstrate the ability to make statistical evaluation taking into account relevant scientific, social and ethical aspects,
- demonstrate an insight on the value of science and its limitations, its value in society as well as people's responsibility for how it is used,
- demonstrate the ability to identify his/her need for further knowledge and to take responsibility to promote his/her competence.

Courses

Compulsory courses:
1. Mathematics for Economic and Statistical Analysis, 7.5 HECs
2. R progamming, 7.5 HECs
3. Probability Theory, 7.5 HECs
4. Statistical Inference, 7.5 HECs
5. Computational Statistics, 7.5 HECs
6. Multivariate Analysis, 7.5 HECs
7. Bayesian Learning, 7.5 HECs
8.Statistical Theory of Science and Methodolgy, 7.5 HECs
9. Master’s Degree Project in Statistics, 30 HECs

All compulsory courses are within the main area of statistics at advanced level (AN) except course 1 which is within the main area of mathematics at basic level (GN).

The compulsory courses are given within the program in the order stated above, where courses 1-8 are given in semesters 1-2 and course 9 is given in semester 4. Progression requirements between the compulsory courses may occur. For further information about the compulsory courses and the specific prerequisites, see the respective course syllabus. Before the course Degree Project in Statistics for the Master's Degree can be started, all compulsory courses above must be completed with a passed result.

Optional courses:
In addition to the above specified compulsory courses, course requirements of at least 30 HECs of optional courses are required for the master's degree. These courses can be in the main area of statistics or in other main areas or a combination thereof. Courses at the undergraduate level can also be included, provided that they are not included in the education qualifying for the program.

In addition to the course Mathematics for Economic and Statistical Analysis, 7.5 HECs, a maximum of 22.5 HECs at the undergraduate level may be included in the master's degree; even undergraduate courses in the main field of statistics can be included in the master's degree.

In addition to the course Mathematics for Economic and Statistical Analysis, 7.5 HECs, a maximum of 30 HECs in a major area other than statistics may be included in the master's degree.

The range of optional courses at the advanced level in the main area of statistics that can be read during semester 3 is decided by the department board at the Department of Statistics before the current semester and posted on the department's website www.statistics.su.se.

For more information about the optional courses in statistics and specific prerequisites, see the respective syllabus and the department's website.

Degree

The programme leads to a Master of Science degree. The main field of study for the degree is Statistics.

Misc

Students who have been admitted to the program and have not completed it within the planned academic year, may request to complete the program even after the study plan has expired. In this case, the restrictions specified in the syllabi apply to the courses included in the education.

When the program is closed and its study plan revoked, the student has the right to complete his/her education according to this study plan, however, no later than after the program's nominal term plus two years. In this case, the restrictions specified in the course syllabi for the courses included in the education apply in the first instance, or equivalent education is offered.

The head of the department of statistics decides on exemptions from any of the local requirements set out in this education plan. The request to this effect must be made in writing to the head of department.

This is a translation of the Swedish original education plan.