Department of Statistics

Education plan
for
Masterprogram i statistik **120.0 Higher Education Credits**
Master's Programme in Statistics **120.0 ECTS credits**

Programme code:	SSTAO
Valid from:	Autumn 2024
Date of approval:	2024-03-06
Changed:	2024-03-07
Department:	Department of Statistics

Decision
Finalized by: Samhällsvetenskapliga fakultetsnämnden, 2024-03-06

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 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 move on to postgraduate studies in statistics.

The program comprises 90 credits compulsory courses, of which 30 consist of a degree project, **and** 30 credits optional courses according to the following arrangement:

Semester 1: compulsory courses in mathematics, 7.5 ECTS and in statistics, 22.5 ECTS

Semester 2: compulsory courses in statistics, 30 ECTS

Semester 3: optional courses of 30 credits

Semester 4: compulsory degree project in statistics 30 credits

The compulsory and optional courses are described below under 'Courses'.

Teaching is given in the form of lectures, exercises, computer labs, seminars and tutorials. Elements of online teaching with digital aids may occur. To the greatest extent possible, students are allowed to work independently with exercise material.

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

Goals

For the master's degree, the student must

Knowledge and comprehension:

- demonstrate knowledge and understanding in the main area of the education, including both broad knowledge in the area as well as significantly in-depth knowledge in certain parts of the area as well as in-depth insight into current research and development work,
- show in-depth methodological knowledge within the main area of the education.

Skills and Abilities:

- demonstrate the ability to critically and systematically integrate knowledge and to analyse, assess and manage complex phenomena, questions and situations even with limited information,
- demonstrate the ability to critically, independently and creatively identify and formulate questions, to plan and with adequate methods carry out qualified tasks within given time frames and thereby contribute to the development of knowledge and to evaluate this work,
- demonstrate the ability to, in both national and international contexts, orally and in writing clearly explain and discuss their conclusions and the knowledge and arguments that underlie them in dialogue with different groups,
- demonstrate such skills as are required to participate in research and development work or to work independently in other qualified activities.

Evaluation ability and approach:

- show the ability to make assessments in the main area of the education with regard to relevant scientific, societal and ethical aspects and show awareness of ethical aspects of research and development work,
- show insight into the possibilities and limitations of science, its role in society and people's responsibility for how it is used, and
- demonstrate the ability to identify their need for additional knowledge and to take responsibility for their knowledge development.

Courses

Compulsory courses:

For a master's degree in the main field of statistics, compulsary courses of a total of 90 credits (hp) are

required accoridng to below:

Semester 1

- Mathematics for Economic and Statistical Analysis, basic level, 7.5 credits (major area of mathematics)
- R programming, advanced level, 7.5 credits (major area of statistics)
- Probability Theory, advanced level, 7.5 credits (major area of statistics)
- Statistical Inference, advanced level, 7.5 credits (major field of statistics)

Semester 2

- Statistical Computation, advanced level, 7.5 credits (major area of statistics)
- Multivariate Analysis, advanced level, 7.5 credits (major area of statistics)
- Generalized Linear Models, advanced level, 7.5 credits (major area of statistics)
- Philosophy of Science and Methodology in Statistics, advanced level, 7.5 credits (major field of statistics)

Semester 3

- Optional courses of 30 credits, see below under 'Elective courses'.

Semester 4

- Master’s Thesis in Statistics, advanced level, 30 credits (major field of statistics)

Progression requirements between the compulsory courses may occur. For more information about the compulsory courses and the specific prerequisites, see the respective course syllabus.

Before the course Master’s Thesis in Statistics can begin, all mandatory courses above must be completed with a passing grade.

Elective courses: The optional courses during Semester 3 can be in the main field of statistics or in other main fields or a combination thereof.

The Department of Statistics offers elective courses at advanced level in the main field of statistics that can

be studied during semester 3. Which courses are decided or each semester by the departmental board at the Department of Statistics and announced on the department's website www.statistics.su.se. For more information about the elective courses in statistics and specific prerequisites, see the respective course syllabus and the department's website.

In addition to the course Mathematics for Economic and Statistical Analysis, a maximum of 22,5 credits on basic level be included in the degree, provided that they are not included in the degree which gives eligibility to the program.

Degree

The program leads to a Master's degree in the main field of statistics.

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Students who have been admitted to the program and have not completed it within the planned academic year can request to complete the program even after the education plan has ceased to apply. In doing so, the restrictions stated in the syllabuses for the courses included in the education apply.

When the program is discontinued and its education plan suspended, the student has the right to complete his education according to this education plan, however, at the latest after the program's nominal duration plus two years. Then, the restrictions specified in the respective syllabus for the courses included in the program applies or equivalent courses are offered.

The head of the Department of Statistics decides on exceptions to any of the local requirements that appear in this education plan. The petition to this effect must be made in writing to the head of department.