Courses in Mathematical Statistics, spring 2026
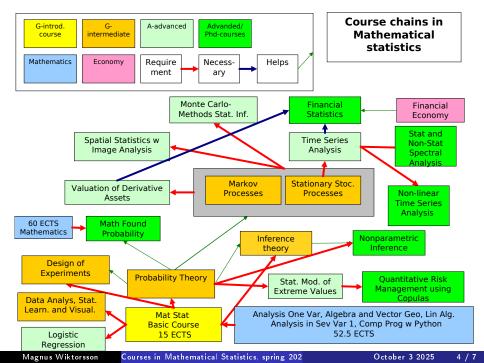
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Data Analysis, Statistical Learning and Visualization with Project

The course treats:

- Basic methods for data handling and common visualisation methods for data.

- Methods for unsupervised and supervised learning such as: clustering; hierarchical clustering; and regression and decision tree methods for classification and regression problems.

- Methods for model selection and validation such as: bootstrap, split of data into training and test, and cross-validation.

List of Courses spring 2026

Intermediate courses

Course	Cred	Start
Probability Theory MASC01	7.5	$\approx$ Jan 19
Data Analysis, Statistical Learning and Visualization with Project MASC06	7.5	$\approx$ Jan 19
Inference Theory MASC12	7.5	$\approx$ Jan 19
Design of Experiments MASC15	7.5	$\approx$ Mar 23

Advanced courses

Course	Cred	Start
Monte Carlo methods for stat inf MASM11	7.5	$\approx$ Jan 19
Stat and Non-Stat Spectral Analysis MASM26	7.5	$\approx$ Jan 19
Stat mod Extreme Values MASM15	7.5	$\approx$ Mar 23
Linear and Logistic Regression MASM22	7.5	$\approx$ Mar 23

Course chains in Mathematical statistics

Bachelor thesis in mathematical statistics

Entry requirements
MATA31 Analysis in One Variable 15, MATA32 Algebra and Vector
Geometry 1 7.5, NUMA01 Computational Programming with Python 7.5,
MATB21 Analysis in Several Variables 1 7.5, MATB32 Linear algebra 7.5,
MATB23 Analysis in Several Variables 2 7.5,
At least one of the courses: MATB34 Linear analysis 7.5 hp, MATB35
Discrete mathematics 7.5.
Additionally the courses MASA03 Mathematical statistics, basic course, 15;
MASC01 Probability theory, 7.5 ; as well as 15 additional credits in
Mathematical statistics are required.

Master programme in mathematical statistics

Entry requirements
A degree at the basic (Bachelor) level of at least 180 ECTS credits, or that the requirements for such a degree are fulfilled. It is also required that this degree contains courses of in total at least 90 ECTS credits in mathematics, mathematical statistics, numerical analysis, scientific computing and computer science, of which at least 45 ECTS credits in mathematics including courses in multivariable calculus and linear algebra, at least 30 ECTS credits in mathematical statistics, and at least 15 ECTS credits in numerical analysis, scientific computing and/or computer science. English 6/English Course B.

Requirements for a Master's degree
Courses of 90 ECTS credits, and a Master's thesis in Mathematical
Statistics of 30 ECTS credits. Of the 90 course credits, at least 45 credits
must be courses in Mathematical Statistics on the advanced level; among
these 45 credits at least three out of the four courses:

- MASM11 Monte Carlo methods for statistical inference,
- MASM15 Statistical Modelling of Extreme Values,
- MASM17 Time-series-analysis,
- MATM30 Mathematical Foundations of Probability,

should be included. Of the 90 ECTS course credits not more than 30
credits are allowed to be on the basic level.