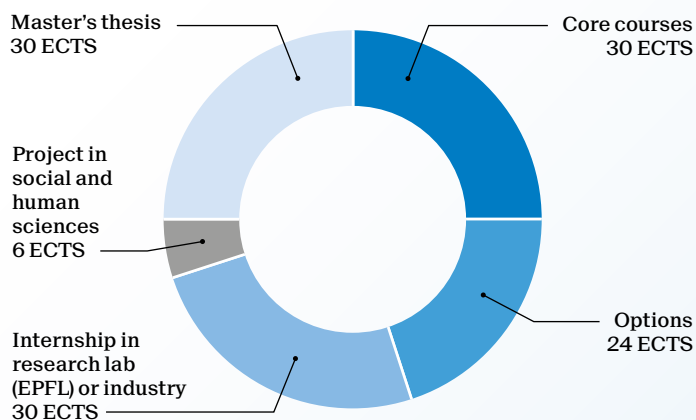


Master of Science in STATISTICS

2-year program - 120 ECTS



Students may choose a minor (30 ECTS) e.g.:

- Computational science and engineering
- Computer science
- Data science
- Environmental science and engineering
- Financial engineering

Career prospects

After graduation, students can enter the job market directly or continue their university studies by applying to a doctoral program. The realization that 'data is the new oil' means that statisticians and data analysts are highly sought-after and valued in many domains, including the pharmaceutical industry, the insurance sector, the financial sector, environmental science, and the health and social sciences. The internship portal, with offers from well-known companies such as Nestlé, Apple, AXA or Swissquote, gives a foothold in the professional world. The unique combination of theoretical and methodological foundations of statistics with skills in cutting-edge programming techniques, critical thinking, team-working and communication, will make graduates valued collaborators in any data-rich environment.

Entry requirements

- A Bachelor's degree in Mathematics with an excellent academic record
- Holders of a Bachelor's degree in Physics, Engineering, Economics, or a field related to Mathematics with a strong quantitative background may also be admitted

	Credits
Core courses	30
Applied statistics	5
Multivariate statistics	5
Randomization and causation	5
Regression methods	5
Statistical computation and visualization	5
Statistical inference	5

Options	24
Biostatistics	
Applied biostatistics	5
Biostatistics	5
Genetics and genomics	4
Genomics and bioinformatics	4
Markov chains	5
Nutrition: from molecules to health	4
Time series	5
Environmental statistics	
Exploratory data analysis in environmental health	4
Sensing and spatial modeling for earth observation	5
Risk and environmental sustainability	5
Time series	5
Finance	
Derivatives	6
Financial big data	3
Markov chains	5
Martingales in financial mathematics	5
Probability and stochastic calculus	6
Stochastic simulation	5
Time series	5
Mathematical statistics	
Empirical processes	5
Markov chains	5
Measure theory	5
Nonparametric estimation and inference	5
Probability theory	5
Statistical theory	5
Time series	5
Statistical data science	
Applied data analysis	8
Computational linear algebra	5
Deep learning	4
Deep reinforcement learning	6
Foundations of data science	8
Learning theory	6
Machine learning for behavioral data	6
Mathematical modeling of behavior	5
Mathematics of data: from theory to computation	6
Optimization for machine learning	8
Statistical analysis of network data	5
Statistical machine learning	5