



LUND
UNIVERSITY

Master's Programme in Mathematical Statistics

LUND UNIVERSITY | SWEDEN

- Master of Science in Mathematical Statistics
- 2 years, full-time, 120 ECTS credits
- Centre for Mathematical Sciences
- Lund Campus
- Application deadline: January 2022
- Programme start: August 2022

PROGRAMME OVERVIEW

The Master's programme in Mathematical Statistics provides a broad spectrum of tools and methods for handling random phenomena occurring in scientific as well as industrial contexts. Within the programme, you can specialise in many different areas for different purposes, such as the modelling of economical, biological and environmental data. You study at least 45 credits in mathematical statistics at Master's level and write a Master's thesis of 30 credits. You can choose to take the remaining (at most 45) credits in e.g., mathematics or numerical analysis. You can also choose courses in other subjects, such as computer science or, if you are aiming for a career in a specific applied field, courses in that field. Examples include courses in economics, molecular biology and bioinformatics. If you intend to proceed to a PhD, you should take courses with a high degree of theory content, while if you are aiming for a career outside academia, you should take courses that cover a wide range of statistical models and methods.

PROGRAMME MODULES/COURSES

COURSES AND NUMBER OF CREDITS: Semester 1: Stationary Stochastic Processes (7.5), Markov Processes (7.5), Mathematical Foundations of Probability (7.5), Time Series Analysis (7.5), Semester 2: Monte Carlo Methods for Stochastic Inference (7.5), Non-Parametric Inference (7.5), Stationary and Non-Stationary Spectral Analysis (7.5), Linear and Logistic Regression (7.5), Statistical Modelling of Extreme Values (7.5), Inference Theory (7.5) or Design of Experiments (7.5). Semester 3: Non-Linear Time Series Analysis (7.5), Spatial Statistics with Image Analysis (7.5), Valuation of Derivative Assets (7.5). Financial Statistics (7.5), Quantitative Risk Management using Copulas (7.5) or other elective courses. Semester 4: Master's degree thesis (30).

CAREER PROSPECTS

With a Master of Science in Mathematical Statistics, you have great opportunities to form an exciting career in, for example, the pharmaceutical industry, biotechnology companies or the banking and finance sector. Statistical methods are also of great importance

for logistics, quality assurance and development in industry and organisations within the public sector.

ENTRY REQUIREMENTS AND HOW TO APPLY

Entry requirements

A Bachelor's degree of at least 180 credits or the equivalent, including at least 90 credits in mathematics, mathematical statistics, numerical analysis, scientific calculations and computer science, of which at least 45 credits must be in mathematics, including courses in multivariate analysis and linear algebra, at least 30 credits in mathematical statistics and at least 15 credits in numerical analysis, scientific calculations and/or computer science. English Level 6.

How to apply

- 1. Apply online:** Go to www.lunduniversity.lu.se/mathematical-statistics. Click on "Apply" and follow the instructions for the online application at www.universityadmissions.se, the Swedish national application website. Rank the chosen programmes in order of preference.
- 2. Submit your supporting documents:** Check what documents you need to submit (i.e. official transcripts, degree diploma/proof of expected graduation, translations, proof of English, passport) and how you need to submit them at www.universityadmissions.se.
- 3. Pay the application fee (when applicable).**

Selection criteria/additional info

The selection will be based on grades awarded for previous academic courses in science, mathematics and engineering.

Tuition fees

Tuition fee SEK 145 000 per year for non-EU/EEA citizens. No fee for EU/EEA citizens. See www.lunduniversity.lu.se for details on tuition fees

ABOUT THE CENTRE FOR MATHEMATICAL SCIENCES

The Centre for Mathematical Sciences is both part of the Faculty of Science and of the Faculty of Engineering. The Centre consists of approximately 120 employees. We carry out research and teaching in mathematics, mathematical statistics and scientific computing. The personnel of the Centre can be clustered according to different non-disjoint criteria, e.g. according to title, faculty, subject or research groups. The three administrative divisions are: Mathematics (Faculty of Science), Mathematics and Numerical Analysis (Faculty of Engineering) and Mathematical Statistics).





ABOUT LUND UNIVERSITY

Lund University was founded in 1666 and is repeatedly ranked among the world's top 100 universities. The University has around 44 000 students and more than 8 000 staff based in Lund, Helsingborg and Malmö. We are united in our efforts to understand, explain and improve our world and the human condition.

Lund is considered one of the most popular study locations in Sweden. The University offers one of the broadest ranges of programmes and courses in Scandinavia, based on cross-disciplinary and cutting-edge research. The unique disciplinary range encourages boundary-crossing collaborations both within academia and with wider society, creating great conditions for scientific breakthroughs and innovations. The University has a distinct international profile, with partner universities in almost 70 countries.

Lund University has an annual turnover of more than EUR 880 million, of which two-thirds go to research in our nine faculties, enabling us to offer one of the strongest and broadest ranges of research in Scandinavia.

The establishment of the world-leading facilities MAX IV and European Spallation Source (ESS) will have a major impact on future scientific and industrial development in both materials science and life science. MAX IV is the leading synchrotron radiation facility in the world while ESS will feature the world's most powerful neutron source when it starts producing neutrons in 2023. These facilities together with the new University campus in Science Village will constitute a science complex and an international hub for research, education and innovation in which Lund University plays a central role.

CONTACT

Programme webpage:
www.lunduniversity.lu.se/mathematical-statistics

Director of Studies

Magnus Wiktorsson, Magnus.Wiktorsson@matstat.lu.se

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Learn more at www.lunduniversity.lu.se

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