

## Master's Programme in Statistics – Statistical Modelling and Data Science, 120 credits

The master's programme in statistics with a focus on statistical modelling and data science will prepare you for taking a leading role in the analysis and understanding of complex information flows. The programme is a good starting point for a career in statistics or data science in the private or public sector, both nationally and internationally.



## ABOUT THE PROGRAMME

The programme is focused on the analysis of data with a foundation in statistical theory and gives you the tools needed to find patterns in large and complex data sets, or for more accurate statistical modelling with the aim of identifying causal relationships. You get a good foundation for a career in data science and as a statistician where you are well equipped to drive the design of statistical surveys and make your own contributions to statistical method development. Perhaps you want to pursue a PhD in statistics? Even then, the programme is something for you!

## COURSES

### Semester 1

- Statistics, Mathematics – 5 credits
- Statistics, Data Visualisation – 5 credits
- Statistics, Probability Theory – 5 credits
- Computer Science, Programming for Statisticians – 5 credits
- Statistics, Inference Theory – 5 credits
- Computer Science, Databases – 5 credits

### Semester 2

- Statistics, Econometrics – 7.5 credits
- Statistics, Statistical Computation and Computer Intensive Methods – 7.5 credits
- Statistics, Independent Project I – 15 credits

### Semester 3

- Statistics, Bayesian Statistics – 5 credits
- Statistics, Sampling Theory – 5 credits
- Statistics, Machine Learning for Data Science – 5 credits
- 15 credits of optional courses from the university's range of courses.

### Semester 4

- Statistics, Work Placement for Statisticians, 15 credits, alternatively
- 15 credits worth of courses in statistics, courses in mathematics, informatics, computer science or another field of application.
- This is followed by the course Statistics, Independent Project II, 15 credits.

### Degree of Master of Science (60 credits)

Students who wish to complete their studies with a Degree of Master of Science (60 credits) take the courses and write their thesis as described for semester 1 and 2 above.

### European Master in Official Statistics

The European Master in Official Statistics (EMOS) is offered as an elective option in this programme. It includes a 15-credit internship course at an agency in the official statistics field.

### Specific entry requirements

A first-cycle qualification of at least 180 credits, of which at least 90 credits are for studies in statistics, alternatively at least 30 credits are for studies in statistics and 60 credits for mathematics, alternatively 60 credits are for studies in statistics including 7.5 credits in statistical theory and 7.5 credits in regression analysis/econometrics. The applicant must also have qualifications corresponding to the course "English 6" or "English B" from the Swedish Upper Secondary School.

### More information

[www.oru.se/masterstudy/programmes](http://www.oru.se/masterstudy/programmes)

