MASTER OF SCIENCE IN STATISTICAL DATA ANALYSIS

MAJORS: STATISTICAL SCIENCE - COMPUTATIONAL STATISTICS

60 ECTS CREDITS - LANGUAGE: ENGLISH

FACULTY OF SCIENCES

2025-26

WHAT

Increasing computer power and the professional need to extract objective information from observed data have led to complex databases. Statistical science has become a broad discipline with well-developed methods and techniques for the design and analysis of a wide range of empirical studies. Information obtained from correctly analysed data allows to predict, adjust and even optimise processes based on evidence. Inefficient or haphazard data gathering and analysis, however, can lead to inferior or misleading conclusions, possibly with far-reaching consequences. Hence, international professional and research standards in various fields demand high quality data analysis, performed by qualified statisticians. This programme offers scientists from a variety of fields including biology, bioinformatics, economy and marketing, environmental and life sciences, engineering, mathematics and physics, psychology and social sciences, ... intensive training in modern statistical methods and data analysis. The programme aims at improving problem-solving skills and evidence-based decision-making. This will enable scientists to play a distinctly important role within their field of expertise.

STRUCTURE

The curriculum (60 ECTS) consists of mandatory general course units (12 ECTS), course units specific to the chosen main subject (33 ECTS), and a Master' s dissertation (15 ECTS). In every course unit, the theory is supported by projects and assignments in order to develop skills of practical data analysis. In so doing, we provide hands-on experience with real data. You can take this programme either as a full-time one-year programme, or stagger it across two or more years. Several of our course units are taught in the evening. The curriculum consists of two main subjects.

main subject Statistical Science

This track provides a solid basis in statistical thinking and methodology, with a focus on understanding and applying statistical concepts and bridging the world of statistics and that of empirical sciences. A wide variety of elective course units allows students to tailor the curriculum to their own background and interests. Our lecturers are active researchers, and collaborate on projects with the industry and with society. Our elective course units offer modern statistical methods with a strong emphasis on application. Statistical Science graduates are all-round statisticians.

main subject Computational Statistics

The generation of increasingly complex and massive data sets means that statisticians need to work together with data managers and computer scientists now more than ever. This means that statisticians are expected to know the basics of databases, data management and data access. Many companies ask their statisticians to implement code to be able to perform highly specific data analysis tasks. This coding goes beyond the traditional statistical software packages such as SAS or R, and also involves other modern programming languages (e.g. Python, Perl, ...). The Computational Statistics main subject offers a balanced curriculum with course units on statistical data analysis methods as well as on databases and programming skills. This main subject aims particularly at students with solid computer skills and an aptitude for algorithmic thinking. During the second term, the students work on their Master's dissertation. The Master's dissertation is a unique opportunity for students to learn first-hand from an experienced statistician how to apply statistical methods to solve real-world problems. This is an important component of the programme. Students report on their research methods and results orally and in writing.

LABOUR MARKET

Students who finish the Master's programme successfully, have acquired an advanced level of statistical knowledge and data analytical skills. As independent experts, they are ready to contribute to multidisciplinary teams that design, perform, analyse and report on applied scientific research. Our graduates are in high demand in the industry, the banking sector, in government, in academia and research centres (in the profit as well as in the non-profit production sector). Our graduates are trained to handle practical problems in an objective scientific manner, and to gain insight into data structures and the underlying data models. Throughout the programme, we encourage their critical thought and creative problem-solving skills. Computational skills, flexibility, efficiency and a positive attitude towards lifelong learning are important qualities and indispensable for a successful career.

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TOELATINGSVOORWAARDEN VOOR HOUDERS VAN EEN VLAAMS DIPLOMA

1 **Na onderzoek van de bekwaamheid van de student om de opleiding te volgen:**
  a opleidingen nieuwe structuur:
    - Een diploma van een masteropleiding aansluitend op een bacheloropleiding
    - Een diploma van een masteropleiding die volgt op een andere masteropleiding
  b opleidingen oude structuur:
    - Een diploma van de tweede cyclus van het hogeschoolonderwijs van twee cycli
    - Een diploma van een academische opleiding van de tweede cyclus

Additional Information on Admission (Flemish Degree)

For all students, admission is partly dependent on the result of an assessment test, which evaluates skills in basic mathematics, probability, statistics and fluency with use of the R software. More information can be found at https://mastat.ugent.be/assessmenttest. Note that this assessment test also means that the final deadline for applications is the **last week before the actual start of the**

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

For all students, admission is partly dependent on the result of an assessment test, which evaluates skills in basic mathematics, probability, statistics and fluency with use of the R software. More information can be found at https://mastat.ugent.be/assessmenttest. Note that this assessment test also means that the final deadline for applications is the **last week before the actual start of the academic year**.
Information on admission requirements and the administrative procedure for admission on the basis of a diploma obtained abroad, can be found on the following page: www.ugent.be/prospect/en/administration/enrolment-or-registration.

LANGUAGE REQUIREMENTS

Language requirements	Dutch: no language requirements English: CEFR level B2

The language requirements for this study programme can be found on: www.ugent.be/languagerequirements

PRACTICAL INFORMATION

Study programme

studiekiezer.ugent.be/master-of-science-in-statistical-data-analysis-en/programma

Information sessions

Graduation Fair
afstudeerbeurs.gent/en/students/further-studies

Enrolling institution

Information on enrolment at Ghent University.

Application Deadline (for International degree students)

For students who **need a visa**: before 1st of April
For students who **do not need a visa**: before 1st of June
Read more
Important information for all students
Because the Master in Statistical Data Analysis holds an assessment test, the deadline for applications is the **last week before the actual start of the academic year**.
See https://mastat.ugent.be/assessmenttest for specific dates.

Tuition fee

More information is to be found on: www.ugent.be/tuitionfee

Contact

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Assessment Test
Frequently Asked Questions

GHENT UNIVERSITY

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