

Faculty of Science

The Faculty of Science is a world-class faculty where staff and students work together in a dynamic international environment. The research carried out at the Faculty of Science is very diverse, ranging from mathematics, information science, astronomy, physics, chemistry, life sciences and bio-pharmaceutical sciences to biology and environmental sciences. The research activities are organised in eight institutes. These institutes offer twelve English taught master's programmes.

Master's programmes

Astronomy

ENGLISH FEBRUARY START SEPTEMBER 2 YEARS LEIDEN

Students in the Astronomy programme are trained by leading experts in the field of cutting-edge astronomical research. During their Astronomy Master's programme, students make use of observations and data from the world's foremost ground- and space-based telescopes as well as theoretical, computational and astrochemical modelling, large scale simulations, and laboratory experiments that mimic conditions in space. The programme offers a lot of flexibility in choosing your courses and research focus and can be tailor-made to your specific interests.

Specialisations

- Astronomy Research
- Astronomy and Cosmology
- Astronomy and Data Science
- Astronomy and Instrumentation
- Astronomy and Education (partly in Dutch)
- Astronomy and Business Studies
- Astronomy and Science Communication and Society

Career

Graduates find employment in research, industry and the public sector, including technological, data science, financial and consultancy companies, research institutes, governments and science communication organisations.

Best preparatory bachelor's

A bachelor's degree in astronomy or physics with modules in astronomy. Candidates holding a bachelor's degree in related sciences such as mathematics, computer science or aerospace engineering may be considered.

English proficiency**

IELTS: 6.5 (minimum 6.0 per component)/ TOEFL internet-based: 90 (minimum 20 per component) / CAE: 180 (minimum 169 per component)

masters.universiteitleiden.nl/astronomy

Faculty of Science

2	year master's programmes
2,267	master's students
28%	international master students
68	nationalities
€2,209	EU/EEA student tuition fee *
€19,600	Non-EU/EEA student tuition fee
€19,300	Industrial Ecology

* This tuition fee is per year and only applies if this is your first master's programme in The Netherlands

** English language proficiency requirements are subject to change. Please check our website for the updated English language proficiency requirements. You can find the exact language requirements and more detailed language requirements per programme under each programme description. Also check our website for detailed information on the types of English tests accepted and the equivalent scores for IELTS, TOEFL and Cambridge English tests.

NOTE: Tuition fees are subject to change. Please check online our updated tuition fees.

Biology

 DUTCH ENGLISH  FEBRUARY START SEPTEMBER  2 YEARS  LEIDEN

The MSc Biology programme is a collaboration between the Institute of Biology Leiden, Naturalis Biodiversity Center and the Institute of Environmental Sciences, giving it a broad and diverse scope. Our programme provides you with a detailed understanding of different aspects of life, from how it functions on a molecular and genetic level, to how it evolves and responds to environmental challenges. This knowledge is of great value to society.

Research-oriented specialisations:

- Biodiversity and Sustainability
- Evolutionary Biology
- From Cells to Organisms
- Molecular Genetics and Biotechnology

Practical-oriented specialisations:

- Biology and Business Studies
- Biology and Education (partly in Dutch)
- Biology and Science Communication and Society

Career

Career options include positions as researcher, policy maker or adviser, as well as professions in industry, education or other sectors.

Best preparatory bachelor's

A bachelor's degree in biology. The Board of Admissions will review applications from candidates holding a bachelor's degree in related sciences such as natural sciences, life sciences or biomedical sciences.

English proficiency**

IELTS: 6.5 (minimum 6.0 on each subtest)
TOEFL internet-based: 90 (minimum score of 20 on each subtest)

 masters.universiteitleiden.nl/biology

Bio-Pharmaceutical Sciences

 ENGLISH  FEBRUARY START SEPTEMBER  2 YEARS  LEIDEN

In this master's programme, you are trained at the leading edge of drug design and fundamental research into novel drugs, optimisation of existing drugs, and personalised medicine.

Research specialisations

- BioTherapeutics
- Drug Discovery and Safety
- Systems Biomedicine and Pharmacology

Vocational specialisations

- Industrial Pharmacy (in Dutch)
- Bio-Pharmaceutical Sciences and Business Studies

- Bio-Pharmaceutical Sciences and Science Communication and Society
- Bio-Pharmaceutical Sciences and Education (partly in Dutch)

Career

Graduates' careers generally are closely related to the field of drug discovery and design or the development and production of drugs. Options outside research include the pharmaceutical industry, biotechnology companies, teaching or government institutions.

Best preparatory bachelor's

A bachelor's degree in bio-pharmaceutical sciences or pharmaceutical sciences.

English proficiency**

IELTS: 6.5 (minimum 6.0 on each subtest)
TOEFL internet-based: 90

 masters.universiteitleiden.nl/bps

Chemistry

 ENGLISH  FEBRUARY START SEPTEMBER  2 YEARS  LEIDEN

The MSc programme in Chemistry offers you access to cutting-edge chemical research. The research is concentrated in two research areas: Chemical Biology and Energy & Sustainability.

Students in the research area Chemical Biology will study fundamental biological and biomedical problems to understand physiological processes at the molecular level. Students in the research area Energy & Sustainability will focus on the development of new sources of sustainable energy and the use of storage of energy or the development of new catalysts.

Specialisations

- Research in Chemistry
- Chemistry and Business Studies
- Chemistry and Education (partly in Dutch)
- Chemistry and Science Communication and Society

Career

Positions in academia, or in R&D departments in industry, business, public utility companies, teaching, consultancy and government bodies. Many graduates attain higher management positions.

Best preparatory bachelor's

A BSc in Molecular Science and Technology (MST) from Leiden University and TU Delft or a degree in chemistry from another university or in a related field.

English proficiency**

IELTS: 6.5 (minimum 6.0 on each subtest)
TOEFL internet-based: 90

 masters.universiteitleiden.nl/chemistry



Computer Science

ENGLISH FEBRUARY START SEPTEMBER 2 YEARS LEIDEN

This master's programme offers you the opportunity to be trained in the state of the art in artificial intelligence, bioinformatics, computing and systems, and data science research, both fundamental and applied.

Specialisations

- Advanced Computing and Systems
- Artificial Intelligence
- Bioinformatics
- Computer Science and Education (partly in Dutch)
- Computer Science and Science Communication and Society
- Data Science: Computer Science
- Foundations of Computing

Career

Bright and expanding employment outlook, with research positions in academia or industry, oriented towards technical, interdisciplinary, or innovative careers in, e.g., artificial intelligence, bioinformatics, data science, software development, and information systems management.

Best preparatory bachelor's

A BSc in Computer Science or a BSc degree with a major in Computer Science or a BSc degree equivalent to a BSc in Computer Science.

English proficiency**

IELTS: 6.5 / TOEFL internet-based: 90

masters.universiteitleiden.nl/computerscience

Governance of Sustainability

ENGLISH FEBRUARY START SEPTEMBER 2 YEARS THE HAGUE



Students will learn how to integrate a governance perspective (social sciences) and natural science perspectives in order to develop and improve the quality of governance solutions to major sustainability challenges. Students become change agents on sustainability, through the synthesis of different scientific fields and non-scientific knowledge and insights. Governance of Sustainability is unique in its equal combination of natural science and social science and its focus on transdisciplinary skills.

Career

The programme prepares students for governance and strategic positions at (semi-) government institutions or private sector on sustainability issues and to take leading broker-roles connecting different actors.

Best preparatory bachelor's

Applicants holding a bachelor's degree from an accredited university programme and comparable with three years of Dutch academic education can be admitted to the programme. The bachelor's must include one or multiple courses that included a minimum of 8 EC of mathematics, programming and/or statistics.

English proficiency

IELTS: 6.5 (minimum 6.0 on each subtest)

TOEFL: internet-based 90 (minimum 20 component score)

Cambridge C2 Proficiency, or C1 Advanced: 180, minimum component score 169

masters.universiteitleiden.nl/gofs

ICT in Business and the Public Sector

ENGLISH FEBRUARY START SEPTEMBER 2 YEARS LEIDEN AND THE HAGUE

In this master's programme you will expand your knowledge of ICT and develop business and organisational skills that are essential to become a modern IT professional.

Specialisations

- ICT in Business
- ICT in the Public Sector

Career

Job opportunities are excellent and diverse, ranging from consultancy to IT management and from entrepreneurship to PhD research. Graduates are particularly suitable for a career path leading to Chief Information Officer in large organisations.

Best preparatory bachelor's

A bachelor's degree in computer science or a closely-related subject.

English proficiency**

IELTS: 6.5 / TOEFL internet-based: 90

masters.universiteitleiden.nl/ictinbps



Industrial Ecology

ENGLISH  FEBRUARY SEPTEMBER  2 YEARS  LEIDEN DELFT

The master's programme in Industrial Ecology (joint degree with Delft University of Technology) educates students to become critical researchers or practitioners who are able to contribute to developing solutions for persistent sustainability problems. The programme is unique in its combination of natural science, engineering and social science.

Specialisations:

- Industrial Ecology
- Circular Economy (Erasmus Mundus programme CIRCLE)*

Career

Industrial Ecology graduates find employment opportunities throughout business, industry, and government, as well as in non-governmental organisations, universities and research institutes.

Best preparatory bachelor's

Applicants holding a bachelor's degree in any of the Natural Sciences, Engineering Sciences, or Social Sciences from an accredited university programme and comparable with three years of Dutch academic education can be admitted to the programme.

English proficiency**

IELTS: 6,5 (minimum 6.0 on each subtest)
TOEFL: internet-based 90 (minimum 20 component score).
Cambridge C2 Proficiency (CPE) or C1 Advanced (CAE): a score of at least 180 (minimum 169 component score).

masters.universiteitleiden.nl/industrialecology

Life Science and Technology

ENGLISH  FEBRUARY SEPTEMBER  2 YEARS  LEIDEN

In this master's programme you will learn to find solutions for complex societal problems as encountered in personalised medicine, chemical biology and sustainable use of biological sources. Courses are offered in Biomedical, Biophysical and Molecular Sciences, and are related to the research topics that are studied within the LIC.

Specialisations

- Life Science Research and Development
- Life Science and Business Studies
- Life Science and Education (partly in Dutch)
- Life Science and Science Communication and Society

Career

Positions in academia, or in R&D departments in industry, business, public utility companies, teaching, consultancy and government bodies. Many graduates attain higher management positions.

Best preparatory bachelor's

A BSc in Life Science and Technology (LST) from Leiden University and Delft University of Technology or a degree in life sciences from another university or in a related field.

English proficiency**

IELTS: 6.5 (minimum 6.0 on each subtest)
TOEFL internet-based: 90

masters.universiteitleiden.nl/lst

Mathematics

ENGLISH  FEBRUARY SEPTEMBER  2 YEARS  LEIDEN

This master's programme offers a wide variety of courses ranging over analysis, statistics, probability theory, operations research, dynamical systems, algebra, number theory and geometry.

Specialisations

- Algebra, Geometry and Number Theory
- Applied Mathematics
- Mathematics and Business Studies
- Mathematics and Education (partly in Dutch)
- Mathematics and Science Communication and Society

Career

Career options include academia as well as business, including senior (management) positions at banks, insurance and option trading companies, communication and information technology, industry and logistics.

Best preparatory bachelor's

A bachelor's degree in mathematics or a BSc degree with a major in mathematics.

English proficiency**

IELTS: 6.5 (minimum 6.0 on each component)
TOEFL internet-based: 90

masters.universiteitleiden.nl/mathematics

Media Technology

ENGLISH  FEBRUARY SEPTEMBER  2 YEARS  LEIDEN

The Media Technology master's programme connects science, creativity and curiosity. The student's personal autonomy in research is central: you are encouraged to formulate your own scientific questions and translate personal inspirations and curiosities into research projects. The curriculum focuses on creative exploration and understanding of scientific research and technology.



Career

Media Technology MSc alumni are called autonomous researchers, because they master creative and critical thinking. A broad array of career prospects therefore applies to them, while many pursue a future in scientific research. Career positions vary from PhD researcher to lecturer in higher education and from creative entrepreneur to coder or artist.

Best preparatory bachelor's

The programme welcomes students from a wide variety of (educational) backgrounds, e.g. Computer Science, Artificial Intelligence, Communication and/or Information Science, Cognitive Science, Biology, Linguistics, or Performing and Creative Arts. Media Technology students have a creative attitude and are familiar with fundamental and/or knowledge-driven research, with technology and its embedding in the human context and with the basics of imperative programming.

English proficiency**

IELTS: 6.5 (minimum 6.0 on each subtest)
TOEFL internet-based: 90 (minimum 20 on each subtest)
CAE: 180 (minimum 169 on each subtest)

masters.universiteitleiden.nl/mediatechnology

Physics

ENGLISH  SEPTEMBER  2 YEARS  LEIDEN

The Physics master's programme offers you a research-intensive and tailor-made study path on current topics in experimental and theoretical physics at an institute of international renown.

Specialisations

- Physics and Business Studies
- Physics and Education (partly in Dutch)
- Physics and Science Communication and Society
- Research in Physics, Biological and Soft Matter Physics
- Research in Physics, Classical/Quantum Information
- Research in Physics, Cosmology
- Research in Physics, Theoretical
- Research in Physics, pre-PhD ('Casimir')
- Research in Physics, Quantum Matter and Optics

Career

The master's degree is an excellent stepping stone for pursuing a PhD degree. Job possibilities outside research include high-tech industry, software and consultancy companies worldwide, or a career as a teacher, science communicator or science policy maker.

Best preparatory bachelor's

A bachelor's degree in physics.

English proficiency**

IELTS: 6.5 / TOEFL internet-based: 90

masters.universiteitleiden.nl/physics

Statistics and Data Science

ENGLISH  SEPTEMBER  2 YEARS  LEIDEN

This two-year master's programme provides you with a thorough introduction to the general philosophy and methodology of statistical modelling, data analysis and data science.

Specialisations

This programme does not offer specialisations. Coherent sets of electives allow students to specialize in a certain application area or research domain such as:

- Medical Statistics
- Biology and Agricultural Statistics
- Data Science
- Psychometrics and Sociometrics
- Official Statistics (the EMOS specialization)

Career

With a Master of Statistics and Data Science you have good job perspectives: statisticians are highly sought after in various industries such as food and pharmaceutical industry, in governmental organizations, and in healthcare. Qualification to become a PhD candidate is a definite possibility.

Best preparatory bachelor's

A bachelor's degree from a research university with at least 20 ECTS of statistics/advanced methodology and/or (higher) mathematics courses.

English proficiency**

IELTS: 6.5 (minimum 6.0 on each subtest)
TOEFL internet-based: 90

masters.universiteitleiden.nl/statisticalscience

*application via CIRCLE programme, limited spots available

