Learn about the interdependency of Earth Systems and gain advanced skills in specific areas within Earth Sciences. Explore climate change from the perspectives of Earth processes occurring in the atmosphere, hydrosphere, cryosphere, lithosphere and biosphere. Find a balance between using and preserving Earth’s resources and reducing the environmental impact for a healthy sustainable future. The Master Programme in Earth Science at Uppsala University gives you the breadth and depth of Earth Science.

The Department of Earth Sciences at Uppsala University is one of the most comprehensive academic departments of its kind in Europe. Research in Earth Science focuses on subjects that range from the Earth’s core to the atmosphere, on scales from sub-microscopic minerals and fossils to the formation of mountains and oceans, and in time from the formation of the Earth to the processes currently reshaping the planet.

Research activities at the department encompass air and water sciences and physical geography, palaeobiology, mineralogy, petrology and tectonics, geophysics, natural resources and sustainable development. Interaction between these research groups leads to dynamic interdisciplinary research in climate, development of life, natural hazards, natural resources, energy and sustainable development.

Applied research in earth science is directed towards questions of importance for our civilisation including mineral resources, climate change, clean water supplies and carbon dioxide storage, which are all fundamental in the perspectives of sustainable development and world economy.

ABOUT THE PROGRAMME

The combination of breadth and depth is a distinguishing feature of our Master Programme in Earth Science. This reflects the scientific profile of the department, which focuses on research into climate, development of life, natural hazards, natural resources, energy and sustainable development.

The specialisations are:

- Geology
- Hydrology/Hydrogeology
- Palaeobiology
- European Palaeobiology Specialisation
Physical Geography

Sustainable and Innovative Natural Resource Management (SINReM)

European Palaeobiology Specialisation
The European Palaeobiology Specialisation begins with a semester in Lille, France where courses in sedimentology, micropaleontology as well as field and project work are offered. The following semesters are joint with the Palaeobiology specialisation in Uppsala.

Geology
The geology specialisation focuses on mineral and rock formation and deformation in a wide range of geological environments through courses focused on mineralogy and petrology, regional geology, natural resources and tectonics, which reflect the main themes of the research programme. This specialisation is aimed at preparing you for a research career or employment as a professional geologist.

Hydrology/Hydrogeology
The hydrology/hydrogeology specialisation focuses on water at or near the Earth’s surface. The specialisation combines courses in hydrochemistry and field methods with advanced courses on fundamental hydrological processes, water resources, and the modelling of groundwater and surface water. The hydrology specialisation prepares you for employment as a professional hydrologist, hydrogeologist or a research career.

Palaeobiology
The palaeobiology specialisation is focused on the evolution of life with courses ranging from palaeobiological principles, through to evolution of organisms to complex vertebrate life forms. This is mainly a research-oriented specialisation, but has applications to careers in geology and the oil industry.

Physical Geography
The specialisation in physical geography has a strong focus on climate and landscape development in different environments, including glaciology and climate development. The specialisation begins with coursework in climate variations and statistics as a basis for later courses in geomorphology, glacial processes, and field methods. Research in physical geography at the department is oriented to glacial processes and the relationships between glaciers and climate, as well as research in palaeoclimates and landscape development. As a physical geographer, there are many career opportunities in, for example, environmental management, city planning, and research.

Sustainable and Innovative Natural Resource Management (SINReM)
The specialisation SINReM focuses on supply risk challenges in the value chain such as increasing demand for raw materials, price volatility, production concentration and market distortions imposed by some countries. It also considers environmental problems arising from waste emissions. In SINReM you learn to innovatively explore new resources and sustainable primary mining, sustainable use of resources in products and production processes, prevention of waste generation, valorisation of secondary (alternative) resources and recovery/recycling of resources from end-of-life products. SINReM is a joint programme between Uppsala University, the University of Ghent and Freiberg University of Technology and fosters collaboration with raw materials companies. SINReM is cofinanced by the European Institute of Innovation and Technology (EIT) and consequently fosters creativity, innovation and entrepreneurship. Read more about SINReM.

The courses in each specialisation prepare you for one (or two) degree project(s), each corresponding to one semester or more (20 to 30 weeks).

DEGREE
The programme leads to a Master of Science (120 credits) with Earth Science as the main field of study.

INSTRUCTION
The teachers in the programme are experts in their respective fields, giving you up-to-date contact with front-line research in an open and creative educational atmosphere. The teaching consists of a balanced mix of theoretical and practical work providing experience in both research and industry oriented applications. Excursions, fieldwork and study visits are included in some courses.

Examination generally includes written exams, complemented by seminar presentation/discussions, project work, laboratory work and field reports.
In Uppsala courses involving expertise common to all specialisations are offered in the early part of the first term. After that, you will gradually develop a major by means of subjects tailored to your chosen specialisation. The first course Dynamics of Earth Systems – Global Change provides a chance to explore the current research in Earth systems, interactions between Earth systems and how they change with time. A course in presentation and publication provides training and experience in presentation skills. An applied GIS course offers case studies relevant to the different specialisations.

Research methodologies are offered at different times depending on your specialisation. Such courses provide valuable preparation for your research thesis as well as a career in industry or research.

For those of you who choose the European Palaeobiology Specialisation you begin with a semester in Lille, France, and for those who choose the Sustainable and Innovative Natural Resource Management (SINReM) specialisation begin at Ghent University in Belgium.

COURSES WITHIN THE PROGRAMME

See outlines for courses within the specialisations:

European Palaeobiology Specialisation (Uppsala-Lille)
Geology
Hydrology/Hydrogeology
Palaeobiology
Physical geography

SPECIALISATIONS
- European Palaeobiology Specialisation (Uppsala-Lille)
- Geology
- Hydrology/Hydrogeology
- Physical Geography
- Palaeobiology

CAREER

The Master programme in Earth Science provides you with knowledge and skills for a career as a qualified professional in industry, the public sector and consultancy firms. You may also continue to pursue doctoral studies.

Depending on your specialisation you can work with, for example, hydrological, geological, city planning or environmental projects at governmental agencies, NGOs and consultancy firms. The need for professional Earth scientists has increased considerably during the last few years due to growing awareness of environmental issues and the increasing demands for natural resources.
APPLICATION AND REQUIREMENTS

Application to Sustainable and Innovative Natural Resource Management (SINREM) is via the University of Ghent.

EUROPEAN PALAEOBIOLOGY SPECIALISATION (UPPSALA-LILLE)

120 credits
Autumn 2017 100% Campus

Location: Uppsala
Application Deadline: 2016-01-15
Enrolment Code: UU-M1275
Language of Instruction: English

Requirements:
Academic requirements
A Bachelor’s degree, equivalent to a Swedish Kandidatexamen, from an internationally recognised university.
Also required is:
- 90 credits in earth science; or
- 90 credits in biology.

Language requirements
All applicants need to verify English language proficiency. This is normally attested by an internationally recognised test such as TOEFL or IELTS with the following minimum scores:
- IELTS: an overall mark of 6.5 and no section below 5.5
- TOEFL: Paper-based: Score of 4.5 (scale 1–6) in written test and a total score of 575. Internet-based: Score of 20 (scale 0–30) in written test and a total score of 90
- Cambridge: CAE, CPE

Exemptions for students from certain countries.

Selection: Students are selected based on:
- a total appraisal of quantity and quality of previous university studies; and
- a statement of purpose (1 page).

Fees: If you are not a citizen of a European Union (EU) or European Economic Area (EEA) country, or Switzerland, you are required to pay application and tuition fees. Read more about fees.

Application Fee: SEK 900
Tuition fee, first semester: SEK 72500
Tuition fee, total: SEK 290000

GEOLOGY

120 credits
Autumn 2017 100% Campus
Location: Uppsala
Application Deadline: 2016-01-15
Enrolment Code: UU-M1270
Language of Instruction: English

Requirements:
Academic requirements
A Bachelor’s degree, equivalent to a Swedish Kandidatexamen, from an internationally recognised university.
Also required is:
- 90 credits in earth science and 15 credits in chemistry; or
- 90 credits in physics and 30 credits in earth science (geophysics); or
- 90 credits in geology.

Language requirements
All applicants need to verify English language proficiency. This is normally attested by an internationally recognised test such as TOEFL or IELTS with the following minimum scores:
- IELTS: an overall mark of 6.5 and no section below 5.5
- TOEFL: Paper-based: Score of 4.5 (scale 1–6) in written test and a total score of 575. Internet-based: Score of 20 (scale 0–30) in written test and a total score of 90
- Cambridge: CAE, CPE

Exemptions for students from certain countries.

Selection: Students are selected based on:
- a total appraisal of quantity and quality of previous university studies; and
- a statement of purpose (1 page).

Fees: If you are not a citizen of a European Union (EU) or European Economic Area (EEA) country, or Switzerland, you are required to pay application and tuition fees. Read more about fees.

Application Fee: SEK 900
Tuition fee, first semester: SEK 72500
Tuition fee, total: SEK 290000
HYDROLOGY/HYDROGEOLOGY
120 credits
Autumn 2017 100% Campus
Location: Uppsala
Application Deadline: 2016-01-15
Enrolment Code: UU-M1272
Language of Instruction: English
Requirements:
Academic requirements
A Bachelor's degree, equivalent to a Swedish Kandidatexamen, from an internationally recognised university.
Also required is:
- 90 credits in earth science and 15 credits in mathematics; or
- 90 credits in technology/engineering or physics and 30 credits in earth science or environmental science.
Language requirements
All applicants need to verify English language proficiency. This is normally attested by an internationally recognised test such as TOEFL or IELTS with the following minimum scores:
- IELTS: an overall mark of 6.5 and no section below 5.5
- TOEFL: Paper-based: Score of 4.5 (scale 1–6) in written test and a total score of 575. Internet-based: Score of 20 (scale 0–30) in written test and a total score of 90
- Cambridge: CAE, CPE
Exemptions for students from certain countries.
Selection: Students are selected based on:
- a total appraisal of quantity and quality of previous university studies; and
- a statement of purpose (1 page).
Fees: If you are not a citizen of a European Union (EU) or European Economic Area (EEA) country, or Switzerland, you are required to pay application and tuition fees. Read more about fees.
Application Fee: SEK 900
Tuition fee, first semester: SEK 72500
Tuition fee, total: SEK 290000

PHYSICAL GEOGRAPHY
120 credits
Autumn 2017 100% Campus
Location: Uppsala
Application Deadline: 2016-01-15
Enrolment Code: UU-M1274
Language of Instruction: English
Requirements:
Academic requirements
A Bachelor's degree, equivalent to a Swedish Kandidatexamen, from an internationally recognised university.
Also required is 90 credits in earth science.
Language requirements
All applicants need to verify English language proficiency. This is normally attested by an internationally recognised test such as TOEFL or IELTS with the following minimum scores:
- IELTS: an overall mark of 6.5 and no section below 5.5
- TOEFL: Paper-based: Score of 4.5 (scale 1–6) in written test and a total score of 575. Internet-based: Score of 20 (scale 0–30) in written test and a total score of 90
- Cambridge: CAE, CPE
Exemptions for students from certain countries.
Selection: Students are selected based on:
- a total appraisal of quantity and quality of previous university studies; and
- a statement of purpose (1 page).
Fees: If you are not a citizen of a European Union (EU) or European Economic Area (EEA) country, or Switzerland, you are required to pay application and tuition fees. Read more about fees.
Application Fee: SEK 900
Tuition fee, first semester: SEK 72500
Tuition fee, total: SEK 290000
PALAEOBIOLOGY

120 credits

Autumn 2017 100% Campus

Location: Uppsala

Application Deadline: 2016-01-15

Enrolment Code: UU-M1273

Language of Instruction: English

Requirements:

Academic requirements
A Bachelor’s degree, equivalent to a Swedish Kandidatexamen, from an internationally recognised university.
Also required is:

- 90 credits in earth science; or
- 90 credits in biology.

Language requirements
All applicants need to verify English language proficiency. This is normally attested by an internationally recognised test such as TOEFL or IELTS with the following minimum scores:

- IELTS: an overall mark of 6.5 and no section below 5.5
- TOEFL: Paper-based: Score of 4.5 (scale 1–6) in written test and a total score of 575. Internet-based: Score of 20 (scale 0–30) in written test and a total score of 90
- Cambridge: CAE, CPE

Exemptions for students from certain countries.

Selection: Students are selected based on:

- a total appraisal of quantity and quality of previous university studies; and
- a statement of purpose (1 page).

Fees: If you are not a citizen of a European Union (EU) or European Economic Area (EEA) country, or Switzerland, you are required to pay application and tuition fees. Read more about fees.

Application Fee: SEK 900

Tuition fee, first semester: SEK 72500

Tuition fee, total: SEK 290000

CONTACT & MORE INFO

Department of Earth Sciences
Geocentrum, Villav. 16 752 36 Uppsala
Villav. 16, 752 36 UPPSALA
Fax: 018-471 2592

For programme-specific information, please contact: Study Counsellor studievagledare@geo.uu.se
Telephone: +46 18 471 25 07
Abigail Barker abigail.barker@geo.uu.se
Telephone: +46 18 471 25 52

For general information about Master’s studies at Uppsala University, please send an email to: masterprogrammes@uu.se