Course Syllabus

1st Semester
- Hydrogeology 6 CP
- Environmental Modeling 1 6 CP
- Aquatic and Environmental Chemistry 6 CP
- Elective Module 1 6 CP
- Elective Module 2 6 CP

2nd Semester
- Scientific Practice 1 6 CP
- Elective Module 3 6 CP
- Elective Module 4 6 CP
- Elective Module 5 6 CP
- Elective Module 6 6 CP

3rd Semester
- Scientific Practice 2 6 CP
- Elective Module 7 6 CP
- Elective Module 8 6 CP
- Master Thesis 12 CP

4th Semester
- Scientific Presentation 6 CP
- Elective Module 9 6 CP
- Elective Module 10 6 CP
- Elective Module 11 6 CP
- Master Thesis 18 CP

CP: Credit Points

AEG offers three areas of specialization:
- Hydrogeology
- Environmental Chemistry and Environmental Microbiology
- Environmental Physics and Environmental Modeling

After the first semester with the three compulsory modules Hydrogeology, Aquatic and Environmental Chemistry and Environmental Modeling, students can choose elective modules according to their field of specialization e.g. Geomicrobiology, Geophysics, Environmental Modeling 2, Water Treatment, Geotechnical Engineering, Applied Hydrogeology, Contaminant Hydrogeology, Environmental Risk Assessment. In the compulsory modules Scientific Practice 1+2 and Scientific Presentation students gain additional practical interdisciplinary skills.

Why AEG @ Tübingen?

Applied & Environmental Geoscience
- a modern, interdisciplinary curriculum at one of the largest and renowned institutes for geo- and environmental sciences in Germany
- a highly motivated teaching staff
- excellent study conditions in newly renovated facilities in an international environment
- research and studies on an international level with many contacts to universities abroad
- and last but not least: Tübingen is a nice historical city with a vivid student life.

The University of Tübingen
Innovative. Interdisciplinary. International. Since 1477. These have been the University of Tübingen’s guiding principles in research and teaching ever since it was founded. With this long tradition, the University of Tübingen is one of the most respected universities in Germany. Recently, its institutional strategy was successfully selected for funding in the Excellence Initiative sponsored by the German federal and state governments, making Tübingen one of Germany’s eleven universities distinguished with that title of excellence. Tübingen has also proven its status as a leading research university in many national and international competitions – in key rankings Tübingen is listed among the best universities for the Humanities and Social Sciences as well as for Science and Medicine.

Additional Information
- www.geo.uni-tuebingen.de/en/work-groups/applied-geosciences.html
- www.geo.uni-tuebingen.de/en/research.html

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**AEG Profile**

Solving complex environmental problems such as industrial and agricultural pollution requires a comprehensive understanding of the relevant physical, chemical and biological mechanisms.

The international MSc Program Applied & Environmental Geoscience (AEG) is a unique research-oriented two-year study program designed for students interested in process-oriented, research-driven graduate education in environmental geosciences following multi-disciplinary approaches.

The core modules introduce the essential fields of physical and contaminant hydrogeology, environmental modeling, environmental and aqueous chemistry. Elective modules allow for an individual research focus in additional fields such as geophysics and geomicrobiology.

Special features of the program are:

- Individual research projects with possible integration in ongoing research projects at an early stage (2nd semester)
- Early possible start of the Master Thesis (3rd semester)
- Numerous field, lab, and computer exercises for practical hands-on experience
- All modules are taught in English.

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**Opportunities**

Facilities

The Center for Applied Geoscience offers modern, state-of-the-art facilities for research and training.

Laboratories for

- standard hydrochemistry
- analysis of organic micropollutants
- molecular-biological and microbiological analysis
- optical fluorescence and electron microscopy
- geotechnical engineering and hydraulic studies

Modern field equipment for

- hydrogeological and geophysical site-investigation
- pumping/slug tests, tracer tests
- geomagnetic and seismic surveying

A hydrogeological field site

- equipped with a well field installed and operated for research and educational purposes

Career Perspectives

The key positions for AEG graduates are:

- Environmental consultancies
- Environmental agencies
- Non-governmental organizations
- (Re-)insurance companies

The AEG course is also an excellent foundation for doctoral studies in programs of environmental sciences, earth sciences, and environmental engineering.

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**Requirements / Qualifications**

**Degree Requirements**

- Training in natural sciences or engineering
- Good background in mathematics, chemistry, and physics
- Bachelor degree or equivalent with an overall grade better than 2.5 German System
- Proof of English language efficiency equivalent to a TOEFL score of 79 ibt or IELTS score of 6.0

**Application / Admission Timeline**

The AEG course starts in the winter semester only.

- 31st March: Application deadline for international applicants
- 15th July: Application deadline for German and EU applicants
- October: Orientation week and preparatory Math course

**Service**

- Help during the application period
- Support in finding student accommodation
- Pick-up-service on arrival
- Inauguration week with registration at the university and introduction to student life in Tübingen
- Academic guidance

Application forms and detailed information about the AEG course are available on our website: www.geo.uni-tuebingen.de/en/study/perspective-master-students/msc-applied-environmental-geoscience