



Applied & Environmental Geosciences

University of Tübingen

AEG Staff

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coordination of study program,
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administrational questions

General Structure

Five mandatory modules: (30 credits)

- Scientific Practice
- Scientific Presentation
- Environmental Chemistry
- Global Change
- Groundwater Modeling 1

Three additional mandatory modules in the respective area of specialization (18 credits)

- Hydrogeology
- Environmental Chemistry and Environmental Microbiology
- Environmental Physics

Seven elective modules (42 credits) from

- the modules listed in the module handbook
- additional science and geoscience modules can be accepted upon request and after approval

Master Thesis (30 credits)

Hydrogeology

- Hydrogeological Field Investigation Techniques
- Remediation of Contaminated Sites
- Groundwater Modeling 2

Environmental Chemistry and Environmental Microbiology

- Biotransformation of Pollutants
- Hydrogeochemical Modeling (Modeling of Reactions, Microbial Dynamics and Bioreactive Transport)
- Environmental Analytical Chemistry

Environmental Physics

- Climate Dynamics
- Atmospheric Physics
- Physics of the Earth's Surface

1. Sem.	2. Sem.	3. Sem.	4. Sem.
6 ECTS Groundwater Modeling 1	6 ECTS Hydrogeological Field Investigation Techniques	6 ECTS Elective Module	6 ECTS Elective Module
6 ECTS Environmental Chemistry	6 ECTS Remediation of Contaminated Sites	6 ECTS Elective Module	6 ECTS Scientific Presentation
6 ECTS Global Change	6 ECTS Groundwater Modeling 2	6 ECTS Scientific Practice	30 ECTS Master Thesis
6 ECTS Elective Module	6 ECTS Elective Module		
6 ECTS Elective Module	6 ECTS Elective Module		

-  Master Thesis (30 ECTS)
-  Mandatory Modules (30 ECTS)
-  Elective Modules Specialization (18 ECTS)
-  Elective Modules (42 ECTS)

1. Sem.	2. Sem.	3. Sem.	4. Sem.
Groundwater Modeling 1 6 ECTS	Hydrogeochemical Modeling (Modeling of Reactions, Microbial Dynamics and Bioreactive Transport) 6 ECTS	Elective Module 6 ECTS	Elective Module 6 ECTS
Environmental Chemistry 6 ECTS	Elective Module 6 ECTS	Elective Module 6 ECTS	Scientific Presentation 6 ECTS
Global Change 6 ECTS	Elective Module 6 ECTS	Scientific Practice 6 ECTS	Master Thesis 30 ECTS
Environmental Analytical Chemistry 6 ECTS	Elective Module 6 ECTS		
Biotransformation of Pollutants 6 ECTS	Elective Module 6 ECTS		

-  Master Thesis (30 ECTS)
-  Mandatory Modules (30 ECTS)
-  Elective Modules Specialization (18 ECTS)
-  Elective Modules (42 ECTS)

1. Sem.	2. Sem.	3. Sem.	4. Sem.	
6 ECTS Groundwater Modeling 1	6 ECTS Atmospheric Physics	6 ECTS Elective Module	6 ECTS Elective Module	
6 ECTS Environmental Chemistry	6 ECTS Climate Dynamics	6 ECTS Elective Module	6 ECTS Scientific Presentation	
6 ECTS Global Change	6 ECTS Elective Module	6 ECTS Scientific Practice	30 ECTS Master Thesis	
6 ECTS Physics of the Earth's Surface	6 ECTS Elective Module			
6 ECTS Elective Module	6 ECTS Elective Module			

-  Master Thesis (30 ECTS)
-  Mandatory Modules (30 ECTS)
-  Elective Modules Specialization (18 ECTS)
-  Elective Modules (42 ECTS)

Hydrogeology

6 ECTS
Groundwater Modeling 1
6 ECTS
Environmental Chemistry
6 ECTS
Global Change
6 ECTS
Elective Module
6 ECTS
Elective Module

**Environmental Chemistry
and Environmental Microbiology**

6 ECTS
Groundwater Modeling 1
6 ECTS
Environmental Chemistry
6 ECTS
Global Change
6 ECTS
Environmental Analytical Chemistry
6 ECTS
Biotransformation of Pollutants

Environmental Physics

6 ECTS
Groundwater Modeling 1
6 ECTS
Environmental Chemistry
6 ECTS
Global Change
6 ECTS
Physics of the Earth's Surface
6 ECTS
Elective Module

Block Courses

6 ECTS
Environmental Chemistry Lab Block Course
6 ECTS
Geographical Informations Systems Block Course
3 ECTS
Glaciology Block Part
3 ECTS
Environmental Analytical Chemistry Lab Part

Additional Courses

6 ECTS
Earth Processes required for students with no background in Geosciences

2 ECTS
Python/AEG 13.10.2026 - 12.01.2027

Chemistry Preparatory Course 05.11.2026 - 17.12.2026 3pm- 6pm

Hydrogeology

6 ECTS
Hydrogeological Field Investigation Techniques
6 ECTS
Remediation of Contaminated Sites
6 ECTS
Groundwater Modeling 2
6 ECTS
Elective Module
6 ECTS
Elective Module

Environmental Chemistry and Environmental Microbiology

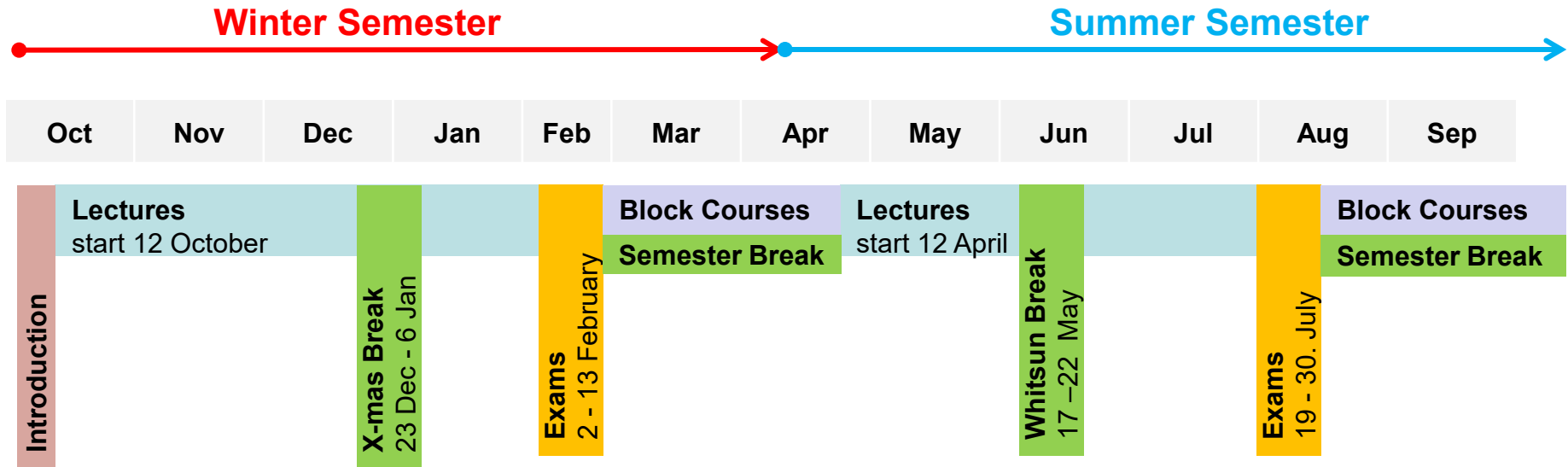
6 ECTS
Hydrogeochemical Modeling (Modeling of Reactions, Microbial Dynamics and Bioreactive Transport)
6 ECTS
Elective Module
6 ECTS
Elective Module
6 ECTS
Elective Module
6 ECTS
Elective Module

Environmental Physics

6 ECTS
Atmospheric Physics
6 ECTS
Climate Dynamics
6 ECTS
Elective Module
6 ECTS
Elective Module
6 ECTS
Elective Module

Block Courses

3 ECTS
Hydrogeological Field Investigation Techniques
6 ECTS
Geomicrobiology Lab Block Course
3 ECTS
Geosphere-Biosphere Interactions
6 ECTS
Field Seminars in Applied Geosciences Block Course



ILIAS Learning Management System

ILIAS is an online platform which lecturers use to

- **Distribute study materials**
- **Contact students**

https://ovidius.uni-tuebingen.de/ilias3/login.php?target=&client_id=pr02&auth_stat=&lang=en

alma Portal

- **Offers an online course catalogue**
- **Registration for courses and exams**
- **Makes it possible to re-enroll, print records of enrollment, change your address, as well as carry out other administrative functions online**

<https://alma.uni-tuebingen.de/alma/pages/cs/sys/portal/hisinoneStartPage.faces>

- **FAQ on alma** <https://uni-tuebingen.de/en/172170>
- Video guide for frequently used functions
 - https://timms.uni-tuebingen.de/tp/UT_20221018_001_almaeng_0001
 - https://timms.uni-tuebingen.de/tp/UT_20221018_001_almaengut_0001

Support for International Students by the University

<https://uni-tuebingen.de/en/182071>

Team: Simone Hahne / Manuel Hengge / Thomas Lauterwasser

University of Tübingen

Division IV – Student Affairs

Wilhelmstraße 19 (Room 3.24)

72074 Tübingen

degree-seeking@zv.uni-tuebingen.de

- **Help Desk** <https://uni-tuebingen.de/en/182215>
- **Info and Courses** <https://uni-tuebingen.de/en/182233>
 - Advisory Course Introduction to student life in Tübingen
 - Various Workshops e.g. Academic Writing
 - Advisory Course for international students
 - Social Counselling (Legal advice, Psychotherapeutic counseling, etc.)
- **Housing** <https://uni-tuebingen.de/en/224925>
- **Buddy Programm** <https://uni-tuebingen.de/en/182224>

Mathematisch-Naturwissenschaftliche Fakultät
Fachbereich Geowissenschaften

FACHBEREICH	STUDIUM	FORSCHUNG	ARBEITSGRUPPEN & KONTAKTE	SAMMLUNGEN	SERVICE
Schülerinformation	Studiengänge	Studienorganisation	International	Praxis und Beruf	Fachschaften

Sie sind hier: [Startseite](#) > [Fakultäten](#) > [Mathematisch-Naturwissenschaftliche Fakultät](#) > [Fachbereiche](#) > [Geowissenschaften](#) > [Studium](#) > [Studiengänge](#) > [Applied & Environmental Geoscience](#)

Studiengänge

[Geographie](#)[Geowissenschaften](#)[Geoökologie](#)[Umweltnaturwissenschaften](#)[Applied & Environmental Geoscience](#)[Study Contents](#)[Application / Contact](#)[Information for Students](#)[Urgeschichte und](#)[Naturwissenschaftliche Archäologie](#)[International PhD Program GeoEnviron](#)

Master Course Applied & Environmental Geoscience (AEG)

[Study Content](#)[Application/Contact](#)[Information for Students](#)

AEG is an international research-oriented study program focusing on the evaluation and solution of environmental problems. Special emphasis is given to environmental problems in the subsurface such as the pollution of drinking water supplies from groundwater resources, the non-sustainable use of natural resources, the impact of short and long term

Studiengänge

Geographie

Geowissenschaften

Geoökologie

Umweltnaturwissenschaften

Applied & Environmental Geoscience

Study Contents

Application

Information for Students

MSc AEG (old examination rules)

Naturwissenschaftliche Archäologie und Paläoanthropologie

Information for Students Applied & Environmental Geoscience

Study Related News

Student Counseling

Examination Board

Examination Office

Advisory Services

Class Schedules

BAFöG

Information for Students having started WS 2021/22 (and later)

[Information on the old examination rules](#)

[Module Handbook](#) (as at: 30.08.22)

[Certificate of Accreditation](#)

[Module "Data Analysis and Modeling Methods in Geoscience and Environmental Science"](#)

[Module "Experimental and Analytical Methods in Geoscience and Environmental Science"](#)

[Field Pass AEG](#)

Timeline Scientific Practice + Scientific Presentation + Master's Thesis

semesters 1-4: attendance of eight department seminars (certified on the *Seminar Pass for the Module "Scientific Presentation"*) + four participations at the Master's Day (certified on the form *Participation Master's Day for the module "Scientific Presentation"*)

semesters 3-4: 1. contacting a supervisor for the Master's thesis topic + compilation of a research proposal of the agreed topic
2. submission of the forms *Application for Admission to the Final Module (Master's Thesis)* and *Registration for a Master's Thesis* + preparation of the Master's thesis + poster presentation of the thesis' results on the Master's Day + presentation of the thesis' results in the research group

The Master's thesis cannot be submitted before the end of the fourth month after registration, and must be submitted after six months at the latest !!!

Forms for Scientific Practice + Scientific Presentation + Master's Thesis

[Scientific Presentation Seminar Pass and Master Day Pass](#)

[Scientific Practice Certification](#)

[Explanatory Notes Scientific Practice](#)

[Scientific Presentation Certification](#)

[Explanatory Notes Scientific Presentation](#)

[Application for Admission to the Final Module \(Master's Thesis\)](#)

[Authorized Supervisors](#)

[Registration Master's Thesis](#)

[Grading Master's Thesis](#)

[Duration of Master's Thesis](#)

Any additional questions about the AEG program?

First:

Check the Module Handbook and the info material !!!

Still more questions:

Come see me in my office (Room 3U16)

Compulsory precautions for MNF students

- Online event on compulsory precautions for excursions/fieldwork placements in low vegetation, contact with infectious pathogens (TBE, Lyme disease) and natural UV radiation
- Participation in excursions is not permitted without attending the course!

The following dates are offered in WiSe 2026/27:

- Monday, 12.10.2026, 11:00 (in German)
- Thursday, 15.10.2026, 14.30 (in German)
- Wednesday, 21.10.2026, 14.30 (in German)
- Thursday, 22.10.2026, 11:00 (in English)
- Thursday, 29.10.2026, 14.30 (in English)

The dial-in takes place via the following link:

Topic: Mandatory preventive care for students at the Faculty of Science
Tübingen

- <https://med-uni-tuebingen-de.zoom-x.de/j/63940566654?pwd=SCcHiKI9Lf6juEXbAUw8Jptb6SDo9G.1>
- Meeting-ID: 639 4056 6654
- Code: 307961

Module Number	Module Title	Module Coordinator	CP	Semester
M 101	Scientific Practice	Merkel	6	W / S
M 103	Scientific Presentation	Bocherens	6	W / S
M 104	Master Thesis (Abschlussmodul)	-	30	W / S
M 201	Groundwater Modeling 1	Cirpka	6	W
M 207	Environmental Chemistry	Zarfl	6	W
M 229	Global Change	Rehfeld	6	W
Accepted B.Sc. Modules				
B 408	Geophysik / Geophysics	Drews	6	S
B 504	Hydrologie	Schwientek	6	W
B 506	Water Treatment	Angenent	3	W
B 514	Introduction Earth Surface Processes	Beer	6	W
M.Sc. Modules Applied Geosciences				
M 202	Hydrogeological Field Investigation Techniques	Leven	6	S
M 203	Groundwater Modeling 2	Yuan	6	S
M 205	Remediation of Contaminated Sites	Finkel	6	S
M 206	Case Studies in Environmental Geosciences	Cirpka	6	W
M 208	Environmental Isotope Chemistry	Mason-Jones	6	S
M 209	Environmental Chemistry Lab	Haderlein	6	W
M 210	Environmental Microbiology and Geomicrobiology	Kappler	6	S
M 211	Geomicrobiology Lab	Kappler	6	S

M 212	Advanced Geophysics	Drews	6	W
M 213	GIS and Remote Sensing	Schäuble, Lörcher	6	W
M 214	Geotechnical Engineering	Leven	6	W
M 216	Atmospheric Physics	Platis	6	S
M 218	Environmental Analytical Chemistry	Zwiener	6	W
M 219	Earth Processes	Süß	6	W
M 220	Field Seminars in Applied Geosciences	Merkel	6	W / S
M 221	Environmental and Human Health Risk Assessment of Chemicals	Escher	6	W
~~M 222~~	~~Hydrogeochemical Modeling~~ ➔ substituted by module M 242		~~6~~	~~S~~
M 225	Field Seminars in Applied Geosciences 2	Merkel	3	W / S
M 227	Sustainable Environmental Biotechnology Systems 1	Angenent	6	S
M 228	Sustainable Environmental Biotechnology Systems 2	Angenent	6	W
M 230	Geosphere-Biosphere Interactions	Dippold	6	S
M 232	Internship	Glotzbach	6	W / S
M 233	Biotransformation of Pollutants	Fabregat	6	W
M 236	Modelling for Sustainable River Management	Zarfl	6	S
M 238	Rhizosphere Processes in a Changing World	Muehe	6	W
M 239	Geo-Bio-Interactions in Tropical Landscapes of Kenya	Otieno, Dippold	6	W
M 240	Isotopes in Ecosystem Sciences	Dippold, Stock	6	W

M 242	Modeling of Reactions, Microbial Dynamics and Bioreactive Transport	Cirpka	6	S
M 243	Tropical Ecology of South America	Ebner	6	W, every other year
M 244	Geothermal Reservoirs	Süß	6	S
M 245	Physical Processes in Surface Waters	Calamita, Zarfl	6	S
M 246	Scientific Writing of a Thesis	Muehe	3	W
M 247	Drones in Geosciences	Platis	6	W
M 322	Climate Dynamics	Rehfeld	6	S
M.Sc. Modules Mineralogy and Geology, Biogeology				
M 301	Physics of the Earth's Surface	Glotzbach	6	W
M 305	Advanced Field Methods in Geoscience	Norton	6	W / S
M 308	Isotope Geochemistry	Schönberg	6	W
M 312	Advanced Sedimentology	Meijers	6	W
M 315	Glaciology	Weikusat	6	W
M 317	Data Analysis and Modeling Methods in Geoscience and Environmental Science	Drews	6	W / S
M 321	Experimental and Analytical Methods in Geoscience and Environmental Science	Schulz	6	W
M 324	Economic Geology	Walter	6	S, every other year
M 325	Data Analysis and Modeling Methods in Geoscience and Environmental Science 2	Drews	6	W / S
M 326	Experimental and Analytical Methods in Geoscience and Environmental Science 2	Schulz	6	S
M 409	Marine Geology and Geochemistry	Schulz	6	W