Physical Geography:
Climate & Environmental Sciences
Master of Science

Environmental processes and dynamics encompass many aspects of physical systems on global, regional and local scales. Accelerating climate change alters hydrological processes and biogeochemical turnover rates, affect landscape dynamics and ecological systems. These changes impose fundamental research challenges and, as a consequence, increase the volume of spatial data. These changes are studied by the Institute of Geography in Erlangen from different research perspectives.

1. Content of the programme
The MSc programme offers the opportunity to specialize in one major subject area of Physical Geography by designing an individually tailored Master’s programme. This programme allows for a clear specialisation and qualification in an individual field of interest. In-depth modules and topics for the Master thesis mirror the three research pillars of the Physical Geography branch of the Institute of Geography in Erlangen, which include:

- Climate research
- Geoinformatics
- Environmental Analysis

Each of these pillars is studied within the institute in manifold facets, for example glaciology, physical climatology and paleoclimatology in climate research, soil science, biogeography and dendroecology in case of environmental studies, and hyperspectral remote sensing, radar remote sensing and modelling and simulation in case of geoinformatics, respectively. The theoretical seminars as well as the practical courses convey knowledge and skills to analyze and assess processes and effects of environmental changes in different environmental contexts, with special focus on environmentally sensitive regions like high mountain areas, polar regions and deserts, or tropical environments.

2. Structure of the degree programme
Climate & Environmental Sciences is a two-year (4 semesters) degree programme that is taught in English and comprises 120 ECTS credit points. All students start with a thorough education in scientific writing as well as with a graduate seminar on one of the three research topics. The first three semesters are dedicated to the Master’s thesis, which focuses on one of the chosen major topics. Semesters abroad are not compulsory, but can be arranged (e.g. through the ERASMUS programme and partnerships with universities).

- Compulsory modules:
  - Scientific Working I + II – 10 ECTS
  - Advanced Physical Geography Seminar I + II – 10 ECTS
  - Research Training Course - 15 ECTS
  - Field Course – 5 ECTS

- Modules in elective subjects – 10 ECTS

- Consolidation modules
  - 4 methodological modules à 5 ECTS = 20 ECTS
  - Project Planning and Preparation – 5 ECTS
  - Master Thesis + defense – 30 ECTS

- Elective modules:
  - 3 methodological modules à 5 ECTS = 15 ECTS

3. Admission requirements
Applicants are required to have a Bachelor’s degree (or equivalent qualification) in Physical Geography or an adjacent scientific discipline, e.g. geography, climatology/meteorology, cartography/geoinformatics, geology, which was awarded with "good" or "very good". A degree in sciences or engineering which can also be deemed to be equivalent, provided they include physical geography topics accounting for at least 40 ECTS credits.

Applications have to prove intermediate knowledge of the English language (level B2) according to the Common European Framework of Reference for Languages or an equivalent score in an internationally recognised test. The proficiency of a basic knowledge of German (A1) has to be proven within the first academic year.

Applications for the MSc Climate & Environmental Sciences shall be submitted online via www.campo.fau.de. All documents required for the application must be sent by post to the Master’s Office (Masterbüro) [3]. The application deadlines are 31 January for the following summer term (starting in April) and 15 July for the following winter term (starting in October).

4. Career prospects
The Master's programme has a clear research focus and qualifies participants for a PhD at a University or for scientific work in research institutions or governmental agencies. Graduates also qualify for a large variety of exciting and challenging positions in consulting, management, or public services.
### 5. Addresses

**Institute of Geography**
Wetterkreuz 15, 91058 Erlangen  
[www.geographie.fau.de](http://www.geographie.fau.de)

Secretary: Room 2.057, Phone +49 9131 85-22633,  
Fax: +49 9131 85-22013,  
E-Mail: common@geographie.uni-erlangen.de

**Study guidance**
Dr. Birgit Schwabe  
Dr. Thorsten Peters  
Student Service Center Geography  
Wetterkreuz 15, 91058 Erlangen  
Phone: +49 9131 85-25791 or 85-22635  
E-Mail: geographie-studienberatung@fau.de

**General advice**
Student Advice and Career Service (IBZ)  
Schloßplatz 3, 91054 Erlangen, Information desk: room 0.021  
Phone: +49 9131 8523333 or +49 9131 8524444  
Office hours: Mon–Wed 8.00 a.m.–4.00 p.m.  
Thu 8.00 a.m.–6.00 p.m.; Fri 8.00 a.m.–2.00 p.m.  
E-Mail: ibz@fau.de

### Examinations representative

Petra Schmitt  
Halbmondstraße 6, room 1.035  
Phone: +49 9131 85-24063;  
E-Mail: petra.ps.schmitt@fau.de  
Office hours: Mon–Fri 8.30 a.m.–12.00 p.m.

### More information online

[1] Homepage of FAU: [www.fau.de](http://www.fau.de)
[3] Information on application for Master’s degree programmes: [www.master.fau.de](http://www.master.fau.de)
[5] FAU course catalogue: [www.vorlesungsverzeichnis.fau.de](http://www.vorlesungsverzeichnis.fau.de)

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### Appendix 1:

**Structure and recommended study plan**

**Physical Geography: Climate & Environmental Sciences Master's degree programme**

<table>
<thead>
<tr>
<th>No.</th>
<th>Modul</th>
<th>Course</th>
<th>Total ECTS</th>
<th>Workload distribution per semester in ECTS[^1]</th>
<th>Specification graded/ non-graded examination</th>
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<tbody>
<tr>
<td>1</td>
<td>Scientific Working I</td>
<td>Scientific Writing and Communication</td>
<td>5</td>
<td>5</td>
<td>Exercises</td>
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<tr>
<td>2</td>
<td>Scientific Working II</td>
<td>Introduction to Climate &amp; Environmental Sciences</td>
<td>5</td>
<td>5</td>
<td>Written Exam, 45. min</td>
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<tr>
<td>3</td>
<td>Advanced Physical Geography I</td>
<td>Graduate Seminar Physical Geography I</td>
<td>5</td>
<td>5</td>
<td>Written paper, 20-30 pages, with oral presentation, 45 min.</td>
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<tr>
<td>4</td>
<td>Advanced Physical Geography II</td>
<td>Graduate Seminar Physical Geography II</td>
<td>5</td>
<td>5</td>
<td>Written paper, 20-30 pages, with oral presentation, 45 min.</td>
</tr>
<tr>
<td>5</td>
<td>RTC: Research Training Course</td>
<td>Research Training Course</td>
<td>15</td>
<td>10</td>
<td>5</td>
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<tr>
<td>6</td>
<td>Field Course</td>
<td>Field Course</td>
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<td>5</td>
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<tr>
<td></td>
<td>Sum Compulsory Module</td>
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<td>40</td>
<td>15</td>
<td>20</td>
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<tr>
<td></td>
<td>Optional Subjects</td>
<td>Inter-/Transdisciplinary Perspectives</td>
<td>Depending on module</td>
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<td>5</td>
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<td></td>
<td></td>
<td>Sum: Inter-/Transdisciplinary Perspectives</td>
<td></td>
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<td>5</td>
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<tr>
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<td>Elective Modules</td>
<td>Depending on module</td>
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<td></td>
<td></td>
<td>Sum Elective Modules</td>
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[^1]: ECTS = European Credit Transfer System
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<th>Consolidation Modules</th>
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<th>Depending on module</th>
<th>20</th>
<th>10</th>
<th>5</th>
<th>5</th>
<th>Depending on module</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Planning and Preparation</td>
<td>Project Planning and Preparation</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td></td>
<td>Preparatory work for the implementation of the research project (Master's Thesis), Research report (20-50 pages) and reflexive discussion (15-30 min.)</td>
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<tr>
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<tr>
<th>Master's Thesis</th>
<th>Master's Thesis</th>
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<th>25</th>
<th>Master's Thesis (ca. 80 pages), 100%, and oral defence (ca. 30 min.)</th>
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<tbody>
<tr>
<td>Master's Thesis Defence</td>
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<th>Total</th>
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1) The specified distribution constitutes a recommendation only.

Last updated: 2020/04 JA, BS