MASTER OF SCIENCE

EARTH AND CLIMATE SYSTEM SCIENCE

The interdisciplinary and research-oriented Master's program in Earth and Climate System Science is based on the comprehensive scientific understanding of the Earth as a system. Aspects of the natural sciences are linked to topics in the agricultural and economic sciences.

The focus of this program lies on the analysis of the interactions of the Earth system's various components. They are interacting in a fascinating and complex way because the system is more than the sum of its pieces. The analysis of these complex processes requires the study of human activities, population growth, food production, and land use management in the context of climate change. In addition, the simulation with regional climate, agricultural and economic models provide useful insights into Earth system functions. As graduate, you will be able to make your own contributions to Earth system analyses and research as well as to ecologically-sustainable developments in society.

AT A GLANCE

DEGREE
LANGUAGE OF
CREDITS
STANDARD PERIOD OF STUDY
AVAILABLE PLACES
ADMISSION REQUIREMENTS

SELECTION CRITERIA

Final grade of Bachelor's degree

Master of Science

English

4 semesters

(180 credits)

• English (B2)

Subject-specific coursework

Related Bachelor's degree

• Vocational training, work experience, internships, further qualifications

APPLICATION DEADLINE 15 May

CAREER PROSPECTS

You will stand out through your inter-disciplinary thinking and flexibility when it comes to applying scientific methodologies in project work. Depending on your specialization, you will be prepared for a career in the following fields:

- Research activities in the field of Earth System Science (meteorology, environmental physics, geoscience, etc.)
- Consultancy in the public service, private business sector, and non-governmental organisations
- Development assistance



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Information for Prospective Students

Earth and Climate System Science

Master of Science

PROGRAM DESIGN

In the course of your studies, you will complete 17 modules and the Master's thesis. The acquisition of theoretical knowledge is combined with practical exercises e.g. in physics, biology, weather research and mathematics. 10 compulsory modules are dedicated to acquire important skills in the sector of Earth and Climate System Science.

ESPECIALLY INNOVATIVE COMPONENTS OF THE PROGRAMME:

- The debate seminar in the second semester
- Training in data assimilation as a key technology in weather forecasting, climate simulations and reanalyses of regional climate
- Operation and analyses of regional climate models
- Application of remote sensing for Earth system observations
- The synthesis of aspects of natural sciences with economic models

A research-intensive Master's thesis, written in the fourth semester, completes the program.









MODULE CATALOGUE

INFORMATION ON ELECTIVE MODULES

In addition to the 10 compulsory modules, you also choose 7 elective modules based on your personal and professional interests and areas of specialization. Elective modules can be integrated flexibly into the second or third semester. It is also possible to take modules from other Master's programs in Hohenheim or at other German or foreign universities to intensify the interdisciplinary research.

EXAMPLES FOR OFFERED ELECTIVE MODULES AT THE UNIVERSITY OF HOHENHEIM:

- Special Topics of Earth System Science
- Remote Sensing of the Earth System
- Agricultural and Forest Meteorology
- · Measurement, Modelling and Data Assimilation II
- Spatial Data Analysis with Geographic Information Systems (GIS)

MASTER OF SCIENCE

- Statistics for Natural Sciences
- Global Change Issues
- Ecotoxicology and Environmental Analytics
- Poverty and Development Strategies
- Sustainability and Environmental Economics
- Astrobiology
- Spring School "Extreme Environments"