

MASTER OF SCIENCE

EARTH AND CLIMATE SYSTEM SCIENCE

The interdisciplinary and application-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, which interact in fascinating and complex ways - the system is more than the sum of its parts. 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 unique insights into Earth system functions. As a graduate, you will be able to contribute significantly to an ecologically-sustainable Earth System. This opens job opportunities in industry, governmental and non-governmental organizations.

AT A GLANCE

DEGREE

Master of Science

LANGUAGE OF INSTRUCTION

English

CREDITS

120

STANDARD PERIOD OF STUDY

4 semesters

ADMISSION REQUIREMENTS

- Related Bachelor's degree (180 credits)
- English (B2)

SELECTION CRITERIA

- Final grade of Bachelor's degree
- Subject-specific coursework
- Vocational training, work experience, internships, further qualifications

APPLICATION DEADLINE

March 15 for Non-German students
May 15 for German students

CAREER PROSPECTS

You will stand out through your interdisciplinary 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 and Geo Science (meteorology, environment, land management, etc.)
- Consultancy or project management in the public sector, private businesses, and non-governmental organizations
- Development assistance

CONTACT

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Study Counselling

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www.uni-hohenheim.de/ecss



UNIVERSITÄT
HOHENHEIM



Earth and Climate System Science

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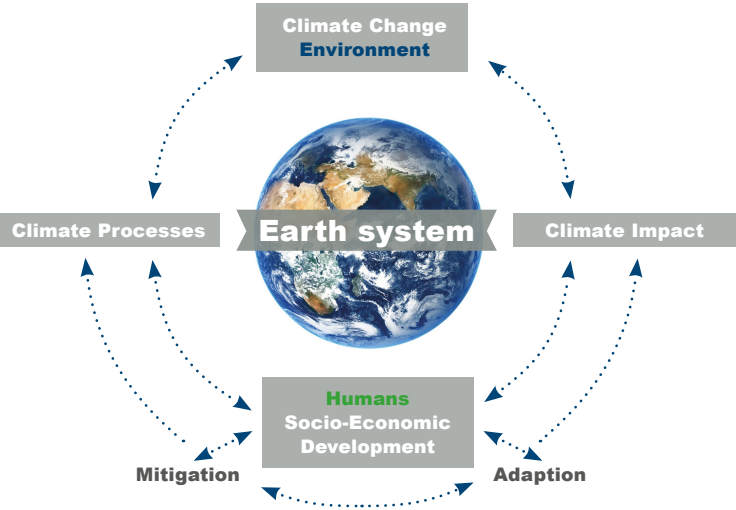
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PROGRAM OBJECTIVE

Within the Master in Earth and Climate System Science you develop a comprehensive understanding of the Earth system and you recognize how important its state is for humanity and our ecosystem. You are therefore perfectly prepared for solving pressing questions of our future and the sustainable development of the Earth System.

ESPECIALLY INNOVATIVE COMPONENTS OF THE PROGRAMME:

- The debate seminar
- State-of-the-art modelling techniques to investigate key earth system processes
- Operation and analyses of regional climate models
- Application of remote sensing for earth system observations
- Synthesis of aspects of natural sciences with economic models
- Mitigation of and adaptation to climate change
- Bio-geoengineering



1. SEMESTER	Lecture Series	Mathematics and Computational Sciences	Fundamentals of Economics	Weather and Climate Physics	Chemistry of the Earth System & Pollution	Agricultural Production of Bio-based Resources
2. SEMESTER	Climate History and Evolution of the Earth System	Energy and Water Regime at the Land Surface	Debate Seminar	Measurement, Modeling and Data Assimilation	Elective Modules based on your chosen specialization (optional)*	
3. SEMESTER						
4. SEMESTER	Master's Thesis Earth and Climate System Science					

COURSE DESIGN

During your studies, you will acquire theoretical knowledge in combination with practical work in geosciences and other topics, whilst maintaining a focus on real-world application in both research and industry careers.

During your first two semesters, you will take compulsory modules to acquire the fundamental skills needed for a career in Earth and Climate System Science. These are complemented by freely selectable modules from Hohenheim, other institutions or even foreign universities in the third semester. This flexibility allows you to follow your own preferred research interests with regard to your personal career goals. You'll complete the course by conducting a one-semester Master thesis to apply your scientific knowledge and further develop your competence.

EXAMPLES FOR OFFERED ELECTIVE MODULES AT THE UNIVERSITY OF HOHENHEIM:

- Agricultural and Forest Meteorology
- Climate Change, Risks and Challenges
- Ecology and Agroecosystems
- Environmental and Resource Economics
- Global Change Issues
- Measurement, Modelling and Data Assimilation II
- Remote Sensing of the Earth System
- Special Topics of Earth and Climate System Science

*Within this Master course you can develop your **personal qualification profile** by choosing modules of a specific field, such as **Earth system processes and simulation, agroecosystems and food security** or **sustainability and environmental resources**.