Humans are placing unprecedented pressure on the environment, testing its resilience and ability to support life. To protect the environment, we must understand the response of organisms and natural systems to this pressure through scientific research. Students learn how to design and carry out sound and meaningful research from a teaching staff of experienced scientists. The scientific literacy our students develop supports careers in academia or applied realms like conservation and policy.
ENVIRONMENTAL SCIENCES

The specialized Master’s in Environmental Sciences captures the essence of the myriad complex issues facing the natural world in a time of great changes. The program builds upon the basics of natural science – ecology, biology, earth sciences – in the context of today’s world. Issues such as climate change, threats to biodiversity, and the economics of environmental preservation bring the natural world into the “Anthropocene,” where human activities have begun to leave an indelible mark on the ecosystem.

To be an environmental scientist, it is necessary to gain a broad understanding of natural systems. Observations can be made through direct fieldwork, but also through remote sensing and large data set analysis or theory. Courses within this Master’s give students the opportunity to explore different mechanisms behind global change from the perspective of flora, fauna and human society.

Through the broad base of knowledge of the Institute’s professors and lecturers, students will gain an understanding of how to effectively design experiments then collect and analyze data. Using programs like ArcGIS and R, raw data is processed and analyzed to express meaningful results, useful for scientists, policymakers, and community members. Elective courses or internships give students a further opportunity to deeply investigate areas of interest.

A broad basis of preliminary course work leads students into the Master’s thesis; an opportunity to define more specific interests within environmental science and grow a particular area of expertise. By joining with a professor within an area of interest, students gain a mentor with whom they can grow academically and professionally. Depending on the topic, there may be opportunities to interact with government agencies or NGOs, allowing for a great utilization of results and a strengthening of one’s experience.

RESEARCH AREAS AT THE INSTITUTE

Research areas in the Institute span the natural sciences. Professors and lecturers focus on a wide range of topics within environmental sciences, some with a broad overview and others with a more narrow focus. Ecology and evolutionary biology are predominant topics, with study systems ranging from tortoises and wildflowers to entire communities and nearly everything in between. Remote sensing of changes in Siberian vegetation, biodiversity of frogs in Switzerland, effects of plant diversity in subtropical forest, predicting response of alga to temperature change in closed systems, and understanding the robustness of networks of species interactions all represent ongoing research areas within the Institute. Visit our website for more information on the work of our staff.

ADMISSION REQUIREMENTS

All students with a Bachelor’s degree from a Swiss University or equivalent, sufficient knowledge in natural sciences, sufficient ability in English and, preferably, attendance of courses in environmental sciences during bachelor education can apply.
PROGRAM OVERVIEW
The Master’s program consists of courses in environmental sciences and studies and an independent research thesis. The program spans three semesters for full time students, 1.5 years, for a total of 90 ECTS credits. The majority of coursework takes place during the first semester and consists of both weekly courses and block courses.

Students are expected to use their free time to begin developing thesis ideas with professors. To support this, students are introduced to professors with presentations during their first week of courses and are encouraged to meet with potential supervisors to develop ideas. Through these interactions, ideas can be shared until a thesis project emerges and is agreed upon by both parties. Once a set of research questions is identified, students can begin the process of designing an experiment and predicting results.

WHY SHOULD THIS PROGRAM BE STUDIED AT THE FACULTY OF SCIENCE AT UNIVERSITY OF ZURICH?
The Institute of Evolutionary Biology and Environmental Studies offers a unique opportunity to study environmental sciences. Our researchers focus on a broad range of topics, which allows students to gain an extensive understanding of issues facing both natural and human ecosystems.

CAREER OPPORTUNITIES
In this time of global change, students enrolled in an Environmental Science Master’s will find many opportunities to engage in a career focused on the natural sciences. Opportunities exist in governmental agencies, non-profit organizations, and consulting firms. World Wildlife Fund, United Nations Intergovernmental Panel on Climate Change, and Greenpeace are just a few examples of agencies that offer positions for environmental scientists. Past students have gone on to manage environmental organizations, manage wildlife populations and track greenhouse gas emissions.

Completing a Master’s degree at University of Zurich gives students an opportunity to network with other professionals to further grow career experience and opportunities. For example, students have conducted research with Agroscope, Ramsar Convention on Wetlands, and ETH Zurich. During the coursework, students can also consider an internship in lieu of coursework; past internships have included the United Nations Economic and Social Commission for Asia and the Pacific, and the United Nations Environmental Programme.
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