

Major in Ecology and Evolution

Master in Environmental Sciences



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Publisher Department of Environmental Systems Science
Editor Gabrielle Attinger
Grafic Design Karin Frauenfelder
Photos Cover: Martin Fischer / Inside: Institute of Integrative Biology, ETH, Fotolia
Printing Casanova Druck und Verlag AG, Chur

Major in Ecology and Evolution

For those fascinated by the diversity of life on earth, and how we understand and manage that diversity, the major in Evolution and Ecology is an excellent choice. The major offers in depth training in both the conceptual foundations of ecology and evolution and its manifold applications. Whether drawn to field or laboratory work, to theory or experiment, to applications or basic science, you will find that this major offers both broad training and the flexibility to follow your personal interests in ecology, evolution, or disease dynamics. Having studied this major you will be well prepared to start a professional career in the public sector, in industry, or in academia.

The major is affiliated with the Institute of Integrative Biology, which hosts world leading research groups in ecology, evolution, and infectious disease. During your major you will be exposed to cutting edge research and you will have the opportunity to integrate into the interdisciplinary environment of this institute and affiliated partners.

Structure and content

The Ecology and Evolution major is organized as 120 credit points (CP), of which 40 are devoted to the core of the major, 30 are for an internship, and 30 for the MSc thesis. The Environmental Sciences curriculum also requires students to choose 20 CP of elective courses.

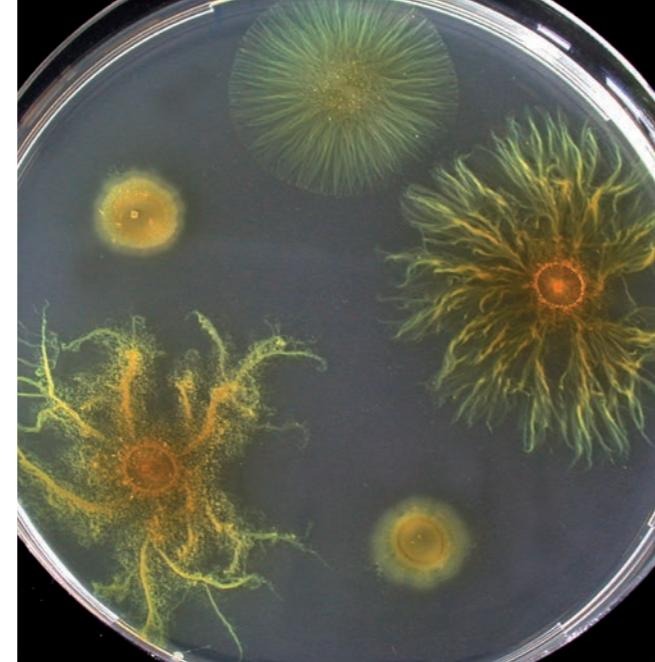
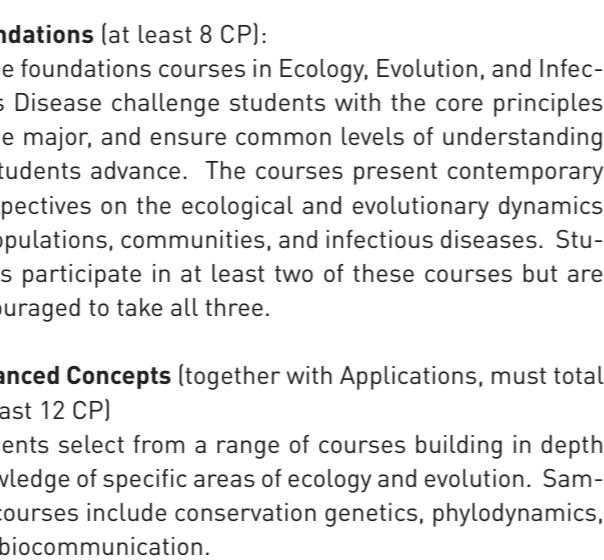
The core of the Ecology and Evolution major is structured into Foundations, Advanced Concepts, Applications, Scientific Skills, and the Term Paper.

Foundations (at least 8 CP):

Three foundations courses in Ecology, Evolution, and Infectious Disease challenge students with the core principles of the major, and ensure common levels of understanding as students advance. The courses present contemporary perspectives on the ecological and evolutionary dynamics of populations, communities, and infectious diseases. Students participate in at least two of these courses but are encouraged to take all three.

Advanced Concepts (together with Applications, must total at least 12 CP)

Students select from a range of courses building in depth knowledge of specific areas of ecology and evolution. Sample courses include conservation genetics, phylodynamics, and biocommunication.



Applications

Students explore the management, conservation, and restoration of diverse biological systems, building an appreciation for the relevance of ecological and evolutionary principles to the informed management of natural areas.

Scientific Skills (at least 6 CP)

A major in ecology and evolution leads to a range of careers requiring technical expertise. Students have the opportunity to build strength in: Quantitative and Computational Expertise, Laboratory and Field Expertise, and Expertise in Biological Diversity.

Term Paper and Seminar (8 CP)

Mentored by a senior scientist, students engage with a topic of their choosing in a semester long term paper.



Electives (20 CP)

Students gain breadth by enrolling in courses across all of environmental sciences.

Internship (30 CP)

Students gain practical experience while embedded in a governmental agency, a consultancy, conservation or health organization, or other professional environment outside of academia.

Master thesis (30 CP)

The Master thesis is an opportunity for students to apply their scientific knowledge to a six month research project in ecology, evolution, or infectious disease dynamics.

