



University of
Zurich^{uzh}

ETH zürich



PhD Program in Ecology

University of Zurich
Department of Evolutionary
Biology and Environmental
Studies

Winterthurerstrasse 190

CH-8057 Zürich

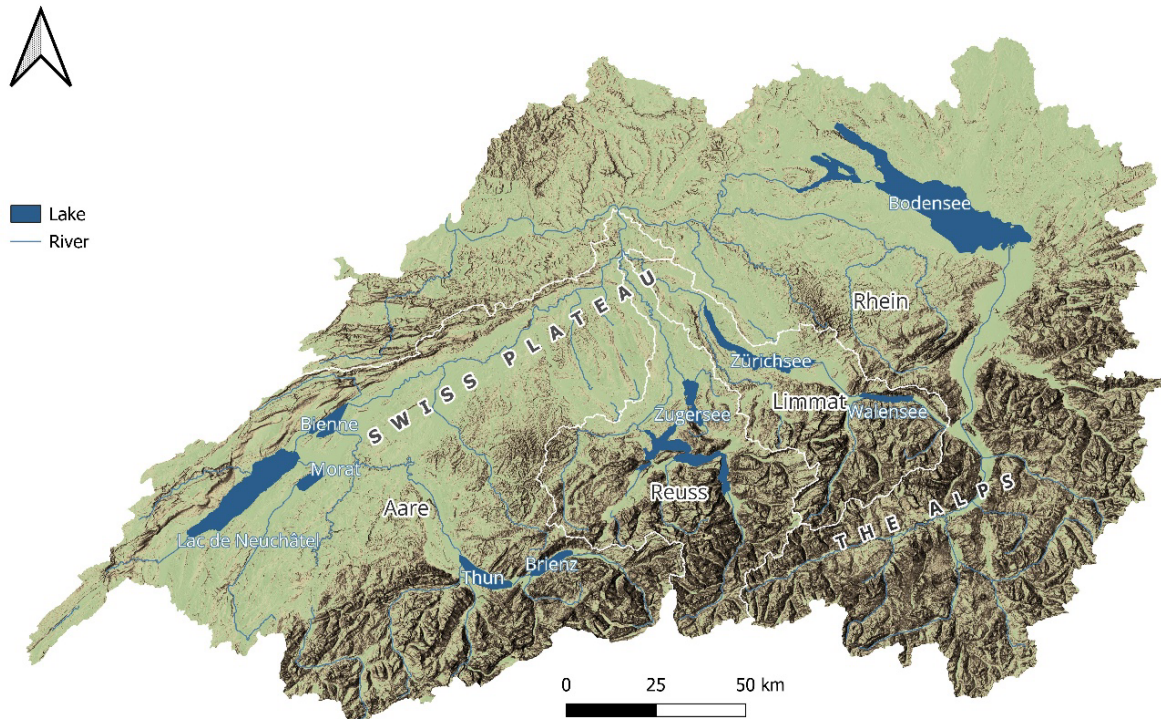
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[/phd_ecology/links.html](https://www.ieu.uzh.ch/en/teaching/phd_ecology/links.html)

COURSE PROGRAM FALL TERM 2026



Several thousand years from now, nothing about you as an individual will matter. But what you did will have huge consequences. This is the paradox of the ecological age.

Timothy Morton (Being Ecological)



Dear members

A very warm welcome to **Sven Gindorf**, **Jamila Gisler**, **Anouk Gremion**, **Marjalena Seipp** and **Jon Went** who recently joined our PhD program in ecology.

Congratulations to **Angela Studer** on successfully defending her PhD thesis.

Thank you to **Oluwadamilola C. Ogundipe** for our cover image.

Congratulations to Valentin Moser, program alumni, on his publication in [Journal of Applied Ecology](#), showing beaver-engineering significantly enhances local biodiversity

We are excited to introduce the new course program. We continuously update our list of offered courses and call students and PIs for suggestions for special cutting-edge course topics for Spring 2026. We are in the process of updating the regulations, please see the draft at the end of the course program.

Students:

We would like to remind you to register for mobility at ETHZ and UZH respectively to facilitate registration for courses and for ECTS to be easily added to your transcript of records. ETHZ will make an exception for students who are in their first semester and add ECTS with a certificate, but not for students who have been there for several semesters.

PIs:

We can assist you in finding a qualified graduate student as we are the access point to all international students that apply for a PhD in Ecology within the Life Science Zurich Graduate School. The next recruiting round is in July 2026.

Please let us know about your achievements, such as papers accepted or awards that we can celebrate!

Please contact Debra Zuppinger-Dingley (phdecology@ieu.uzh.ch) directly for any questions, feedback, or suggestions.

With best regards,



Prof. Dr Jordi Bascompte
Program director



Dr Debra Zuppinger-Dingley
Program Manager



Cover: *The Aare-Rhine catchment, Switzerland* ©Oluwadamilola C. Ogundipe

Advancing Systematic Conservation Planning Across Ecological Realms
Oluwadamilola Christianah Ogundipe

No ecosystem exists in isolation. Natural processes cross environmental boundaries constantly, and what happens in a terrestrial forest may directly shape the adjacent freshwater stream. Planning for biodiversity across realms simultaneously is ecologically necessary but remains rare in practice because coordinating across fundamentally different environments is more complex than it appears.

The challenge is as much geometric and socioeconomic as ecological. When we jointly optimize for terrestrial, aquatic and amphibian species within a single model, asymmetric geometries compete directly. Narrow, linear river networks occupy a small spatial extent relative to the surrounding landscape, making them easy to overlook in standard planning models unless explicitly accounted for. In human-dominated landscapes, the challenge runs deeper still, as conservation implementation must also contend with intense land-use friction.

My work addresses this through a cross-realm planning framework for the Aare-Rhine catchment. Incorporating species data across terrestrial, freshwater and amphibian groups alongside a spatially variable land-use cost layer, I show how ecological representation can be achieved without ignoring implementation feasibility. The results suggest that how we configure a plan may matter as much as how much land we designate.

SUBJECT- SPECIFIC MATTERS

Host institution	Course	SH	ECTS
UZH, ETHZ	ECO 399 Foundations in Ecology 2	30	1
UZH	EEE 226 Ethik und Umwelt	90	3

METHODS

Host institution	Course	SH	ECTS
IEU, UZH	ECO 353 Introduction to Path and Structural Equation Modeling	30	1
PSC	BIO610 Introduction to Machine Learning for Genomics	30	1
PSC	Genetic Diversity: Techniques	30	1
PSC	Introduction to Machine Learning for Plant Scientists Block 1, 2	90	3
IEU, UZH	EEE 334 Biodiversity from Species to Landscape Scale – Concepts and Methods in Spatial Ecology and Remote Sensing	60	2
IEU, UZH	EEE 352 Contemporary Analysis for Ecology	120	4

TRANSFERABLE SKILLS

Host institution	Course	SH	ECTS
LSZGS	Transferable and Methodological Skills Courses	-	-

RESEARCH SEMINARS

Host institution	Seminar	SH	ECTS
EE	ECO 401 Presentation/Organization at Zurich Interaction Seminar (or equivalent)	-	1
IEU; UZH	BIO 606 BEEES Seminar (Behaviour, Ecology, Environment and Evolution)	-	-

IEU: Department of Evolutionary Biology and Environmental Studies

EM: Institute of Terrestrial Ecosystems, EE: Experimental Ecology

14 LH (lesson hours) = 1 ECTS = 30 hours of work (including preparation, participation, homework). ECTS credits are given according to the standards of European Credit Transfer System. BIO605 & BIO606 are not bookable and are recommended to be attended by all PhD students.

2. COURSE DESCRIPTION: SUBJECT-SPECIFIC MATTERS

ECO 399	Foundations in Ecology 2
Course tutors	Dr. Debra Zuppinger-Dingley
Date / Time	08 -10 September 2026, 9:00 – 17:00
Place	University of Zurich.
Content	<p>This course explores the foundations of modern ecology by examining the intellectual and conceptual developments that have shaped the field. We focus on classic ecological papers that generations of scientists have recognized as foundational, introducing key concepts and defining many of the core questions that continue to drive ecological research today.</p> <p>Through a workshop-based format centered on discussion of these seminal readings, participants will develop an understanding of how ecological ideas have emerged, evolved, and influenced one another over time. Particular attention is given to how advances in theory, methodology, data collection, and analytical tools have shaped the development of ecological knowledge.</p> <p>By covering some of the historical papers in ecology, participants will gain a broader perspective on ecology and an appreciation for how modern ecological research has evolved through a progression of ideas that continues to shape the discipline today.</p> <p>Each course focuses on one or two foundational topics. Foundations of Ecology 2 will focus on how species compete and coexist including sharing resources and the role of productivity in shaping ecological communities.</p>
ECTS credits	Active participation in the course is needed to obtain 1 ECTS credit.
Registration	<p>Module booking Registration deadline: 01 September 2026, Cancellation deadline: 01 August 2026. For registration, please mail phdecology@ieu.uzh.ch, include your student number, surname, name, email address and your PhD program.</p> <p>Priority will be given to students registered in the PhD Program in Ecology; however other PhD students may attend if there are available places.</p>

Course tutors	Dr. Anna Deplazes Zemp
Date / Time	18 September – 18 December 2026 (Fr 12:15-13:45)
Place	TBA.
Content	<p>Die drängenden Umweltherausforderungen der heutigen Zeit verlangen nach einer kritischen Reflexion. Ethik ist ein wichtiges Instrument dazu. Diese Vorlesung führt in die Grundlagen der westlichen analytischen Ethik ein und vermittelt vertiefte Kenntnisse der umweltethischen Debatten. Diese werden mit Bezug auf die heute drängenden Umweltherausforderungen vertieft und kritisch reflektiert.</p> <p>Inhalt:</p> <ul style="list-style-type: none"> • Einführung in die allgemeine und angewandte Ethik. • Übersicht und Diskussion westlicher ethischer Theorien, welche für den Umgang mit Umweltherausforderungen relevant sind. • Kennenlernen der verschiedenen Grundpositionen der Umweltethik. • Querschnittsthemen wie Nachhaltigkeit, intergenerationelle Gerechtigkeit, Artenschutz usw. • Einüben des Gelernten in kleineren Übungen. <p><i>Unterrichtsmaterialien</i></p> <p>Andrew Light/Holmes Rolston III, Environmental Ethics. An Anthology, 2003</p> <p>John O'Neill et al., Environmental Values, 2008</p> <p>Simon James, Environmental Philosophy, an Introduction, 2015</p> <p>Konrad Ott/Jan Dierks/Lieske Voget-Kleschin, Handbuch Umweltethik, 2016</p> <p><i>Als allgemeine Einführung in die Ethik:</i></p> <p>Barbara Bleisch/Markus Huppenbauer: Ethische Entscheidungsfindung. Ein Handbuch für die Praxis, 2. Auflage Zürich 2014</p> <p>Marcus Düwell et. al (Hrg.), Handbuch Ethik, 2. Auflage, Stuttgart (Metzler Verlag), 2006</p> <p>Johann S. Ach et. al (Hrg.), Grundkurs Ethik 1. Grundlagen, Paderborn (mentis) 2008</p>
Special note	ETH Number: 701-0703-00L. Das Modul muss an der UZH gebucht werden, mit der Modulbuchung ist man automatisch für den Leistungsnachweis angemeldet. Schriftliche Prüfung in der letzten Vorlesungswoche in Deutsch.
ECTS credits	Schriftliche Prüfung in der letzten Vorlesungswoche. Repetitionsprüfungslink: https://www.mnf.uzh.ch/de/studium/pruefungen.html . Bitte melden sie sich für die Wiederholungsprüfung nicht später als drei Wochen vor der Prüfung beim Modulverantwortlichen an.
Registration	Please register online here .

COURSE DESCRIPTION: METHODS

ECO 353	Introduction to Path and Structural Equation Modeling
Course tutor	Dr. Frank Pennekamp
Date / Time	04 - 06 November 2026, 9.00-17.00
Place	TBA
Content	<p>Natural systems are characterized by direct and indirect connections among components. Structural equation modeling (SEM) is a suitable framework to understand such networks of interconnected variables, identifying potential pathways, as well as test theory with observational and experimental data. This is an introductory course for biologists that have no or little prior experience with fitting structural equation models. The course uses a mix of lectures, live coding sessions and exercises to learn the basics of SEM with the R package <i>lavaan</i>. Students will have the opportunity work on datasets and their own data.</p> <p>Day 1: Introduction to path modelling (background and philosophy of path modelling, meta-models, comparison with linear/multiple regression, assumptions/limitations), exercises using common dataset (model checking and interpretation, fitting your first SEM</p> <p>Day 2: Introduction to structural equation modelling and constructs (composites, latent variables), Additional exercises, model comparison, evaluation (GOF etc.), interpretation and pruning. Self-study.</p> <p>Day 3: Visualization of SEMs. Exercises and self-study with opportunities provided to consult with lecturers.</p> <p>At the end of the course, participants are able to 1) fit path and structural equation models to data, 2) assess model goodness of fit, 3) interpret the model and its coefficients, 4) plot the model and 5) report the model such that others can reproduce the process and evaluate model support.</p> <p>Students should be familiar with the R programming language, basic statistical techniques (i.e., multiple regression, ANOVA), enabling them to fit regression models, interpret and visualize their output.. Self-study with opportunities provided to consult with lecturers. Students will have the opportunity work on datasets and their own data.</p>
ECTS credits	Active participation in the course is needed to obtain 1 ECTS credit points.
Registration	<p>Module booking phdecology@ieu.uzh.ch, include your Surname, Name, student number, email address, PhD program and your institution. Registration deadline: 01 November 2026, Cancellation deadline: 01 October 2026.</p> <p>Priority will be given to students registered in the PhD Program in Ecology; however other PhD students may attend if there are available places.</p>

BIO610	Introduction to Machine Learning for Genomics
Course tutor	Prof. Kentaro Schimizu, Prof. Dr. Jun Sese, Dr. Masaomi Hatakeyama, Dr. Rie Shimizu-Inatsugi, Dr. Narjes Yousefi & Dr. Claudio Quilodran Venegas
Date / Time	28.10.2026 - 29.10.2026, 9.00-17.00
Place	TBA
Content	<p>This course is a hands-on introduction to machine learning with Python for biologists with focus on genomics and evolution. It focuses on analyzing gene expression and experimental data. You will start with the basics, like preparing data and making graphs, then move on to practical tasks. Workflow of the Functional Genomics Center Zurich is used for the hands-on of next-generation sequencing data. We will also use Large Language Models (LLMs) as a powerful helper to make programming and data analysis easier. By the end of the module the students should be able to</p> <ul style="list-style-type: none"> • Understand concepts of NGS technologies • Understand fundamentals of data analysis • Design a research experiment and the data analysis involving biologically relevant issues affecting populations of plants or animals • Run machine learning analysis process • Understand basic bioinformatics of large datasets for practical use in genetic analyses
ECTS credits	Active participation in the course is needed to obtain 1 ECTS credit points.
Registration	<p>With your registration for a course, you commit yourself to attending the whole course. Only complete attendance can be awarded with a credit. Cancellations or changes to registration made less than two weeks before the start of a course will incur a cancellation fee of CHF 200. The PhD Program in Plant Sciences appreciates the cooperation of all participants in respecting this fair-play policy, which helps ensure a high-quality and accessible training program for the entire doctoral community.</p> <p>Arrange cancellation with the PSC coordination office (psc_phdprogram@ethz.ch): Up to 2 weeks prior to course start without a fine. Later cancellations and incomplete attendance without documented justification will incur a fee of 200 CHF.</p> <p>Register here</p>

VVZ 701-1425-01L Genetic Diversity: Techniques

Course tutor	Dr. Aria Minder
Date / Time	04.11.2026 - 25.11.2026, 9.00-17.00
Place	TBA
Content	<p>This course provides laboratory training for advanced students (master, doctoral or post-doctoral level). Various DNA/RNA extraction protocols, quality control measurements, SNP genotyping and gene expression techniques will be addressed. This is a course for practitioners.</p> <ol style="list-style-type: none">1) Students are able to describe the principles, workflows, and applications of genetic data collection methods, including DNA/RNA extraction, quality control, SNP genotyping, and gene expression analysis.2) Students are able to perform standard genetic data collection procedures in the laboratory, following established protocols and using appropriate instruments.3) Students are able to compare and evaluate different genetic data collection methods in terms of reliability, efficiency, and suitability for specific research contexts. <p>After an introduction, students have 3 weeks to work independently in groups of two on different protocols. At the end of this practical part, the whole class meets for another afternoon to present the techniques/results and to discuss the advantages and disadvantages of the different techniques. The techniques addressed are RNA/DNA extractions and quality control, SNP genotyping and real-time qPCR. Material will be handed out in the course. There will be two afternoons in class. The lab work in between the afternoons is done by the students according to their own schedule but with the support of the teacher and must be completed after 3 weeks. The workload is approximately 1-2 full days per week, depending on the student's ability. Student must know how to pipette.</p>
ECTS credits	Students have to attend on the two afternoons (8 hours) and do the individual work in between (around 52 hours).
Registration	<p>Cancellations or changes to registration made less than two weeks before the start of a course will incur a cancellation fee of CHF 200. Arrange cancellation with the PSC coordination office, Dr. Bojan Gujas (psc_phdprogram@ethz.ch): Up to 2 weeks prior to course start without a fine. Later cancellations and incomplete attendance without documented justification will incur a fee of 200 CHF.</p> <p>Register here</p>

PSC course	Introduction to Machine Learning in Plant Sciences Block1
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Course tutor	Prof. Dr. Jan Dirk Wegner (ETHZ)
Date / Time	16 - 18 November 2026, 9:30 – 16:30
Place	ETH Zürich, Zentrum
Content	<p>This course will introduce machine learning with emphasis on plant sciences. In Module 1 we will discuss topics like data pre-processing, feature extraction, clustering, regression, and classification. Both modules consist of 50% lectures and 50% hands-on programming in python, where students will directly implement learned theory as a software to help solving problems in plant sciences.</p> <p>Students should bring their laptops to the exercises because we will program on laptops directly. It is required that students enrolling in this course have successfully passed a course in basic data science and are familiar with programming (preferably in Python). Teaching assistants will help with all programming exercises.</p>

PSC course	Introduction to Machine Learning in Plant Sciences Block 2
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Course tutor	Prof. Dr. Jan Dirk Wegner (ETHZ)
Date / Time	19, 20 November, 02 December 2026, 9:30 – 16:30
Place	ETH Zürich, Centre
Content	<p>In Module 2, we will take first steps towards modern deep learning. Module 2 also includes homework that has to be submitted. On the last course day, a feedback session in the morning will allow participants to receive feedback regarding their homework, while participants will give short talks about their own PhD projects in the afternoon to get advice from machine learning experts.</p> <p>Students with a non-technical background will be introduced to machine learning. Emphasis is on hands-on programming and implementation of basic machine learning concepts to demystify the subject, equip participants with all necessary insights and tools to develop their own solutions, and to come up with original ideas for problems related to the context of plant sciences. Specific importance is placed upon the reconciliation of the predictions, which have been generated by automated processes, with the realities. By the end of the course, students will be able to decide where (and where not) to use machine learning, what method to choose for what research task, and how to critically evaluate model outputs in the context of plant sciences.</p>
ECTS credits	Participation in Module 1 and Module 2 and successful fulfillment of the homework assignments yields. 3 ECTS. Special Note: In

fall term 2026, both modules must be taken within the same semester. Students who completed Module 1 in previous years may still register for Module 2 only (please make a note at registration).

Cancellation Arrange cancellation with the PSC coordination office (psc_phdprogram@ethz.ch): Up to 2 weeks prior to course start without a fine. Later cancellations and incomplete attendance without documented justification will incur a fee of 200 CHF.

Registration Only complete attendance can be awarded with a credit. Cancellations or changes to registration made less than two weeks before the start of a course will incur a cancellation fee of CHF 200.

Module booking is within the ETH Zurich course registration system:

<https://ethz.ch>

Footer at the bottom of the website: Staffnet - More services - Courses, continuing education.

Direct link: <https://ethz.ch/staffnet/en/service/courses-continuing-education/details.90660.html>

Select Plant Sciences/Ecology

Registration 04.06 - 19.10.2026.

EEE 334	Biodiversity from Species to Landscape Scale – Concepts and Methods in Spatial Ecology and Remote Sensing
Course tutor	Prof. Gabriela Schaepman-Strub, Dr. Elena Plekhanova
Date / Time	15 September – 7 October 2026; Tue 13:00-17:00, We 08:00-17:00, Thu 08:00-17:00, Fri 08:00-17:00
Place	13.00-17.00 in Y01F50 , 8.30-12.00 in Y34J02
Content	<p>Global change reshapes biodiversity and ecosystem functions, feeding back to the climate system and threatening nature's contributions to people. Monitoring and analyzing these changes have become a critical component of biosphere science. This course provides you with the theoretical understanding and the skills to tackle biodiversity related research questions across spatial and temporal scales with the help of concepts, data and methods from remote sensing and spatial ecology.</p> <p>Lectures introduce key concepts and you will answer real-world questions in outdoor and computer labs, providing you with foundations in optical remote sensing and ArcGIS. The course will not only prepare you for a MSc or PhD thesis, but also for professional settings. Assessment by individual assignments and a team project.</p> <p>Learning Outcome</p> <ul style="list-style-type: none"> • Understand biodiversity as part of the biosphere, by acknowledging its functions, complexity and interactions within the Earth system. • Apply systems thinking for biodiversity monitoring and analysis, with awareness of length scales of processes and data • Understanding signal contribution of biodiversity in optical remote sensing data to inform robust monitoring and analysis of biodiversity (e.g. application of spectral variability hypothesis) • Integrate a variety of data types (e.g. GPS, satellite-derived essential climate and biodiversity variables, plot data) into spatial analysis to answer real-world questions during labs (e.g. Arctic biodiversity and ecosystem functioning, movement ecology, urban biodiversity) • Basic knowledge of geospatial analysis tool (ArcGIS) and remote sensing data sets and portals that support biodiversity research • Assessed knowledge and skills using a combination of short assessments during labs and lectures and testing skills through team project.
ECTS credits	0.5 (sum of grades of assessments during course) and 0.5 (team project grade).
Registration	Registration by email to admin.schaepman-strub@ieu.uzh.ch until 30 August 2026– please add a short motivation (<0.5 pages),

EEE 352**Contemporary Analysis for Ecology**

Course tutor	Prof. Pascal Niklaus
Date / Time	14.09.2026to 15.12.2026, Mon 13:00-14:45, Tuesday 10:15-12:00
Place	TBA
Content	<p>This course introduces data analysis and the design of experiments. The main focus is on the analysis of data from designed experiments using linear models and analysis of variance. Although the statistical software "R" will be used, the emphasis is on principles of data analysis and the interpretation of results. No introduction to R will be provided.</p> <p>Course participants can bring their own laptop (PC or Mac) if they prefer, after downloading R from: http://stat.ethz.ch/CRAN/</p>
ECTS credits	4 ECTS, Exam
Registration	Please register here or contact phdecology@ieu.uzh.ch , 20 July - 07 August 2026

TRANSFERABLE SKILLS

FOR REGISTRATION INFORMATION SEE [HERE](#)

Course	Course Instructor	Dates	Venue
Presenting Science	Millie Baker	15-16 October 2026 (09:00-17:00); Registration opens on July 1	UZH
Speaking with Confidence and Impact	Millie Baker	19-20 October 2026 (09:00-17:00); Registration opens on July 1	UZH
Effective Visual Communication of Science	Jernej Zupanc	23 October 2026 (9:00- 17:00); Registration opens on July 1	Online course
BIO 680 DNA Next Generation Sequencing	Maria Domenica Moccia	26-30 October 2026 (09:00-17:00); Registration opens in July)	UZH, Irchel Campus
Logic and Reasoning for Scientists	Malte Engel	2-3 November 2026 (9:00-17:00). Registration will be opened on August 1	UZH/ETH
Introductory Lecture to Good Scientific Practice and Scientific Integrity	Anna Deplazes Zemp	19 November 2026 (10:00-12:00). Registration opens on August 1	Online Course
Project Management for Advanced PhD Students	Verena Lütschg	26-27 November 2026 (9:00-17:00). Registration opens on August 1	University of Zurich
Self-organization during a PhD	Johanna Lauer	15/18/22/25 September 2026 (08:30-12:30)	Online course

RESEARCH SEMINARS

ECO 401	Zurich Interaction Seminar Experimental Ecology: Population Biology and Genetics
Organization	The seminar is organized by students from the participating universities, usually from the Institute of Integrative Biology at ETH Zurich and the Institute of Evolutionary Biology and Environmental Studies at the University of Zurich. For the current organizers see here .
Duration and time	Every second week, on Monday 17:15. For details and an overview of the running program see: http://www.tb.ethz.ch/education/zis.html
Place	For the current situation please see: http://www.tb.ethz.ch/education/zis.html
Content	PhD students will receive a credit point for active participation (including a talk) at the Zurich Interaction Seminar or an equivalent series. A credit points will also be given to students who organize a seminar series or a conference themselves.
ECTS credits	1
Registration	ETH students register at myStudies for the course number 551-0740-00L . UZH students: ZIS is officially registered in the PhD program in Ecology under the name of ECO401.

**BEEES
BIO 606**

Behavior, Ecology, Environment and Evolution Seminar

Organization	Department of Evolutionary Biology and Environmental Studies, University of Zurich, Winterthurerstrasse 190, CH-8057 Zurich
Duration and time	Every Thursday from 12:15–13:00
Place	University of Zurich Irchel, room TBA
Content	For an overview of the running program visit: http://www.ieu.uzh.ch/seminars.html Attending the BEEES is mandatory for all students of the PhD Program in Ecology. For information about speaker invitations contact Maja Weilenmann.
ECTS credits	None
Information	M. Weilenmann (mail to: maja.weilenmann@ieu.uzh.ch)
Registration	No booking is required

3. USEFUL LINKS

Useful links	A selection of links that offer additional information about your PhD and cross institutional courses that are offered at University of Zurich and ETHZ:
PhD program in Ecology	https://www.ieu.uzh.ch/en/teaching/phd_ecology.html
Other courses LSZGS	The LSZGS offers a variety of inter-disciplinary or soft skill courses. Students may attend these courses for free. For more information and for registration visit the website: http://www.lifescience-graduateschool.ch/index.php?id=96
ZGSM	Courses of the Zurich Graduate School in Mathematics can be attended for free (excluding courses where additional payments to all participants apply). For more information, visit: https://www.zgsm.ch/index.php?id=current_course_progr0
PhD Programs	Courses of all LSZGS PhD programs, such the partner programs Plant Science Centre and Evolutionary Biology. Students are free to take courses of other programs; however, the number of participants might be limited, and availability based on priority given to own members. Plant Science Centre: https://www.plantsciences.uzh.ch/en/teaching/coursecatalogue.html
UZH/ETHZ	Students can take courses offered by their respective host institution where they are matriculated, for example the Graduate Campus UZH offers transferable skills for PhD candidates: https://www.grc.uzh.ch/en/skills or the courses offered by ETHZ https://ethz.ch/students/en/doctorate/transferable-skills.html
External courses	Courses from external institutions can be attended in agreement with the thesis committee and the program coordinator.

4. REGULATIONS OF THE PHD PROGRAM IN ECOLOGY

4.1 GENERAL INFORMATION

Mission Statement

The aim of the PhD Program in Ecology is to enhance the research competence of PhD students in the interdisciplinary field of ecology, and to support the education of transferable skills for a future career within or outside an academic institution.

Organization

The program is governed by the program director and the associated research groups and is organized by the program coordinator. The associated research groups are experts in the field from the University of Zürich (UZH), the Swiss Federal Institute of Technology Zürich (ETH) and the affiliated organizations Eawag, Agroscope and WSL.

Certificate

PhD students of UZH and ETH participate for 4 years in the program. In addition to the UZH or ETH diploma the student will receive a certificate stating the successful participation in the PhD Program in Ecology.

Further information

All documents, including the semester course program are available on the homepage: https://www.ieu.uzh.ch/en/teaching/phd_ecology/links.html

4.2 ACCEPTANCE

Application

Candidates apply directly through the homepage of the Life Science Zurich Graduate School (LSZGS: <http://www.lszgs.ch/>) for admission to the PhD Program in Ecology (track 1). The official LSZGS interviews are organized in twice a year towards the end of the spring and fall semesters. Applications outside the official interviews are possible if a student is employed in a PhD position (track 2). Please contact the coordinator/manager of the PhD Program in Ecology directly to apply to the program (phdecology@ieu.uzh.ch).

Acceptance interview

Acceptance to the program via track 1 is granted based on an interview. The interview includes a presentation by the candidate, followed by questions on the candidate's scientific competences. At least three official representatives of the PhD Program in Ecology are present. The following requirements will be tested:

- training in Ecology / Environmental Sciences (equivalent to 10 ECTS) and in Mathematics (incl. Statistics) / Physics (together equal to 6 ECTS);
- evidence of excellent communication skills in English during the interview

Acceptance form: https://www.ieu.uzh.ch/en/teaching/phd_ecology/links.html

Admission

Candidates are required to have a master's degree or equivalent when they start their PhD. All candidates have to apply for admission and matriculation at the University of Zurich or ETH Zurich and fulfil the requirements of the respective host institution. A detailed description of the application and admission procedures can be found on the following web pages:

UZH: <https://www.mnf.uzh.ch/en/studium/informationen-f%C3%BCr-phd-studierende/Anmeldung.html>

ETH: <https://ethz.ch/de/doktorat.html>

PhD students who successfully passed the acceptance interview must submit their interview form to the program coordinator: phdecoology@ieu.uzh.ch

4.3 THESIS COMMITTEE

Formation of thesis committee

The thesis committee ensures that PhD students receive the best possible supervision during the PhD and good mentoring for the academic or non-academic career beyond the PhD. It supports the PhD student with expertise and advice throughout the thesis work. In case of emerging problems that cannot be sorted out directly by a meeting between the student and the supervisor, the thesis committee members and/or the program coordinator/manager should act as go-betweens. The members of the thesis committee are selected jointly by the thesis supervisor and the student at the start of the PhD, but not later than 6 months after the official date of employment. The thesis committee consists of 3-4 persons:

- The direct thesis supervisor (must be a member of the PhD Program in Ecology)
- The official thesis supervisor (must be a member of the Science Faculty (MNF) of the UZH or of D-BIOL / D-USYS of the ETHZ or have *Promotionsrecht*).
This function is not required if the direct supervisor satisfies these criteria
- At least one additional member of the MNF UZH / D-BIOL ETH / D-USYS ETH (or a person with *Promotionsrecht*)
- At least one external member who has the right to supervise PhD students at his/her home institution

The committee selects a chairman for the thesis committee meeting, who must not be the PhD student's supervisor. The chairman checks that all committee members received the student reports and that both—the PhD student and the supervisor—have the opportunity to talk to the committee in absence of the other party.

Thesis committee meeting

At least once a year, the PhD student organizes a meeting with the thesis committee. The PhD student distributes the relevant documents two weeks before the meeting to all members. The results of the meeting will be protocolled and

signed by the committee members. After the thesis committee meeting, the PhD student uploads the thesis meeting and progress report to the [milestone admin platform](#).

LSZGS PhD Program in Ecology Thesis Meeting Report:
https://www.ieu.uzh.ch/en/teaching/phd_ecology/links.html

The following time-plan should be followed:

– The first meeting takes place 3–6 months after the official start to discuss the research plan and to sign the doctoral agreement. At the first meeting, PhD's must get the committee meeting form, doctoral agreement form and the Pflichtenheft (UZH PhD's only) signed.

UZH PhD's: Present teaching activities and get approval and recommendations.

Research plan

Two weeks prior to the first meeting, the PhD student must submit a research proposal of ~2000 words (excluding references) describing his/her proposed project to all committee members.

UZH: The research proposal should be written in the form of a grant application and include:

- title or working title of the dissertation;
- a description of the research project, including the background of the research field, preliminary results, planned experiments, potential pitfalls and solutions;
- a timeline of the thesis, including milestones and a roadmap.

ETHZ PhD's: The research proposal must follow the [Doctoral plan template](#)

In case of unsatisfactory performance, the PhD student can repeat the proposal defense within UZH-three months/ETHZ-with four weeks to three months. Should the PhD student fail a second time, he/she will be expelled from the program. The accepted proposal should be signed by the thesis committee at the end of the first meeting and the original submitted together with the Doctoral Agreement and uploaded to the [milestone admin platform](#).

Doctoral agreement

The doctoral agreement outlines the expectations from the student and the thesis committee at the start of the PhD. The form should be filled out and signed at the first thesis committee meeting and should be submitted together with the research plan uploaded to the [milestone admin platform](#).

The information should be updated in the subsequent meetings and any changes must be communicated to the coordinator of the PhD Program in Ecology. The following points should be addressed in the doctoral agreement:

- Members of the thesis committee
- Curriculum, including planned internal and external lectures, seminars and courses
- Contribution to teaching (see below)

Doctoral agreement: https://www.ieu.uzh.ch/en/teaching/phd_ecology/links.html

For the second and all subsequent meetings, results and evidence of progress must be presented in a report submitted two weeks before the meeting to the committee members. The PhD student must upload the progress report and the signed committee meeting form to the [milestone admin platform](#).

UZH: the report should be up to 1000 words in scientific writing. The progress report can be substituted by a manuscript, provided that the PhD contribution is significant and clearly identifiable.

ETHZ: Possible [template for the progress report](#). Please check whether your department uses a specific template or has different requirements. If this is the case, follow the instructions of your department.

– Final meeting 6 months before registration for the exam.

4.4 CURRICULUM

Structure

PhD students attend program courses for a minimum of 12 ECTS credit points during their PhD; these are subdivided into four categories (see table below). The internal courses are communicated to all members of the program before semester start and they are listed in the UZH online semester plan “[Vorlesungsverzeichnis](#)”:

PhD students in the program must first register for mobility at UZH and ETHZ to book courses directly. Registration at UZH:

<https://www.uzh.ch/en/studies/application/chmobilityin.html>

Registration at ETHZ: <https://ethz.ch/en/studies/non-degree-courses/special-students/special-students-university-of-zurich.html>

Registered PhD students from all Swiss universities can book courses and the earned ECTS will be automatically accredited to the “Leistungsausweis” at their home university.

Scientific Integrity Course:

A Scientific Integrity course is compulsory for all Life Science Zurich Graduate PhD students. The course must be completed in the first year of their PhD. This regulation is in effect from 1 February 2016.

Internal courses, seminars and lectures of the four categories can be complemented with courses from the LSZGS graduate school, partner PhD programs and the UZH or ETH. In agreement with the program coordinator and the thesis committee, PhD students can also attend external courses. PhD students must collect a certificate for courses that are not booked through the institutional systems of UZH (Modulbuchung: see above) or ETH (myStudies) and get them

accredited to their student account by the respective faculty (UZH) or department (ETH). In case of doubt, the thesis committee will decide about the accountability and allocation of ECTS credits. One ECTS corresponds to a total workload of 30 hours (incl. preparation and homework). Oral/poster contributions can be each accredited with one ECTS and need to be certified by the PhD supervisor and the home university.

Categories	ECTS
Subject-specific matters (incl. special lectures)	3
Methods	3
Transferable skills	3
Research seminars (incl. oral/poster contributions)	2
Free choice	1
Total	(min. 12)

Additional courses the program accepts:

– Graduate School courses

The LSZGS offers a variety of interdisciplinary and soft-skill courses. Students may attend these courses for free. For more information and for registration visit the website. Courses of the Zurich Graduate School in Mathematics can be attended for free (excluding courses where additional payments to all participants apply).

– Courses of all LSZGS PhD programs, such as the partner programs Plant Science Centre and Evolutionary Biology. Students are free to take courses of other programs; however, the number of participants might be limited, and availability based on priority given to own members.

– Courses offered by UZH/ETH

Students can take courses offered by their respective host institution where they are matriculated, for example the Graduate Campus UZH offers transferable skills for PhD candidates or the courses offered by ETH.

– Courses from external institutions

In agreement with the thesis committee and the program coordinator.

Teaching hours

The PhD student and the supervisor list the planned teaching hours in the doctoral agreement. PhD students at MNF UZH have to report planned and absolved teaching hours to the “Fachbereich Biologie / Geowissenschaften”. Teaching hours include the support of lectures on the Bachelor/Master level, exam supervision and correction, and others. Total hours is between 100-420 hours. Teaching hours form: <https://www.biologie.uzh.ch/de/Studium/Doktorat.html>

Certificate

In addition to the UZH/ETH Diploma, the PhD student receives a certificate from the PhD Program in Ecology stating the successful participation in the program.

4.5 THESIS DEFENSE

Registration

The PhD student must submit and defend a thesis describing his/her original research carried out during the PhD studies. The thesis defense complies with the rules of the host institution: https://www.lifescience-graduateschool.uzh.ch/en/PI/requirements_end_PhD.html

The thesis committee decides whether the PhD student has passed their doctorate based on the exam and the thesis. In exceptional cases, the committee can recommend the students for distinction to the UZH/ETH. This recommendation has to be accompanied by two letters of reference from external reviewers. Distinction is intended for top ~5% of PhD students. The final degree is conferred by either the UZH or the ETH, depending on the academic affiliation of the research group.

The date and title of the defense must be communicated to the program manager no later than two weeks in advance.

Data backup

Together with the registration for the doctoral examination the PhD student has to hand over the thesis and the complete data used to produce the thesis, including meta information and where necessary analysis scripts, on a data storage medium to the thesis supervisor.

Additional information:

Research proposal general outline (+/- 2000 words in scientific language).

Introduction.

Provide only the necessary information to motivate your research and show how it fits into the broader field. What is the problem you are trying to solve? By the end of the introduction, your committee should understand the basics of what you will do and why you will do it.

Background/Methodology.

Detail the current state of research and related research fields. The goal is provide just enough detail to give a sound understanding of the current limitations and the need for new work. Do not go into detail that does not directly help in understanding your project.

Objectives.

This section summarizes the goals of your work - a list of concrete (quantifiable) goals that you want to accomplish.

Proposed Work.

Explain how your work will solve the problems that you have identified. How will you address the objectives above? Provide just enough information to provide a firm grasp of what you will do.

Provide a set of time-structured goals and deliverables.

Provide a 4 year timeline of when you plan to achieve the goals, such as setting up the experiment, literature reviews, analysis and writing.

References

ETHZ: The research proposal must follow the [Doctoral plan template](#)

Annual Progress report general outline (+/- 1000 words in scientific language).

Abstract

Present the background of your research project, list its main goals, describe the methods to be used and the expected results as well as their impact for the field and beyond.

Progress to date

Present the research work you have undertaken since your last progress report, describe the results obtained (including publications) as well as the relevance of these undertakings for your project. Link your work and results to the feedback and steps you had agreed on in your last doctoral committee meeting and annual status conversation.

Significant changes from the research project described in the doctoral plan

Describe shortly if there have been significant changes from the original project plan and explain why.

Potential next steps

Describe which next steps you plan to do in your research work.

References

List the sources of all work

Please do not forget to get the committee meeting signed

ETHZ PhD additional information ECTS recognition for Conferences and External courses:

For external courses:

- Choose the category meant for external work. Depending on your department, it will be labeled "External academic achievements", "Third-party courses", or "Other achievements".
- Click "Add study achievement".
- Type the full, exact name of the host university or institute (e.g., *Paul Scherrer Institute, University of Copenhagen*, etc.).
- Course Title: Type the exact title of the course as it is written on your certificate.
- Date: Enter the completion date or the semester it took place.
- Enter the exact number of ECTS stated on your certificate.
- *If the certificate only shows hours*: Calculate 1 ECTS per 30 hours of work, enter that number, and add a note in the comments section explaining the math.
- Locate the document upload field.
- Upload your consolidated PDF containing your Certificate of Completion/Attendance and the official Course Syllabus/Program.
- Submit the Request.

For Conferences:

- Create a single, consolidated PDF proof package for each conference presentation, a presentation package.
- Include the Certificate of Attendance, the Official Program Booklet Page showing your name/presentation title, your Accepted Abstract, and a brief signed confirmation from your ETH supervisor stating the number of credits awarded (typically 1 ECTS per active contribution).
- Click "Add study achievement" Select your department's specific category for external achievements (e.g., *Transferable Skills Courses / External Conference Participation*).
- Manually enter the details of your presentation and upload the presentation proof package

For UZH Courses if they are not in your transcript in mystudies:

- Log into the standard UZH Student Portal.
- Download your official, digitally verifiable UZH Transcript of Records (Leistungsausweis) reflecting your mobility course grades.
- In ETHZ myStudies, navigate to Credit Transfer.
- Log into the [ETH myStudies Portal](#).
- Go to the Matriculation section and select "Requests to transfer authorized study achievements."
- Log the UZH Mobility Courses.
- Click "Add study achievement".
- Input the course code, exact course title, and the number of ECTS exactly as they appear on your UZH Transcript of Records.
- Upload the digital UZH Transcript of Records as the mandatory supporting evidence.