**PhD Program in Ecology**
Universität Zürich
Institut für Evolutionsbiologie
und Umweltwissenschaften
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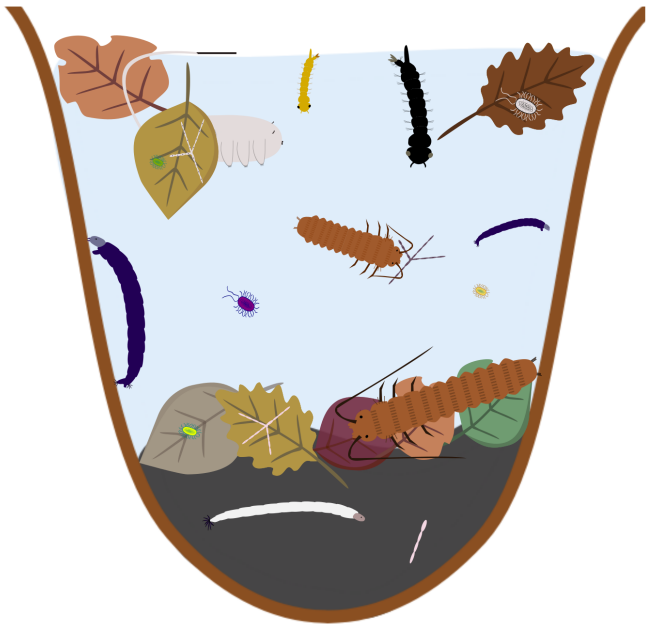
# PROGRAM SPRING TERM 2025



*"All have their worth and each contributes to the worth of the others."*
*— J.R.R. Tolkien, The Silmarillion*

Dear Members

We would like to warmly welcome our new students; **Zachary Cloutier, Holly Cunningham, Frederico Ferrari, Rama Harihara, Grace Kotnik, Julia Murer, Lucy Novovitch, Oliver Truffer** who recently joined our PhD program.

A warm welcome too for **Tamaki Ohmura** and **Oliver Hawlitschek** who joined the PhD Program in Ecology as PI's.

Congratulations to **Uriah Daugaard, Julia Hatzl, David Hofmann, Dominik Kirschner, Mara Knüsel, Rebecca Oester, Vitalii Zemlianskii , Heng Zhang** who successfully defended their PhD theses.

Thank you to **Francesca Cerroti** for our cover.

A big thank to all our PI's who contributed to the Ecological Theories course series: Anna-Liisa Laine, Christian Schöb, Damien Farine, Sonja Kay, Bernhard Schmid, Shinichi Sunagawa, Florian Altermatt, Jake Alexander, Andreas Bruder, Benedikt Schmidt, Thomas Crowther, Fletcher Halliday, Nathalie Dubois, Marcus Hall, Eva Knop, Wolf Blanckenhorn, Kentaro Shimizu, Arpat Ozgul, Michael Kessler, Alex Widmer, Crystal McMichael, Matthew Barbour, Janine Bolliger, Lukas Keller, Anita Narwani ,Beat Frey, Gilda Varliero, Jukka Jokela, Felix Herzog, Katalin Csilléry, Francesco Pomati, Jakob Pernthaler, Gabriela Schaepman-Strub, Christoph Vorburger, Blake Matthews, Rodrigo Cámara-Leret, Frank Pennekamp, Piet Spaak, Marcel van der Heijden and Niels Verhulst.
The PhD's were incredibly pleased to have this course in our curriculum, to hear about your work and to meet you all. This was an incredible community effort to bring the research that is done here to many of the PhD's in the program.

We are excited to introduce the new course program including ECO 398 Foundations in Ecology.

We continuously update our list of offered courses and seminars and are open to suggestions.

Students:
We would like to remind you to keep updated about changes to the regulations for PhDs (Appended to this document and visit the website for more information http://www.ieu.uzh.ch/en/teaching/phd/graduate.html).

PI's:
We can assist you to find 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 June 2025.

Please let us know about your *successes* which 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: Photographs of water-filled tree holes in a forest in Ticino, along with a schematic illustration of their communities (Pictures: © Max Fonseca, schematic illustration: © Francesca Cerroti)***

***Temporal dynamics of macroinvertebrates communities and decomposition rate in water-filled tree holes***

*Francesca Cerroti*

Water-filled tree holes (WHs) offer a unique natural system for studying ecosystem functions like organic matter decomposition within a contained aquatic environment. These microhabitats, formed in decayed or hollowed sections of trees, collect rainwater and organic debris, creating miniature aquatic ecosystems that support forest biodiversity. Decomposer communities in WHs—primarily microbes, aquatic fungi, and macroinvertebrates—actively process leaf litter, but their activity may vary significantly with seasonal changes. Extreme events such as summer drying or winter freezing can halt or sharply reduce decomposition. The relatively contained nature of WHs makes them ideal for investigating seasonal decomposition variability in a simplified yet ecologically significant context. In this study, we examined the seasonal dynamics of decomposer communities and leaf litter decomposition in WHs within a temperate forest, focusing on how seasonal shifts in environmental conditions and biodiversity affect decomposition rates in these microhabitats.

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# 1. COURSE OVERVIEW

### SUBJECT- SPECIFIC MATTERS

| Department | Course | LH | ECTS |
|---|---|---|---|
| IEU | ECO 398 Foundations in Ecology | 14 | 1 |
| IEU | ECO 397 Cutting Edge Research Club | 14 | 1 |
| IEU | BIO 402 Philosophy of Science with a Focus on Biology | 42 | 3 |

### METHODS

| Department | Course | LH | ECTS |
|---|---|---|---|
| IEU | ECO 331 General linear and linear mixed models in R | 28 | 2 |
| PSC | Statistical Modelling | 14 | 1 |

### TRANSFERABLE SKILLS

| Department | Course | LH | ECTS |
|---|---|---|---|
| IEU | ECO 303 Teaching Science at University | 28 | 2 |
| IEU | ECO 311 Writing a scientific manuscript | 28 | 2 |

### RESEARCH SEMINARS

| Department | Seminar | LH | ECTS |
|---|---|---|---|
| IEU | ECO 401 Presentation/Organization at Zurich Interaction Seminar (or equivalent) | - | 1 |
| IEU | BIO 605 Seminar for evolutionary biology and environmental studies | - | - |
| IEU | 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 398** | **Foundations in Ecology** |
|---|---|
| Course tutors | Jordi Bascompte and Debra Zuppinger-Dingley |
| Date / Time | 25 - 26.02.2025, 09:00-17:00 |
| Place | University of Zurich. |
| Content | This course focuses on the foundations of modern ecology by exploring the major intellectual and conceptual roots in ecology.<br>We focus on classic ecological papers that for generations of scientists have identified the key concepts in ecology and which have defined the core questions.<br>The course will provide a foundation in ecology through readings and discussions about foundational papers, theoretical advances, synthetic statements, methodological developments, field studies, and ecological experiments.<br>By covering some of the foundations and linkages in ecology, participants will gain a broad perspective of historical developments in ecology.<br>The goals of this course are to:<br>1. deepen your understanding of classical ecological processes;<br>2. provide some of the knowledge to enable you to improve your interpretation and critical analysis of current publications;<br>3. give you experience in leading discussions related to broader ecology concepts. |
| ECTS credits | Active participation in the course is needed to obtain 1 ECTS credit. |
| **Registration** | Module booking phdecology@ieu.uzh.ch, include your Surname, Name, student number, email address, PhD program and your institution. Priority will be given to students registered in the PhD Program in Ecology, however other PhD students may attend if there are available places. Registration by 15 February 2025, cancellation deadline by 25 January 2025. |

| **ECO 397** | **Cutting Edge Research Club** |
|---|---|
| Date / Time | 23.01., 27.02. 27.03, 08.05, 26.06.2025, 9:00 – 10:00 |
| Place | TBA |
| Content | Global change and biodiversity research is essential for improved conservation planning, policy, and management. We will reflect on recent published peer-reviewed journal articles fundamental to global change and biodiversity research.<br>The aim of this club is to delve into cutting-edge research papers to develop new insights and understanding of the research to flesh out the student's knowledge in many areas of global change and biodiversity research. Students will critically examine how collaboration may increase the interdisciplinarity and transdisciplinarity needed to bridge the gaps between research disciplines within global change and biodiversity research. |
| ECTS credits | Each student, individually or in pairs, presents one seminar including a summary and prepared discussion questions. The summary should include brief descriptions of:<br>- background of the presenter's research and its relevance to global change and biodiversity,<br>- aims of the research in the paper,<br>- methods used in the paper,<br>- key results in the paper,<br>- a discussion of the most important conclusions and implications for the research in the paper.<br>Attendance of 5 meetings is required for 1 credit points Active participation throughout the course. |
| **Registration** | Module booking phdecology@ieu.uzh.ch, include your Surname, Name, student number, email address, PhD program and your institution. Priority will be given to students registered in the PhD Program in Ecology, and the University Priority Program in Global Change and Biology. However, other PhD students may attend if there are available places. Registration open. |

| **BIO 402** | **Philosophy of Science with a Focus on Biology** |
|---|---|
| Course tutor | Dr. Anna Deplazes Zemp |
| Date / Time | Mondays.17.02.2025 - 26.05.2025, 14:00 - 16:00 |
| Place | TBA |
| Content | The lecture starts with a reflection on the discipline of biology. We address questions such as: What is the aim and achievement of this discipline? What kind of question does it address? What methods does it use to address them? How do biological explanations work? What are the basic assumptions on which biological research builds? How is it different from other sciences such as physics? We will look at the particular role of the theory of evolution in biological explanations and analyze key concepts in biology such as 'life' or 'gene&apos of the lecture, we will also address the connection between biology and ethics in the contexts of the difference between facts and values, evolutionary ethics and the transition from science to technology.<br><br>Learning Outcome: On successful completion of the lecture, the students should: Know central concepts and theories in the philosophy of science.<br>• Know central concepts and theories in the philosophy of science.<br>• Understand the particular lens through which biology studies the world and be aware of background assumptions and limitations.<br>• Understand the role of evolutionary theory for research and explanations in biology.<br>• Understand the connection between biology and ethics. |
| ECTS credits | Form, duration and timing of the assessment(s): (if several, define how the final grade is composed). Written answers to different tasks, final examination is needed to obtain 3 ECTS credit. |
| **Registration** | Module booking online. The allocation of places: priorities defined by the students will be taken into account.<br>. |

## COURSE DESCRIPTION: METHODS

| **ECO 331** | **General Linear and Linear Mixed Models in R** |
|---|---|
| Course tutor | Prof Dr. Pascal Niklaus |
| Date / Time | Mon 16.05.2025, Wed 18.06.2025, Fr 20.06.2025, Mon 23.06.2025, Wed 25.06.2025, Fr 27.06.2025 |
| Place | TBA |
| Content | In this course, the participants will learn to analyze experimental and observational data with general linear and linear mixed models. The course will be held as a workshop, with lecture-type parts introducing important concepts and exercises in which the participants will work on data sets provided or their own data. A key goal will be that the participants learn to recognize the essential structure of data sets and to implemented them adequately in statistical models with fixed and random effects. Specifically, the course will deal with issues of experimental design, analysis of variance, hypothesis testing, variance components, models with multiple error terms as well as balanced and unbalanced data.<br>(Note: it is important to understand that this course is not about generalized linear mixed models [GLMM, non-normal data], although it is possible to deal with such data in the projects)<br>Day 1: Introduction<br>Day 2: Important concepts<br>Day 3: presentation of projects by participants<br>Day 4: assisted work on own data<br>Day 5: assisted work on own data<br>Day 6: Presentation of results |
| ECTS credits | Active participation in the course is needed to obtain 2 ECTS credit points. |
| What you need to know | The course participants must be familiar with R and bring their own laptop with a working recent installation of the R software (http://www.r-project.org) including the libraries nlme, lme4, and lmerTest. |
| **Registration** | Please provide a short statement about where you are in your studies, about the data you will use during the course and what basic stats courses you have attended. Module booking phdecology@ieu.uzh.ch, include your Surname, Name, student number, email address, PhD program and your institution. Registration by: 01 June 2025. Cancellations for Course until 16 May 2025. |

| | **Statistical Modelling** |
|---|---|
| Course tutor | Prof. Dr. Matthias Templ and Dr. Barbara Templ |
| Date / Time | 17.-19.03.2025 |
| Place | ETHZ |
| Content | This comprehensive course is designed to equip participants with a deep understanding of linear regression and related advanced techniques using the statistical software R. Over three intensive days, we will cover essential concepts, hands-on exercises, and practical applications, ensuring that participants leave with the knowledge and skills needed to confidently apply these methods in real-world scenarios.<br>Day 1: Introduction to Linear Regression and OLS Estimation - participants will delve into the fundamentals of linear regression, gaining insights into its principles and application. We will explore Ordinary Least Squares (OLS) estimation as a cornerstone technique for parameter estimation. Additionally, we will examine various goodness-of-fit measures and hypothesis testing to assess model accuracy.<br>Day 2: Model Diagnostics, Robust Regression, and Variable Selection - participants will learn how to identify and address potential issues in their models. Robust regression techniques will be introduced to handle outliers and non-normally distributed data. Furthermore, we will explore variable selection methods to refine and optimize models.<br>Day 3: Outline on advanced regression topics: Nonlinear Regression, Splines, and General Additive Models These techniques are essentially used to uncover non-linearities and improve the linear model through the insights gained from the non-linear techniques. Participants will showcase their newfound knowledge and insights in presentations. |
| ECTS credits | To obtain 1 ECTS, participants are required to attend all course days and hand in an assignment to be carried out at home. |
| What you need to know | Basic knowledge of the R language would be ideal but is not essential. Participants without prior knowledge in R will be sent some preparatory material in advance. Please request it. |
| **Registration** | Students are required to bring their own computers, with the latest version of R downloaded from https://cran.r-project.org/. As an editor for R, we recommend installing the free desktop version of https://www.rstudio.com as well. PSC course registration is located within the ETH Zurich course registration system: https://ethz.ch/staffnet/en/service/courses-continuing-education.html |

| **ECO 362** | **The building blocks of Scientific Writing** |
|---|---|
| Course tutor | Dr Michael O'Brien |
| Date / Time | 31.03 - 04.04.2025, 09:00–17:00 |
| Place | TBA |
| Content | This course will give an overview of the structure and style of a scientific manuscript and provide a process for how to construct a manuscript for submission to a scientific journal. I will provide examples of different approaches to the writing process and common tips, tricks and pitfalls along the way. We will work step-by-step through the process of writing the sections of a scientific manuscript.<br>We will start each session with a lecture on aspects of writing a manuscript covering the language and structural components of each section including methods, results, introduction, discussion, abstract, cover letters and responding to reviewers. Practical work will be to draft your own manuscript for submission to a peer-reviewed journal. These writing workshop sessions will include drafting sections, reviewing the manuscripts of others and writing a cover letter to the editor of the journal. Therefore, I expect daily contributions of written material. I understand that this requires intense work, but writing is an intense working process. Open writing all sections<br>General approach and structure:<br>• How to revise<br>• Methods & Results section<br>• The importance of graphics<br>• Review Methods & Results<br>• Review Introduction<br>• Discussion (key points, conclusions, structure and subheadings)<br>• Review Discussion<br>• Abstracts, Titles, Keywords<br>• Cover letters<br>• Submission<br>• Responding to reviewers<br>• Grant writing |
| What students need to know | The course participants must have preliminary results including figures that can form the<br>foundation of your manuscript. However, ideally, everyone should have their main hypotheses. Laptops required. |
| ECTS credits | Active participation in the course is needed to obtain 2 ECTS credit points. |
| **Registration** | Module booking phdecology@ieu.uzh.ch, include your Surname, Name, student number, email address, PhD program and your institution.<br>Priority will be given to students registered in the PhD Program in Ecology, however other PhD students may attend if there are available places. Booking until 20 March 2025, cancellations until 28 February 2025. |

| **ECO 303** | **Teaching Science at University** |
|---|---|
| Course tutor | Sara Petchey |
| Date / Time | Online course runs from Tues 31 January 2025 for six weeks. In person lectures Tues 31.01.25 9.00-12.00 and Tues 16.05.25, 9.00-12.00 |
| Place | TBA |
| Content | Your first teaching experience should be effective, enjoyable, and personally beneficial. This course gives you the basic knowledge, tools, and practice to have such an experience. You will learn to make your scientific expertise accessible to your students and build a repertoire of evidence-based strategies for teaching abstract science topics to your students and making them active and successful learners. We will show you how to communicate science to novices as well as advanced students in science.<br>The course blends in-person and online learning which allows you to learn as a cohort of peers while maintaining the flexibility to learn at convenient times. We start with an in-person, half-day course followed by a 5-week online course involving videos and a weekly assignment (average of 3 hours of work per week). We meet in-person again for a half day at the end of the course.<br>Based on up-to-date findings from research into teaching and learning science you will be able to:<br>- implement evidence-based strategies into your own teaching,<br>- use students everyday-conceptions for the development of courses,<br>- prepare analogies and models to teach in your field,<br>- implement problem-based teaching,<br>- set up experiments and teach the nature of science. |
| ECTS credits | Active participation in the course is needed to obtain 2 ECTS credit points. |
| **Registration** | Module booking phdecology@ieu.uzh.ch, include your Surname, Name, student number, email address, PhD program and your institution.<br>Priority will be given to students registered in the PhD Program in Ecology, however other PhD students may attend if there are available places. Booking until 25 January 2025, cancellations until 01 January 2025. |

## RESEARCH SEMINARS

| **ECO 401** | **Zurich Interaction Seminar**<br>**Current research in ecology and evolutionary biology** |
|---|---|
| Organization | The current semester ZIS organizers please go 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. UZ students: ZIS is officially registered in the PhD program in Ecology under the name of ECO401. |

| **SEBES**<br>**BIO 605** | **Seminar for Evolutionary Biology and Environmental Studies** |
|---|---|
| Organization | Department of Evolutionary Biology and Environmental Studies, University of Zurich, Winterthurerstrasse 190, CH-8057 Zurich |
| Duration and time | Every Thursday from 16:15–17:00 |
| Place | University of Zurich Irchel, room TBA |
| Content | - For an overview of the running program visit: http://www.ieu.uzh.ch/seminars.html<br>- Attending the SEBES is strongly recommended for all students of the PhD Program in Ecology. For information about speaker invitations contact Maja Weilenmann. |
| ECTS credits | None |
| Information | M. Weilenmann (maja.weilenmann@ieu.uzh.ch) |
| **Registration** | No booking is required |

| **BEEES**<br>**BIO 606** | **Behaviour, 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 Tuesday 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<br><br>Attending the BEEES is recommended for all students of the PhD Program in Ecology. For information about speaker invitations contact Maja Weilenmann. |
| ECTS credits | None |
| Information | M. Weilenmann (maja.weilenmann@ieu.uzh.ch) |
| **Registration** | No booking is required |

## 3. USEFUL LINKS

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|---|---|
| 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 | http://www.ieu.uzh.ch/en/teaching/phd/graduate.html |
| Other courses<br>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.<br>Plant Science Centre:<br>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 during 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. At UZH the certificate is needed to register for the thesis defense.

*Further information*

All documents, including the semester course program are available on the homepage: http://www.phd-ecology.uzh.ch/

## 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 February and September, calendar week 6 and 36. Applications outside the official interviews (track 2) are possible if a student is employed in a PhD position. Please contact the coordinator of the PhD Program in Ecology phdecology@ieu.uzh.ch.

*Acceptance interview*

Acceptance to the program is granted based on an interview. The interview includes a presentation by the candidate, followed by questions on the candidates' scientific competences. At least three official representatives of the PhD Program in Ecology are present. A protocol of the interview will be signed by all members of the acceptance committee. 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 communcation skills in English during the interview

Acceptance form: http://www.phd-program.org/Documents_Ecology.zip

*Fast track*
Fast track candidates of the Specialized MSc Environmental Sciences can enter the PhD Program in Ecology directly through a combined acceptance interview.

*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 have to submit their registration form to the program coordinator: phdecology@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 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 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 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 submits the thesis meeting report to the coordinator of the PhD Program in Ecology.

Thesis Meeting Report:
https://www.ieu.uzh.ch/en/teaching/phd/graduate/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.

*Research plan*
Prior to the first meeting, the PhD student has to submit to all committee members and to the program coordinator a research proposal of ~2000 words (excluding references) describing his/her proposed project. 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.

In case of unsatisfactory performance, the PhD student can repeat the proposal defense within 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 to the coordinator of the PhD Program in Ecology.

*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 to the coordinator of the PhD Program in Ecology. The information should be updated in the subsequent meetings and any changes have to 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:
http://www.ieu.uzh.ch/en/teaching/phd/graduate/links.html

– Second meeting after 18 months and third meeting after 30 months to present results and evidence of progress. For all subsequent meetings, the PhD student has to submit to the committee members and to the program coordinator a progress report (up to 1000 words) two weeks before the meeting. The progress report can be substituted by a manuscript, provided that the PhD student's contribution is significant and clearly identifiable.

– 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":
https://studentservices.uzh.ch/uzh/anonym/vvz/index.html#

PhD students in the program have to 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:*
The 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.

| 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. Teaching at the Science Education Center (within the disciplines of life science, mathematics, physics, chemistry, geography and biology) can be accredited as teaching hours. Total hours are between100-420 hours.
Teaching hours form: http://www.biologie.uzh.ch/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. The certificate will be signed by the program director, coordinator and the supervisor and is needed to register for the thesis defense.

### 4.5 Thesis Defense

*Registration*
The PhD student has to submit and defend a thesis describing his/her original research carried out during the course of 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 or not. 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 the 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 one week 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.

## 4.6 Presentations and Publications


For any oral/poster presentation it is recommended to use this logo. http://www.ieu.uzh.ch/en/teaching/phd/graduate/links.html

*Confidentiality*

The exchange of scientific data and unpublished results is fundamental for the PhD Program in Ecology. Such information is strictly confidential and should not be shared prior to publication by any of its members. The protection of intellectual property as outlined by the associated institutions needs to be assured.