Bachelor’s thesis in the Bachelor’s degree programme in Environmental Sciences: Information sheet for students and faculty

Learning objective
Through the Bachelor’s thesis students learn (a) to address an issue using scientific methods and concepts; (b) to author a report according to scientific standards; (c) to cite literature sources correctly. Depending on the orientation of the thesis, students develop these skills in the context of an empirical study, a literature review, a planning or design task, or a practical project.

Content
Students either write a long Bachelor’s thesis (“BA”, 10 credits, 701-0010-10L) or two shorter Bachelor’s theses (5 credits each, 701-0010-02/3L). The long Bachelor’s thesis addresses a theme from either “Humanities and Social Sciences” or “Natural Sciences and Technical Electives”. It may also be interdisciplinary or trans-disciplinary. Students who choose two short theses write one on a topic from “Humanities and Social Sciences”, and the other on a topic from “Natural Sciences and Technical Electives”.

A Bachelor’s thesis in the area of “Humanities and Social Sciences” generally addresses a theme at the interface of social sciences and the humanities, the environment and sustainability. It deploys sociological and humanistic tools of data collection, analysis and interpretation. A thesis in the “Natural Sciences” area addresses a theme at the interface of natural sciences, environment and sustainability. It deploys scientific tools of data collection, analysis and interpretation. A thesis in the area of “Technical Electives” addresses the environmental effects of a particular use of technology, in the form of an analysis, an assessment or the future design of a particular use. Interdisciplinary or trans-disciplinary theses merge findings from various areas to address an overarching issue, or include social players.

Form and scope
A Bachelor’s thesis usually comprises an illustrated text of 15-20 pages (short thesis) or 30-40 pages (long thesis). The time outlay envisaged is 150 hours (short thesis) or 300 hours (long thesis). Models for Bachelor’s theses are scientific publications and environmental reports. Other forms may be selected in consultation with the supervisor (e.g. some theses have already involved planning, conducting and evaluating local Agenda 21 activities; role-playing; and the writing of film scripts).

Bachelor’s theses are normally written in the third year of studies, but thesis work may begin in the second year. It is recommended that students undertake examination blocks 1, 2, and 3 before beginning the Bachelor’s thesis. Theses may be authored individually or in the context of group work; group work theses are more comprehensive. Bachelor’s theses may be authored in German or English.

Assessment
Bachelor’s theses are assessed according to the following criteria. These criteria normally have equal weight, but that of criterion 5 depends on the specific task.

1) Content
   - How far does it address the issue?
   - Originality of the thesis
   - Practical relevance of the findings (particularly for theses in the technological area)
   - Assertions and conclusions are backed up by facts and arguments

2) Transparency/Reproducibility
   - The data and statements cited are imparted in the author’s own words or quoted verbatim, and their sources provided correctly.
   - Data collection and analysis has been performed correctly.
   - Established knowledge, facts and doctrines are distinguished from suppositions and personal opinions
   - The methods and theoretical bases deployed are obvious.

3) Communicative quality of the report
   - The report is logically structured and intelligibly written, in a manner appropriate to its target audience.
   - The findings are arranged clearly.
   - There is a meaningful summary.
   - The layout is attractive.
4) Formal quality of the report
   - Citation rules have been adhered to.
   - Grammar, spelling and punctuation are correct according to Duden rules.

5) Independence in the working process

Supervision
All professors and faculty involved in teaching the degree programme in Environmental Sciences are entitled to supervise Bachelor’s theses. However, Bachelor’s theses in the area of “Humanities and Social Sciences” may only be supervised by faculty teaching in this area, and Bachelor’s theses in the area of “Natural Sciences and Technical Electives” may only be supervised by faculty teaching in the area of natural sciences, systems or technology. Requests for a thesis to be supervised by a person without ETH faculty status should proceed using the form “Supervisors not listed in myStudies”.

Progression
The student selects one supervisor and together they establish the topic and form of the thesis. The student registers the thesis in myStudies and provides the name of the supervisor.

At least three supervisory consultations should take place during thesis work, plus further discussions if necessary.
   - Introductory discussion: Requirements, faculty expectations, particular standards if any, delineation of the theme, thesis plan, important literature
   - Mid-thesis discussion: Check of whether thesis work is on the right track, especially of whether the topic is being addressed using the appropriate means and in the required detail, and whether there are difficulties or uncertainties
   - Concluding discussion: Comprehensive feedback on the content and formal quality of the thesis, with the possibility of suggesting additions and corrections

The definitive version of the thesis is graded by the supervisor. The supervisor must ensure that a signed declaration of originality is integrated into the thesis, including the electronic version. The student normally receives concluding feedback in written form or in a further meeting.

Tips
Students should have maximum freedom in determining the direction of the thesis and the time framework. However, to avoid stretching it out excessively a project agreement with the supervisor is recommended.

Registration of grade by the supervisor
Unless otherwise agreed, the supervisor has a maximum of 4 weeks after the final definitive thesis is submitted to grade it. As soon as the grade is established, the supervisor enters it in eDoz: “Grades/Results > Semester performance>” (= Semester when thesis work officially began; if the student registered for it normally in myStudies his/her name will appear under “… Bachelor’s thesis...” for grade entry). The supervisor prints out the grades list, signs it and sends it to the Study Administration Office.

Layout Front Page and Submission
The front page must contain the following information (there is no layout restriction): ETH Logo/Thesis type (Bachelor's thesis)/Name of the student/Student ID no./Degree Programme Environmental Sciences/Title of the Bachelor's thesis/Supervisor and Advisor, with their academic institution (both could grade the thesis)/Date of submission (dd/mm/yyyy)/Note “Confidential” (only if asked)

The form of submission (printed, bound, PDF, etc.) of the Bachelor’s thesis needs to be agreed with the supervisor. Additionally, the Bachelor's thesis must be handed in as a PDF document to the Study Administration: studyadministration@usys.ethz.ch.

For further information:
   - Study advisor Natural Sciences and Technical Electives: Dr. Susanne Lambrecht