

Appendix

To the Programme Regulations 2013 of the
Master's degree programme in Environmental Sciences

1 November 2017 (Version: 01 September 2019)

Applies to students who enter or re-enter the programme from Autumn Semester 2020 onwards.

For those entering the programme before Autumn Semester 2020 the stipulations of the previous Appendix apply.

This English translation is for information purposes only. The German version is the legally binding document.

This appendix sets out the prerequisites for and further details regarding admission to the Master's degree programme in Environmental Sciences. It supplements the stipulations of the Admission Regulations of ETH Zurich and the Directive on Admission to Master's Degree Programmes.

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1 Profile of requirements

Policy

For admission to the Master's degree programme in Environmental Sciences (subsequently "the degree programme") all of the following prerequisites must be satisfied.

1.1 Degree qualifications

¹ The prerequisite for admission to the degree programme is one of the following:

- a. A university Bachelor's degree in Environmental Sciences comprising at least 180 ECTS¹ credits or an equivalent university degree in Environmental Sciences or Environmental Engineering
- b. A Bachelor's degree in Environmental Sciences or Forestry from a Swiss university of applied sciences comprising at least 180 credits²
- c. A university Bachelor's degree comprising at least 180 credits or an equivalent university qualification in a discipline other than Environmental Sciences or Environmental Engineering which, if any pertaining additional admission requirements are fulfilled within the given time frame, satisfies the academic prerequisites set out in 1.2 of this Appendix.

² A Bachelor's degree qualifies its holder for admission to an ETH Master's degree programme only if it also qualifies said holder to enter, without additional requirements, the desired Master's degree programme within the university system where the Bachelor's degree was acquired. The Rector may also demand proof of this, determining whether such proof must come from the home university or from another university in the country where the Bachelor's degree was acquired.

1.2 Academic prerequisites

¹ Attendance of the Master's degree programme in Environmental Sciences presupposes basic knowledge and skills in the areas of mathematics, the fundamentals of natural sciences, environmental systems science, and humanities and the social sciences which are in content, scope, quality and skills level equivalent to those covered at ETH Zurich (discipline requirements profile).

² The **discipline requirements profile** comprises **64 credits** in total and is based on knowledge and skills covered in the ETH Bachelor's degree programme in Environmental Sciences. This includes training in the relevant methodological scientific thinking.

¹ ECTS: European Credit Transfer System. Credits describe the average time expended to achieve a learning goal. One credit corresponds to a workload of 30 hours.

² A Diploma from a Swiss university of applied sciences is considered equivalent to a Bachelor's degree in the same discipline. A Bachelor's degree from a German or Austrian university of applied sciences is considered equivalent to a Bachelor's degree from a Swiss university of applied sciences.

³ If a candidate does not fully satisfy the academic prerequisites, admission may be granted subject to the acquisition of the missing knowledge and skills. The scope of these is expressed in the form of additional credits. Details regarding fulfilment of additional requirements are provided in section 4 below.

⁴ Admission to the degree programme is not possible if the gaps in the candidate's academic knowledge are too extensive. Details are provided below in sections 2.3, 2.4 and 2.6 (persons with university degrees) and 2.5 (persons with degrees from universities of applied sciences).

⁵ The discipline requirements profile is structured in two parts, as follows. Details regarding the content of the corresponding course units are published in the Course Catalogue (www.vvz.ethz.ch).

Part 1: Basic knowledge (52 credits)

Part 1 comprises 52 credits and covers basic knowledge and skills in the disciplines of mathematics, the natural sciences, environmental systems, humanities and the social sciences. The substance of the following course units is required:

Mathematics (14 credits)

- Analysis I & II and Lineare [Linear] Algebra
- Systemanalyse [Systems Analysis]
- Statistik [Statistics]

The natural sciences / environmental systems (32 credits)

- Allgemeine Biologie [General Biology] I & II
- Evolutionsbiologie [Evolutionary Biology]
- Mikrobiologie [Microbiology]
- Ökologie [Ecology]
- Chemie [Chemistry] I & II
- Physik [Physics] I & II
- Umweltsysteme [Environmental Systems] I & II
- Atmosphäre [Atmosphere]
- Pedosphäre [Pedosphere]
- Hydrosphäre [Hydrosphere]

Humanities and the social sciences (6 credits)

- Ökonomie [Economics]
- Umweltrecht [Environmental Law]
- Umweltpolitik der Schweiz [Environmental Policy in Switzerland]
- Methoden des Argumentierens in Wissenschaft und Ethik [Methods of Argument in Science and Ethics]
- Methoden der empirischen Sozialforschung [Methods of Empirical Social Research]

Part 2: Specialisation-specific knowledge (12 credits)

Part 2 comprises 12 credits and covers knowledge and skills which the candidate requires for the selected specialisation ("major").

Major: Atmosphere and Climate

- Atmospheric physics]
- Atmospheric chemistry]
- Meteorology
- Climate]
- Numerical modelling

Major: Biogeochemistry and Pollutant Dynamics

- Biogeochemistry
- Global cycles
- Environmental chemistry
- Environmental physics
- Environmental microbiology
- Ecotoxicology

Major: Ecology and Evolution

- Ecology
- Evolution
- Genetics
- Infectious diseases

Major: Forest and Landscape Management

- Botanical species knowledge
- Forest and landscape ecology
- Spatial information systems (GIS)
- Planning and use of forest and landscape
- Environmental law, politics and economics

Major: Environmental Systems and Policy

- Social sciences
- (Statistical) modelling
- Deploying policy analysis

Major: Human Health, Nutrition and Environment

- Human anatomy and physiology
- Food sciences
- Environmental chemistry and ecotoxicology
- Immunology
- Microbiology
- Statistical application

1.3 Language prerequisites

¹ The teaching language of the degree programme is English.

² For admission to the degree programme, proof of sufficient knowledge of English (Level C1³) must be provided.

³ Applicants to the degree programme who hold a Bachelor's degree from a university of applied sciences must, because of the additional requirements for admission, also supply proof of sufficient knowledge of German (Level C1).

⁴ The required language certificates must be submitted by the application deadline. The ETH Zurich publishes a list of the language certificates accepted.

2 Specific stipulations for admission and entry to the Master's degree programme

2.1 Bachelor's degree in Environmental Sciences or Environmental Engineering from ETH Zurich

Unconditional admission

¹ The following persons are guaranteed unconditional admission to the degree programme:

- a. Holders of a Bachelor's degree in Environmental Sciences or Environmental Engineering from ETH Zurich
- b. Persons enrolled in one of these Bachelor's degree programmes at ETH Zurich

Entering the Master's degree programme

² Students of the Bachelor's degree programmes in Environmental Sciences or Environmental Engineering may enrol directly in the degree programme via www.mystudies.ethz.ch. The admission procedure outlined in section 3 is dispensed with. Details:

- a. The normal ETH Zurich enrolment dates and deadlines apply.

³ The required language level is measured according to the Common European Framework of Reference for Languages scale (CEFR).

- b. Students of the Bachelor's degree programme in **Environmental Sciences** may enrol as soon as only 30 credits remain to be acquired for the Bachelor's degree and if all of the credits required for the Bachelor's degree in core subjects I and II have been acquired.
- c. Students of the Bachelor's degree programme in **Environmental Engineering** may enrol as soon as only that number of credits which would allow them to enrol in the consecutive Master's degree programme in Environmental Engineering remain to be acquired.
- d. Admission is provisional until the Bachelor's degree is issued. Admission will be revoked if the Bachelor's degree is not or cannot be issued.

2.2 Bachelor's degree in Sciences et Ingénierie de l'Environnement from EPF Lausanne

Unconditional admission

¹ Holders of a Bachelor's degree in Sciences et Ingénierie de l'Environnement from EPF Lausanne are unconditionally admitted to the degree programme.

² Admission is subject to fulfilment of the language prerequisites set out in section 1.3 above.

Entering the Master's degree programme

³ Candidates who have been granted admission may only enter the Master's degree programme when they have completed the preceding (Bachelor's) degree programme.

2.3 Bachelor's degree in Environmental Sciences or Environmental Engineering from another Swiss university

Admission

¹ Holders of a Bachelor's degree or the equivalent in Environmental Sciences or Environmental Engineering from another Swiss university may be admitted to the degree programme.

² Admission is subject to fulfilment of the language prerequisites set out in section 1.3 above.

³ Admission may be subject to additional requirements.

Entering the Master's degree programme

⁴ Candidates who have been granted admission may only enter the Master's degree programme when they have completed the preceding (Bachelor's) degree programme.

2.4 Bachelor's degree in Environmental Sciences or Environmental Engineering from a university outside Switzerland

Admission

¹ Persons holding a Bachelor's degree or the equivalent in Environmental Sciences or Environmental Engineering from a university outside Switzerland must satisfy the academic and language prerequisites listed in section 1 above to be admitted to the degree programme.

² Admission may be subject to additional requirements.

³ Admission is not possible if

- a. the language prerequisites listed in section 1.3 above are not satisfied;
- b. the content, scope, quality and skills level of the degree are not equivalent to those at ETH Zurich;
- c. the number of additional credits required to satisfy the academic prerequisites exceeds
 - 1) 20 credits in total; or
 - 2) 15 credits from Part 1 of the academic prerequisites (see 1.2 above).

Entering the Master's degree programme

⁴ Candidates who have been granted admission may only enter the Master's degree programme when they have completed the preceding (Bachelor's) degree programme.

2.5 Bachelor's degree in Environmental Engineering or Forestry from a Swiss university of applied sciences

Admission

¹ Holders of a Bachelor's degree in Environmental Engineering or Forestry from a Swiss university of applied sciences are admitted to the degree programme if both of the following apply:

- a. The final Bachelor's degree grade is at least a 5 (according to the Swiss grading system, which involves grades from 1 (lowest) to 6 (highest))⁴.
- b. The language prerequisites set out in 1.3 above are satisfied.

² Admission is always subject to the acquisition of missing academic and methodological knowledge via additional study achievements which total at least 46 credits.

⁴ The total grade is always calculated by ETH Zurich. The method of computation used, and other details such as how letter grades are transposed, are stipulated in the Directive on Admission to Master's Degree Programmes (www.weisungen.ethz.ch).

³ The additional requirements to be fulfilled by candidates are structured in two parts, as follows:

Additional requirements **Part 1**

To fulfil additional requirements Part 1, 46 credits must be acquired in the areas of mathematics and natural sciences as set out below. The individual course units belong to the curriculum of the ETH Zurich Bachelor's degree programme in Environmental Sciences. Details regarding their content are published in the Course Catalogue (www.vvz.ethz.ch).

- Mathematik [Mathematics] I and II (13 credits)
- Chemie [Chemistry] I and II (9 credits)
- Biologie [Biology] I–III, Evolutionsbiologie [Evolutionary Biology] (12 credits)
- Mikrobiologie [Microbiology] (2 credits)
- Physik [Physics] I and II (10 credits)

Additional requirements **Part 2**

To fulfil additional requirements Part 2, candidates may be required to build up knowledge necessary for the selected specialisation ("major"). The required knowledge is determined by the responsible study advisor on behalf of the admissions committee.

If no Bachelor's thesis comprising at least 5 credits is documented, a Bachelor's thesis will also be an additional requirement.

Entering the Master's degree programme

⁴ Candidates who have been granted admission may only enter the Master's degree programme when they have completed the preceding (Bachelor's) degree programme.

2.6 University Bachelor's degree in another discipline or enrolled at ETH Zurich in a Bachelor's degree programme in another discipline

Admission

¹ If they can satisfy the academic and language prerequisites set out in section 1 within the given framework, and if they showed very good academic performance during their Bachelor's degree studies, the following persons may also be admitted to the Master's degree programme:

- a. Holders of a university Bachelor's degree or the equivalent in a discipline other than Environmental Sciences or Environmental Engineering
- b. Persons enrolled at ETH Zurich in a Bachelor's degree programme other than Environmental Sciences or Environmental Engineering.

² Admission may be subject to additional requirements.

³ Admission is not possible if

- a. the language or performance prerequisites are not satisfied;
- b. the content, scope, quality and skills level of the degree are not equivalent to those at ETH Zurich;
- c. the number of additional credits required to satisfy the academic prerequisites exceeds
 - 1) 20 credits in total;
 - 2) 15 credits from Part 1 of the academic prerequisites (see 1.2 above).

Entering the Master's degree programme

¹ Students of an ETH Zurich Bachelor's degree programme (other than Environmental Sciences or Environmental Engineering) who have been granted admission are subject to the following:

- a. They may enrol in the Master's degree programme as soon as only that number of credits which would allow them to enrol in the Master's degree programme consecutive to the original discipline⁵ remain to be acquired.
- b. The normal ETH Zurich enrolment dates and deadlines apply.
- c. Admission is provisional until the Bachelor's degree is issued. Admission will be revoked if the Bachelor's degree is not or cannot be issued.

² All other candidates who have been granted admission may only enter the Master's degree programme when they have completed the preceding (Bachelor's) degree programme.

3 Application and admission procedure

¹ All candidates – with the exception of matriculated ETH Zurich students from the Bachelor's degree programmes Environmental Sciences and Environmental Engineering – must submit an application for admission to the degree programme. The binding specifications for application, in particular the documents required and the dates/deadlines for submission, are published on the website of the ETH Zurich Admissions Office (www.master-bewerbung.ethz.ch).

² Application may be made even if the required preceding degree has not yet been issued.

³ Applications will not be considered if

- a. they are not submitted by the set deadline or are not in the correct form;
- b. any associated fees are not paid.

⁵ The permitted number of pending credits is set out in the Programme Regulations of the respective Master's degree programme (e.g. BSc Physics > MSc Physics).

⁴ The admissions committee of the degree programme determines how far the background of the candidate corresponds to the profile of requirements and submits an application for admission/rejection to the Director of Studies.

⁵ On the request of the Director of Studies the Rector makes the final decision regarding admission or rejection.

⁶ The candidate receives a written admissions decision which includes information on any additional admission requirements.

4 Fulfilling additional admission requirements

4.1 General regulations

¹ Candidates who are admitted subject to the fulfilment of additional requirements must acquire the required additional knowledge and skills before or during the Master's degree programme via independent study or by attending classes. They must undertake the associated performance assessments by the set deadlines.

² If the candidate fails said performance assessments or does not respect the set deadlines he/she will be regarded as having failed the degree programme and will be excluded from it.

³ The deadlines and conditions for undertaking the performance assessments depend upon the background of the candidate (see sections 4.2 and 4.3 below).

4.2 Candidates with a university Bachelor's degree

¹ Candidates holding a university Bachelor's degree must undertake all of the performance assessments pertaining to the additional admission requirements by the end of the first year of the Master's programme at the latest. All additional requirements, including any assessment repetitions, must be fulfilled within 18 months of the start of the Master's programme at the latest.

² A pass grade in each individual performance assessment is required.

³ A failed performance assessment may only be repeated once.

4.3 Candidates with a Bachelor's degree from a Swiss university of applied sciences

¹ Candidates holding a Bachelor's degree from a Swiss university of applied sciences must undertake all of the performance assessments pertaining to the additional admission requirements by the end of the first year of the Master's programme at the latest. All additional requirements, including any assessment repetitions, must be fulfilled within two years of the start of the Master's programme at the latest.

² If the performance assessments involve session examinations, these may be grouped into examination blocks as long as they are offered in the same examination session. The examinations belonging to a block must always be undertaken within the same examination session.

³ A pass grade in an examination block is achieved if the average of the individual grades is at least a 4.

⁴ A failed performance assessment or a failed examination block may only be repeated once. Repeating an examination block entails repeating all of the performance assessments belonging to it.