

University of Tübingen exam regulations for the study program in Geoecology culminating in an examination for a Master of Science (M. Sc.) – Special Provisions –

In accordance with §§ 19 paragraph (1) sentence 2 nos. 7 and 9, 32 paragraph (3) of the law governing institutions of higher education, LHG of 1 January 2005 (GBl. p. 1), in the version published 1 April 2014 (GBl. p. 99) most recently amended by article 1 of the law dated 24 June 2020 (GBl. p. 426), the University of Tübingen Senate on 11.02.2021 passed the Special Provisions of these exam regulations for the study program in Geoökologie / Geoecology at the University of Tübingen culminating in an examination for a Master of Science (M. Sc.) degree.

Approved by the President and Vice-Chancellor on ...

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A. Validity of General Provisions and admission requirements

§ 1 Validity of General Provisions

The University of Tübingen exam regulations for Master's degree programs culminating in the academic degree of Master of Science (M.Sc.) / Master of Arts (M.A.) – Master's degree framework exam regulations (MRPO) – as amended represent the General Provisions of these exam regulations and are an integral part of them, insofar as no more specific provisions have been made.

§ 2 Requirements for admission to program

(1) ¹A prerequisite for studies in this Master's program is a grade of 2.5 or better in a Bachelor's degree in the subject of Geoecology, in a related program covering basically the same material, or an equivalent degree. ²The responsible examination board decides on the equivalency of a degree. ³The board of examiners may transfer the making of this decision revocably to the head of

the board. ⁴If there is a restricted number for admission, the articles may specify that the selection committee formed for the relevant selection process decides instead.

(2) To take part in the Master's program, applicants must also document knowledge of English at least at the level of B2 of the Common European Framework of Reference for Languages (CEFR).

B. Goals, content and structure of the program

§ 3 Goals and content of program, regular duration of study, scope of program

(1) ¹Studies in Master of Science program (M. Sc.) in Geoecology (hereinafter: the program) enable students to acquire the specific qualifications, competencies, knowledge, abilities and skills required for a Master's degree in the subject of Geoecology under § 7 (1) of the Master's degree framework exam regulations (MRPO). ²Building upon a broad base of knowledge in Geoscience, Biology, Ecology, Chemistry, Physics and Mathematics from a study program in the Sciences, this program aims at quantitative understanding of the complex interplay of the lithosphere, pedosphere, biosphere, hydrosphere and atmosphere as well as competence in the relevant methods required for successful processing of environmentally-relevant scientific problems. ³Students learn to analyze geoecological problems quantitatively in their scientific context, to collect, evaluate and interpret data independently and using appropriate methods - and to use and judge critically international specialist literature in the discipline. ⁴The focus is - both broadly and in the Master's thesis - on the quantitative analysis of geoecosystems in order to evaluate and guide changes in their use and/or their rejuvenation. ²The objective of the degree program is to deepen or expand the knowledge acquired in the Bachelor's degree program, thus providing the basis for the development and/or application of the student's own ideas (application or research-oriented); graduates possess a broad, detailed and critical understanding at the cutting edge of knowledge in one or more specialized fields and

- are able to apply their knowledge and understanding as well as their problem-solving skills in new and unfamiliar situations related to their field of study in a wider or multidisciplinary context (instrumental competencies),
- to integrate knowledge and deal with complexity,
- and to make scientifically sound decisions on the basis of incomplete or limited information, taking into account social, scientific and ethical findings resulting from the application of their knowledge and from their decisions,
- to acquire new knowledge and skills independently and to carry out largely self-directed and/or autonomous independent research- or application-oriented projects (systemic competencies)
- to communicate their conclusions and the information and motives underlying them to expert representatives and laypersons in a clear and unambiguous manner, to exchange information, ideas, problems and solutions with both experts and laypersons on a scientific level and to assume prominent responsibility in a team (communicative competencies).

⁶Further details of the course objectives are set out in the module handbook.

(2) ¹The regular duration of study for this degree program is 4 semesters. ²The program comprises 120 credit points (CP).

(3) ¹Over and above the number of credit points prescribed for the degree program according to these regulations, students may obtain no more than a 60 additional credit points from the degree program modules specified in § 5, para. (1); in all other respects, § 2, para. (5) of the Master's degree framework exam regulations applies.

§ 4 Academic degree

The academic degree "Master of Science" (abbr. "M.Sc.") is awarded on the basis of a successful completion of a Master of Science examination.

§ 5 Program structure

(1) ¹Students complete a program to earn credit points as set out in § 3 para. (2); the program consists of the following modules:

Se- mes- ter no.	Module no.	P/WP	Module title	Work for as- sessment	CP
Compulsory Modules (Pflichtbereich)					
1	M 231	P	M.Sc. Seminar Geoecology	written / oral	6
2	M 230	P	Geosphere-Biosphere Interactions	written / oral	6
3	M 101	P	Scientific Practice	-	6
4	M 103	P	Scientific Presentation	-	6
Option 1: Specialization Biogeoscience of the Land Surface (see sentence 2)					
1	M 301	WP	Physics of the Earth's Surface	written	6
1	GEO 77	WP	Geomorphology and Soil-Landscape Modeling	written / oral	6
2	GEO 85	WP	Planetary Boundaries	written	6
2	M 210	WP	Environmental Microbiology and Geomicrobiology	written / oral	6
2	GEO 87	WP	Biodiversity and Ecosystem Functioning	written / oral	6
Option 2: Specialization Environmental Chemistry and Ecotoxicology (see sentence 2)					
1	M 235	WP	Advanced Ecotoxicology	written / oral	6
1	M 207	WP	Environmental Chemistry	written	6
1	M 221	WP	Environmental and Human Health Risk Assessment of Chemicals	written	6
1	M 209	WP	Environmental Chemistry Lab	written / practical	6
2	M 234	WP	Experimental and Analytical Methods in Environmental Chemistry & Ecotoxicology	written / practical	6
Option 3: Ecology and Nature Conservation (specialization, see sentence 2)					
1	M 407	WP	Conservation Palaeoecology	written	6
1	3102	WP	Global Change Ecology II	written / oral	6

2	3132	WP	Biotic Interactions: Plant-Animal Interaction	foP	6
2	4214	WP	Plant Ecology II	written	6
2	M 237	WP	Field Ecology II	written / oral	6
Elective Modules (required electives, see sentence 3)					
1-4	M WP	WP	Modules from programs run by the Department of Geoscience or by other departments in accordance with the module handbook.	depending on module chosen, s. module handbook	36
Final module section					
4	M 104	P	Master's thesis (final module)	Master's thesis	30

Notes: FS = recommended semester (subject to availability and change, see module handbook); module no. = current module no. or abbreviation (subject to change, see module handbook), P = compulsory, WP = required elective, CP = credit points, foP = formative assessment, K = written exam, H = assignment; mP = oral defense; final module: Master's thesis and, if required by the exam regulations or the module handbook, an oral examination in the final module.

²One of the specialization areas set out in the table in sentence 1 above must be selected and the modules listed there successfully completed. ²Sufficient compulsory elective modules must be selected - in accordance with the module handbook - so that a total of 24 credit points may be earned. ⁴A total of at least 6 CP must be attained in the subject of Biology in the specialization area or in the required elective area; details of required electives may be found in the current module handbook. ⁵Other modules relating to the content and qualification goals of this degree program may be admitted as required electives upon application; the head of the examination board will decide. ⁶However, a maximum of two modules from Bachelor programs is permitted - and then only modules which the student did not complete in the previous Bachelor's degree program. ⁷If modules in the "compulsory modules" area were completed in the student's previous Bachelor's degree studies or in the specialization field selected under sentence 2, these must be replaced by further required electives with the same workload; the head of the examination board may specify the content of the replacement modules.

§ 6 Module coursework

¹Details of the module coursework required in each of the modules is set out in the module table in these regulations (§ 5) and in the module handbook. ²Assessment must be clearly specified as to its type and scope, if this is not set out in the module table. ³For the modules in the required electives area, students may be directed to the module handbook of the respective department in which the modules originate.

§ 7 Languages of instruction and examination

¹English is the language of instruction and examination in this degree program. ²Classes and module coursework may be conducted, promoted and taught in the following languages:

- German.

³Furthermore, teachers and examiners may promote and/or conduct classes and/or module coursework in another language for the purpose of teaching that language. ⁴Exams are usually conducted in the language in which the relevant classes were held; other assessment is usually conducted in the language in which the relevant classes were held. ⁵It is therefore assumed that students have sufficient knowledge of the relevant languages.

C. Assessment in the program

I. General Provisions for assessed coursework

§ 8 Examiners

Notwithstanding § 14 (1) sentence 3 MRPO, assessment may be conducted by more than one examiner if the contents of the module straddle more than one sub-field of the degree program; the examination board decides.

II. Special provisions for the final module

§ 9 Final module

(1) ¹The student writes the Master's thesis in the final module; this is regulated in § 28 of the MRPO. ²In the final module, 30 credit points must be obtained.

(2) ¹The time limit for writing a Master's thesis - from the issuing of the topic to submission of the thesis - is six months. ²Admission to the Master's thesis is allowed at the start of the second year of study at the earliest. ³The Master's thesis may not be submitted prior to the end of the fourth month following the issuing of the topic.

§ 10 Subject-specific provisions for admission to final module

In addition to the prerequisites set out in the MRPO, the subject-related prerequisites for admission to the Master's thesis process are:

- the successful completion of modules worth a total of at least 54 ECTS credits, including
- obtaining the CP in the module table for the compulsory modules and for the modules selected in the chosen area of specialization, see § 5 (1) sentence 2.

²Furthermore, the following work must be completed in the following subjects and/or areas of knowledge in the prior Bachelor's degree studies or Master's degree studies:

- Mathematics (min. 6 CP)
- Physics (min. 6 CP)
- Chemistry (min. 12 CP)
- Geology (min. 6 CP)
- organism biology (Botany, Zoology; min. 6 CP)
- Microbiology (min. 3 CP)
- Soil Science (min. 6 CP)
- Hydrology and Climatology (min. 6 CP)
- Ecology (min. 6 CP)
- Environmental Chemistry (min. 3 CP)
- Quantitative Data Analysis / Modelling / Geographical Information Systems (min. 6 CP)
- Fieldwork (min. 15 days in the field)

³The responsible examination board decides on the requirements set out in sentence 2; the board may determine that competencies of up to 30 CP which are lacking at the start of the student's Master's studies must be obtained prior to registration for the Master's thesis process, for instance within the framework of a learning agreement and in cases of accreditation under § 5 (1) sentence 6.

D. Deadlines for examinations in the program

§ 11 Deadline for completion of studies

¹All coursework and assessment required under the exam regulations for the module coursework must be completed by the end of the student's 7th semester in the subject. ²If this time limit is exceeded, the student's right to be examined is lost, unless the failure to meet the deadline is beyond the control of the student.

E. Master's overall grade, certificate and other documentation

§ 12 Calculation of Overall Grade

The overall grade for the Master's examination process is calculated from the average of all graded modules, as weighted by credit points.

§ 13 Certificate and other documentation

(1) Along with the details provided for under § 36 par. 1 MRPO, the following details are entered:

- the area of specialization selected, see § 5 (1) sentence 2.

F. Closing remarks

§ 14 Effective date and transitional arrangements

¹These exam regulations come into effect on the date of their publication in the University of Tübingen's official bulletin, the Amtliche Bekanntmachungen. ²Their first semester of validity is the winter semester 2021/2022.

³Students who commenced their Master of Science in Geoecology studies at the University of Tübingen prior to the semester specified in sentence 2 are - subject to the following provisions - entitled to complete their module coursework in this degree program at the University of Tübingen by 30.09.2024 under the previously valid rules; however, regarding the examination board, § 6 MRPO applies. ⁴Students who commenced their Master of Science in Geoecology studies at the University of Tübingen prior to the semester specified in sentence 2, are entitled to switch and complete their module coursework in the degree program under these current exam regulations upon written application, which must be submitted to the responsible examination office by 31.03.2022. ⁵If no application under sentence 4 above is lodged, then - after the deadline specified in sentence 3 - the module coursework in the degree program must be completed under these current regulations. ⁶Module coursework completed previously will only be accredited according to the new exam regulations and the corresponding module handbook, subject to the following provisions. ⁷These exam regulations do not grant any new or additional right to be assessed in an area already assessed; any fails in assessed work under the previous exam regulations will be included. ⁸Furthermore the responsible board of examiners may agree suitable transitional arrangements in individual cases, particularly if previous classes are no longer offered as before or if certain classes have been completed, possibly offering partial accreditation and/or requiring certain conditions to be fulfilled, particularly if a "learning agreement" is to be considered.

Tübingen,

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President