

Care was taken to ensure the text of these regulations is accurate and up-to-date; the present version may nevertheless contain errors. The official, legally binding version can be viewed in the Examinations Office, the Student Advising Office, or online at <http://www.uni-bayreuth.de/de/universitaet/organisation/abt1/amtliche-bekanntmachungen/index.html>.

Please note the effective dates of the amendments.

***Examination and Study Regulations
for the Master's Programme
Environmental Chemistry (M.Sc.)
at the University of Bayreuth
dated 15 July 2016,
as amended on 20 November 2019
(second set of amendments)***

Article 13 para 1 sentence 2 in conjunction with Article 58 para 1 sentence 1 and Article 61 para 2 sentence 1 of the Bavarian Higher Education Act (*BayHSchG*) forms the framework for the following Examination Regulations issued by the University of Bayreuth.

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§ 1 Purpose of the master's examination

¹The master's examination, as the culmination of the master's programme Environmental Chemistry, is designed to assess whether the candidate possesses the requisite understanding of subject-related and interdisciplinary connections to pursue further academic research. ²On the basis of a well-founded understanding of the subject matter, the candidate is able to identify current problems relating to material pollution of the environment, to analyse complex states of affairs, and to develop flexible solution proposals. ³A well-founded understanding of the subject matter includes an advanced understanding of the functions and regulation of complex biogeochemical processes and materials cycles in the compartments air, soil, and water in consideration of abiotic and microbial reactions; the ability to quantitatively assess materials, especially hazardous materials, in ecosystems; as well as the ability to utilize modern techniques of environmental analysis, data analysis, and modelling to detect, interpret, assess, and forecast problems in environmental chemistry. ⁴Upon the candidate's passing of the examination, the University of Bayreuth, by way of the Faculty of Biology, Chemistry & Earth Sciences, awards the academic degree "Master of Science" (abbreviated as M.Sc.). ⁵The programme of study is held in the English language.

§ 2 Admission to the programme; qualification

(1) Admission prerequisites for the master's programme are as follows.

1. ¹a bachelor's degree from a higher education institution in Germany or abroad in biology, chemistry, geo-ecology, geology, forestry, agricultural sciences, hydrology, ecological engineering, limnology, meteorology, physical geography, environmental physics, environmental economics, environmental law, or an equivalent degree that was completed with a total of at least 20 credit points in physics, biology, and chemistry along with at least 20 credit points in environmental science and a final grade of "good" (2,5) or better. ²The board of examiners shall determine equivalency of foreign academic credentials under the terms of Article 61 para 4 sentence 2 and Article 63 of the Bavarian Higher Education Act. ³The Central Office for Foreign Educational Credentials ("Zentralstelle für ausländisches Bildungswesen") may be contacted if there is doubt concerning equivalency of foreign educational credentials.
2. evidence of having passed the aptitude assessment process described in Annex 2.
3. a strong command of English. Applicants who did not gain their higher education entrance qualification or initial degree in the English language can demonstrate their English language skills by way of a thesis in English at a higher education institution, or by way of a B2-level language certificate according to the Common European Framework.
4. basic knowledge of the German language. Applicants who did not earn their higher education entrance qualification or their initial degree that enabled them to enrol in

studies in the German language can demonstrate their German language skills by achieving level A1 of the Common European Framework of Reference for Languages or with a final thesis in a German-taught programme of study at a higher education institution. Applicants who do not meet this requirement will be enrolled on the condition that they submit the proof of German language proficiency by the end of their second semester of study.

- (2) If previous study is not found to be equivalent in content and scope to the required 20 credit points in physics, biology, and chemistry, along with the 20 credit points in environmental science, the applicant may be accepted on the condition that he or she is to complete a maximum of 20 credits in these areas within one year in addition to the master's programme requirements; otherwise, the prerequisites for admission are not to be considered fulfilled.
- (3) Decisions such as those described in paragraph 2 are to be made by the board of examiners established under the terms of § 4.
- (4) ¹If the bachelor's certificate or equivalent diploma has not yet been issued, a confirmation of all individual grades and examinations for courses completed up to the date of registration must be submitted. ²Such coursework must amount to at least 135 ECTS points and correspond to a final grade of "gut" (2,5) or better. ³Applicants who fulfil the requirements of sentence 2 are to be enrolled on the condition that they submit the relevant degree certificate with a grade of "gut" ["good"] or better by the end of the second semester of study. ⁴ Upon request, the board of examiners can extend the submission deadline for the relevant degree certificates to up to the end of the second semester, as long as the reasons for the extension are beyond the student's control. ⁵ This holds, in particular, if the student has already completed all examinations but the grades have not yet been disclosed or the certificate not yet issued.

§ 3 Structure of full-time and part-time study and the master's examination; standard period of study

- (1) ¹The master's programme Environmental Chemistry is divided into modules in the following areas: Air (A), Soil (S), Water (W), Chemistry and Analytics (C), Experimental Biogeochemistry (EB), Isotope Biogeochemistry (ISO), Methods (M), Elective/Internship (E), and the Master's Thesis (T). ²All modules are given in the overview in Annex 1. ³Students can take the following in the elective module area E (15 credit points): courses that have not previously been attended in the elective area, other modules or courses offered at the University of Bayreuth, or - if a request is submitted to the board of examiners - internships. ⁴Foreign languages other than English can be selected in an elective module. ⁵The fourth semester of full-time study or the 7th and 8th semesters of part-time study are for writing the master's thesis (30 credit points).

- (2) ¹The master's programme Environmental Chemistry can be completed as a full-time or part-time student. ²Upon enrolment, the applicant must decide whether he or she wants to complete the programme of study as a full-time or part-time student. ³Changing from full-time to part-time study or from part-time to full-time study is possible within the enrolment period of each new semester. ⁴The programme comprises four semesters of full-time study including the master's thesis (standard period of study). ⁵The programme comprises eight semesters of part-time study including the master's thesis (standard period of study). ⁶Unless special provisions are made in the present regulations, the deadlines specified for full-time study also apply to part-time study.
- (3) A total of 120 credit points must be earned in accordance with the European Credit Transfer System (ECTS).
- (4) New students must begin the programme in the winter semester.

§ 4 Board of examiners

- (1) ¹A board of examiners shall be formed to make the necessary decisions with regard to the admission to the master's programme and the organizational execution of the master's examination. ²The board of examiners shall administer the examination proceedings in accordance with the present regulations and make all decisions with the exception of the examinations and the assessment thereof. ³It is to be made up of at least three members from among the university instructors (Article 2 para 3 sentence 1 Bayerisches Hochschulpersonalgesetz) in the Faculty of Biology, Chemistry & Earth Sciences, a research associate, and a student (in an advisory capacity) and shall not generally have more than seven members. ⁴The members of the board of examiners are elected for a period of two years by the faculty council for Biology, Chemistry & Earth Sciences on the recommendation of the Department of Earth Sciences. ⁵Re-election is permissible. ⁶The board of examiners shall elect a chair and deputy chair from among its members who are university instructors.
- (2) ¹The board of examiners constitutes a quorum if the majority of members are present and entitled to vote after an invitation had been sent to all members at least three days prior to the meeting. ²The decisions taken by the board of examiners in its meetings are to be made on the basis of majority vote. ³Vote abstention, secret voting, and proxy voting are prohibited. ⁴If votes are equally divided among its members, the chair's vote shall be decisive.
- (3) ¹The chair of examiners shall ensure that the provisions of these regulations are followed. ²He or she shall convene the meetings of the board of examiners and shall act as chair of its proceedings and decisions. ³With regard to matters that cannot be postponed, he or she is authorized to make decisions on behalf of the board of examiners. ⁴He or she must promptly inform the other members of any such decision - at the next meeting at latest. ⁵In addition, unless otherwise provided by the present regulations, the board of examiners can

transfer (until revoked) the right to perform other duties of the board to the chair. ⁶The chair can delegate tasks to the members of the board of examiners.

- (4) The board of examiners shall regularly report to the faculty council of the Faculty of Biology, Chemistry & Earth Sciences concerning updates to examination schedules and study periods and may make suggestions for reforming the present regulations.
- (5) ¹Any notices the board of examiners issues under the terms of the present regulations are to be published together with a rationale and information concerning legal remedies available. ²Notices of appeal shall be issued by the president in consultation with the board of examiners.

§ 5 Examiners and co-examiners

- (1) ¹Any person who is authorized to administer examinations at institutions of higher education according to the *BayHSchG* and the *HSchPrüferV*, as amended, may serve as examiner. ²Any member of the University of Bayreuth who is a graduate of an equivalent or comparable programme of study may serve as co-examiner.
- (2) ¹If a member of the University of Bayreuth who is an authorized examiner leaves the University, he or she may remain an examiner for a reasonable period. ²Authorization to administer examinations shall generally remain valid for up to three years.
- (3) ¹Unless otherwise decided by the chair of examiners, the relevant instructor shall also serve as examiner. ²If that instructor is not authorized to administer examinations as laid out in sentence 1, the chair of examiners shall appoint an examiner at the beginning of the semester in which the examination is to be held.

§ 6 Disqualification due to personal involvement; confidentiality

- (1) Disqualification from consultation and voting on the board of examiners as well as other activities relating to examinations on the basis of personal involvement is governed by Article 41 para 2 of the *BayHSchG*.
- (2) The non-disclosure obligation that holds for members of the board of examiners, as well as examiners, co-examiners, and anyone else involved in the examination process is governed by Article 18 para 3 of the *BayHSchG*.

§ 7 Admission to the examinations

Students who are enrolled in the master's programme Environmental Chemistry are considered *ipso facto* to be admitted to the examinations.

§ 8 Credit transfer

- (1) Awarding credit for competencies (learning outcomes) is governed by Article 63 para 1 and 2 of the *BayHSchG*.
- (2) ¹If credits are awarded for competencies, the grades are to be carried over and included when calculating the final grade, as long as the grading systems are analogous. ²If the grading system for the competencies to be transferred does not correspond to the grading system given in § 16, the grades received at the other higher education institution are to be converted using the Modified Bavarian Formula:

$$x = 1 + 3 \cdot (N_{\max} - N_d) / (N_{\max} - N_{\min})$$

where x is the grade to be calculated, N_{\max} is the highest possible grade, N_{\min} is the highest passing grade, and N_d is the actual grade; in this calculation, the grade to be calculated is only given to one decimal place and is not adjusted to fit the grading scale given in § 16. ³If the grading systems are not analogous, the remark "*bestanden*" ["passed"] shall appear in place of a grade; in this case, the course shall not be taken into account when calculating the final grade. ⁴Transferred credits are to be listed as such on the certificate. ⁵The board of examiners in consultation with the relevant representative from the subject area shall decide whether the requirements have been met for credit transfer. ⁶If credit transfer is denied, the person concerned can appeal the decision by submitting a request for the University Board to review the decision within four weeks of notification of denial. ⁷The University Board shall provide the board of examiners with a recommendation on how to proceed with the request.

- (3) Credit transfer requests are to be submitted to the board of examiners as soon as possible following enrolment and in any event prior to completing the examination proceedings in the relevant module.

§ 9 Times for holding examinations; announcing examination times and examiners

- (1) ¹The examinations in the programme are held promptly following the conclusion of the modules. ²The type of examination, as well as the time and duration is to be announced university-wide prior to the start of the course, and no later than four weeks prior to the examination. ³An additional examination time may be scheduled for the beginning of the following semester.
- (2) ¹If not listed in the annex, the examination times and the form and duration of examinations shall be determined by the relevant examiner and announced university-wide at the start of the semester. ²A change of examiner on short notice shall only take place if there are urgent grounds for doing so.

- (3) Students are to register for examinations by the published deadline, according to the process determined by the board of examiners.

§ 10 Elements of the examination

- (1) The master's examination comprises the module examinations listed in Annex 1 and the master's thesis.
- (2) The examinations serve to demonstrate that the examinee has satisfied the desired learning outcomes of the individual modules.

§ 11 Form of examinations

- (1) ¹Module examinations are held in the form of written examinations (WE), oral examinations (OE), presentations (Pres), and reports (Rep). ²The possible forms of examination in the modules are given the annex.
- (2) ¹Assessment of examinations at the University of Bayreuth is to be carried out according to the process announced by the board of examiners. ²Notifications will not be sent individually. ³Students are required to familiarize themselves independently with the terms of the present regulations pertaining to repeating examinations; they are responsible for informing themselves of examination results.
- (3) If an examination is assessed by more than one examiner, the grade shall be determined by taking the average of the grades assigned and truncating (not rounding) the number to one decimal digit.
- (4) ¹Written examinations are to held over a period of at least one hour and no longer than two hours; the duration of the examination should be appropriate to the requirements of the corresponding course. ²The relevant examiner shall decide which resources may be used during the examination. ³A written record of the examination is to be made. ⁴The invigilator shall confirm the accuracy of the record by providing his or her signature. ⁵The examination record sheet is to include all aspects of the examination that are relevant to determining the grade.
- (5) ¹If a candidate arrives to the examination late, he or she shall not be given additional time to finish the examination. ²Candidates may leave the room during an examination if permission is granted by the invigilator. ³The time and duration of absence are to be noted on the question paper.
- (6) ¹Written examinations are generally graded by the relevant examiner. ²The relevant examiners are to determine the grades for the individual examinations under the terms of § 16. ³An assessment of each written examination shall be provided no later than six weeks after

the examination. ⁴If an examinee receives the grade "*nicht ausreichend*" ["unsatisfactory"] on a written examination, a second examiner shall also provide an assessment. ⁵The board of examiners may decide to appoint an additional examiner. ⁶The graded written examination shall remain in the examination records.

- (7) ¹Oral examinations are to be held over a period of 30 to 45 minutes, depending on the requirements of the particular course. ²Oral examinations are to be conducted in German or English, and are to be administered by two examiners or one examiner and one co-examiner. ³One examiner or the co-examiner shall complete an examination record sheet for the oral examination that includes the following: location, start time, and duration of the examination; examination subject-matter and results (grade); names of the two examiners or of the examiner and co-examiner; and any noteworthy incidents. ⁴The record sheet is to be signed by the two examiners or by the examiner and co-examiner. ⁵The examiners are to determine the grades for performance in the oral examinations under the terms of § 16.
- (8) ¹Presentations are to be held during the courses on which they are based. ²The deadline, scope, and duration of the presentation are to be determined by the relevant examiner when assigning the topic. ³The presentation is to be given in the context of the seminar or tutorial. ⁴A record sheet is to be filled out for each graded presentation including the candidate's name, the names of the examiner and co-examiner, the place, time, duration, subject matter, grade, and any noteworthy incidents during the presentation. ⁵Within a module, multiple students' talks may be included on a single examination record sheet. ⁶The record sheet is to be signed by the examiner(s). ⁷The examiner(s) shall determine the grades for performance in the graded presentation under the terms of § 16. ⁸Presentations that are held in the context of the modules M1, M2, and M3 are not relevant to the final grade and are only assessed on a pass/fail basis. ⁹Assessment of the presentation should be carried out within six weeks of the end of the seminar. ¹⁰If the presentation is not delivered at the time agreed upon, the grade "5,0" is to be assigned for the module. ¹¹In modules M1, M2, and M3, a presentation that is not held at the time agreed upon is to be graded as "*nicht bestanden*" ["failed"].
- (9) ¹Reports are to be submitted by full-time students within three weeks of the end of the course, and part-time students are to submit them within six weeks. ²The deadline and scope are to be determined by the relevant examiner when assigning the topic. ³The topics for assignments are to be such that they can be completed within this time limit. ⁴The chair of examiners may extend this deadline by up to one week at the request of the candidate and after having heard the supervisor in case of reasons beyond the candidate's control. ⁵If the candidate demonstrates via a medical certificate that he or she was unable to work on the thesis, the deadline is to be extended accordingly. ⁶The examiner(s) shall determine the grades for performance in the graded presentation under the terms of § 16. ⁷Reports that are completed in the context of the modules M1, M2, and M3 are not relevant to the final grade and are only assessed on a pass/fail basis. ⁸Assessment of the presentation should be carried out within six weeks of the end of the seminar. ⁹If the assignment is not submitted

on time, the grade "5,0" is to be assigned for the module. ¹⁰In modules M1, M2, and M3, a report that is not submitted by the time agreed upon is to be graded as "*nicht bestanden*" ["failed"]. ¹¹One copy of the report (data storage medium) shall remain in the records for five years.

§ 12 Master's thesis

- (1) ¹The master's thesis should demonstrate that the candidate is able to utilize relevant resources and adequately address and write about current issues in the field using scientific methods. ²The topic may include interdisciplinary issues.
- (2) ¹The chair of examiners is to determine an examiner to act as supervisor and first assessor and an additional examiner to serve as second assessor, if possible in consideration of the candidate's wishes. ²The topic of the master's thesis is generally to be assigned by an examiner (§ 5 para 1) from the Faculty of Biology, Chemistry & Earth Sciences who is active in the appropriate field. ³Record is to be made of the date on which the topic was assigned. ⁴It is recommended that the master's thesis be completed in the fourth semester (full-time study) or the seventh and eighth semesters (part-time study).
- (3) ¹The master's thesis is to be integrated into the programme of study and shall correspond to a workload of 900 hours. ²The master's thesis is to be submitted no later than six months after the topic was assigned in the case of full-time study or 12 months in the case of part-time study. ³The chair of examiners may extend this deadline by up to twelve weeks in the case of full-time study or 24 weeks in the case of part-time study at the request of the candidate and after having heard the supervisor if there are reasons beyond the candidate's control. ⁴If the candidate demonstrates via a medical certificate that he or she was unable to work on the thesis, the deadline is to be extended accordingly. ⁵Theses that are not submitted by the stated deadline are to be graded as "*nicht ausreichend*" ["unsatisfactory"].
- (4) ¹The master's thesis is to be submitted in the English language. ²In addition to the actual body text, the thesis must also include an abstract, a table of contents, and a bibliography. ³The master's thesis shall contain a statement at the end in which the author confirms that he or she wrote the thesis independently and did not make use of any sources or materials that are not cited in the thesis. It shall also be confirmed that the thesis had never before been submitted toward fulfilment of an academic degree.
- (5) ¹The thesis is to be submitted to the Examinations Office by the deadline given. ²Record is to be made of the date on which the thesis was submitted.
- (6) ¹Three typewritten, paginated, and bound copies of the master's thesis are to be submitted. ²All raw data and evaluated data collected, any illustration and the thesis in pdf format are to be submitted along with the printed copy of the thesis.

- (7) ¹The candidate may return the topic to the board of examiners once within the first two weeks. ²Paragraphs 1 to 6 also apply when assigning and working on a new topic.
- (8) ¹The Examinations Office shall forward the thesis to the relevant assessor. ²The grades shall be made available no later than two months after submission of the thesis. ³Each assessor shall provide a recommendation as to whether the thesis is to be accepted or rejected and assign a grade in accordance with § 16. ⁴In special cases, the board of examiners may call upon an additional assessor, especially if the grades assigned vary by more than one point.
- (9) ¹If different grades are assigned, the grade for the master's thesis shall be the arithmetic mean of the assessments. ²In this calculation, the grade shall only be given to one decimal place; the remaining digits are to be truncated (not rounded).
- (10) If the master's thesis is deemed "*nicht ausreichend*" ["unsatisfactory"], the chair of examiners or his or her deputy shall inform the candidate of the decision.
- (11) One copy of the master's thesis is to remain on record.

§ 13 Credit point system

- (1) ¹A record of credit points for completed modules is to be kept by the University of Bayreuth's Examinations Office for each student who is enrolled in the programme of study. ²The credit points that appear on the transcript are identical with credit points as stipulated in the European Credit Transfer System (see Annex 1). ³One credit point corresponds to a workload of 30 hours.
- (2) The credit points for the modules are given in Annex 1.

§ 14 Consideration of extenuating life circumstances

- (1) ¹Upon request, the following are to be observed with regard to dates and deadlines: §§ 3, 4, 6 and 8 MuSchG, dated 20 July 2002, BGBl p. 2318 - as amended), periods set aside under the laws concerning parental leave (BEEG, dated 5 December 2006, BGBl p. 2748 - as amended), and periods reserved for care of a family member (as stipulated in PflegeZG, dated 28 May 2008, BGBl pp. 874, 896 - as amended) who requires care as described in §§ 14 and 15 of SGB XI, dated 26 May 1994 (BGBl pp. 1014 and 1015), as amended. ²The appropriate evidence must be furnished; any changes in status are to be reported immediately.
- (2) ¹If duly requested, periods during which study was impossible or only possible to a limited extent for reasons beyond the student's control shall not be taken into account with regard

to the examination schedule. ²Corresponding evidence must be furnished; medical certificates must be presented in the case of illness. ³Any changes in status are to be reported immediately.

§ 15 Consideration of the special needs of disabled persons

¹For the sake of ensuring equal opportunities, the particular needs of disabled examinees are to be appropriately accommodated. ²Upon written request, the board of examiners shall determine on the basis of the degree of disability in what form a disabled examinee is to take the examination; alternatively, an extension may be granted. ³Evidence of disability is to be provided by way of a medical certificate, which confirms that the candidate is unable (entirely or in part) to take the examination in its usual form due to a lasting or permanent disability. ⁴The request is to be submitted together with the examination registration. ⁵If the request is submitted later, it shall only be valid for subsequent examinations.

§ 16 Grading of examinations

(1) The following grading scale will be used in the assessment of the individual assignments and examinations; the digit to the right of the comma enables a more differentiated assessment between the whole-number values.

"sehr gut" (excellent)	= 1,0 or 1,3
"gut" (considerably better than average)	=1,7 or 2,0 or 2,3
"befriedigend" (average)	= 2,7 or 3,0 or 3,3
"ausreichend" (fulfils the minimum requirements despite deficiencies)	= 3,7 or 4,0
"nicht ausreichend" (unsatisfactory due to considerable deficiencies)	= 5,0

(2) ¹If a greater module examination is made up of multiple examinations, the grade for the module shall be established by calculating the arithmetic mean after weighting the components based on credit points. ²In this calculation, the grade shall only be given to one decimal place; the remaining digits are to be truncated (not rounded). ³Module grades are as follows:

an average of 1,5 or better	= sehr gut
an average of 1,6 up to and including 2,5	= gut
an average of 2,6 up to and including 3,5	= befriedigend
an average of 3,6 up to and including 4,0	= ausreichend.
an average of 4,1 up to and including 5,0	= nicht ausreichend.

§ 17 Final grade

- (1) ¹The overall grade for the master's examination is calculated by taking the arithmetic mean of the module grades and the grade for the master's thesis, weighted according to the credit points awarded for each module. ²In this calculation, the grade shall only be given to one decimal place; the remaining digits are to be truncated (not rounded).
- (2) Candidates who pass the master's examination are to receive a final grade as follows: an average grade of 1,2 or better is "ausgezeichnet", up to 1,5 is "sehr gut", up to 2,5 is "gut", up to 3,5 is "befriedigend", up to 4,0 "ausreichend".
- (3) Calculation of the final grade for the master's examination is to be carried out by the chair of examiners; the certificate or an attached document shall indicate how the final grade was calculated.
- (4) ¹In addition to the degree certificate, an ECTS grading table will be issued as stipulated in the ECTS guidelines in the version dated 6 February 2009. ²This table displays what percentage of programme graduates in a given time frame received the same final grade as described in para 2. ³Those programme graduates who were awarded their diplomas in the previous eight semesters shall serve as the reference group as long as it includes at least 30 persons. ⁴The date of the last examination shall be decisive in assigning graduates to a particular semester. ⁵If the minimum number of graduates is not reached, the number of previous semesters is to be extended until the minimum number is reached. ⁶If the programme of study does not yet have as many graduates as the minimum number required of the reference group, an ECTS grading table will be issued as soon as the minimum number is reached. ⁷For degrees awarded before the minimum number is reached, an ECTS grading table will be issued at a later date upon request once the minimum number has been reached. ⁸The graduate's own graduating class is also to be included in the reference group. ⁹The size of the reference group and the time frame is to be included.

§ 18 Passing the master's examination

- (1) Passing the master's examination requires a grade of "ausreichend" ["sufficient"] or better or "bestanden" ["passed"] for the master's thesis and each module; in addition, all 120 credit points must be earned and all requirements mentioned in § 2 para 2 must be fulfilled.
- (2) ¹If the candidate has not fulfilled the requirements given in paragraph 1 by the end of his or her sixth semester in full-time study or twelfth semester in part-time study due to reasons under his or her control, then the candidate shall be considered as having failed the master's examination on the first attempt. ²Module examinations that were taken on time and for which the candidate received a passing grade need not be repeated.

- (3) ¹If the missing module examinations are not passed by the student within a year of the deadline given in paragraph 2 sentence 1 for reasons under his or her control, or if all possibilities to repeat the examinations have been exhausted, then the candidate shall be considered as having failed the master's examination on the final attempt. ²The deadline shall not take into account periods of leave and periods during which the candidate withdrew from study. ³Notice shall be sent to inform the candidate that he or she has failed an examination on the final attempt in accordance with § 4 para 5 in conjunction with Article 41 *BayVwVfG* as amended. ⁴The board of examiners may grant the student an extension of the deadline for circumstances beyond his or her control if the student submits a request prior to the deadline described in sentence 1.

§ 19 Repeating a module examination or the master's thesis

- (1) ¹Any module examination that was failed on the first attempt can be repeated once. ²In case of modules with multiple examination elements, only those elements are to be repeated for which the grade "nicht ausreichend" ["unsatisfactory"] was assigned. ³The resitting of an examination can be carried out in oral form, even if the previous examinations were in written form, as determined by the examiner.
- (2) ¹Repeating an examination for a second time is only permitted for up to three module examinations. ²Students who fail the second repetition of a module examination are to be considered as having failed the master's examination on the final attempt.
- (3) ¹The master's thesis can be repeated with a new topic if the student receives a failing grade for the thesis. ²Repeating the master's thesis for a second time is not permitted.
- (4) Administrative measures shall be taken to ensure that it is possible to repeat the failed examinations or a failed master's thesis within six months.
- (5) Voluntarily repeating examinations that were already passed or the master's thesis is not permitted.

§ 20 Notice of failing the master's examination

If a candidate has failed the master's examination on the final attempt, then a written notice shall be sent to him or her within two weeks upon request; the notice shall include a list of the individual examination grades as well as the missing examination elements.

§ 21 Access to examination documents

- (1) Following the conclusion of the examinations process, the candidate may upon request be granted access to his or her graded examination documents including the assessor's report as well as the record sheets for the examination.
- (2) ¹Such requests are to be made no later than one month after the degree certificate is awarded. ²If the candidate was prevented from meeting the deadline in sentence 1 due to reasons beyond his or her control, Article 32 of the Bavarian Administrative Process Act (*Bayerisches Verwaltungsverfahrensgesetz*) shall apply.

§ 22 Defects in the examination proceedings

- (1) If it is shown that there were defects in the examination proceedings which influenced the examination results, the candidate or the board on its own initiative shall request that the relevant examinations be repeated.
- (2) Any defects in the examination proceedings or circumstances preventing the candidate from completing the examination are to be reported to the examiner or the chair of examiners without delay, and in general, prior to notice being given of the examination results.
- (3) Claims under the terms of paragraph 1 must be made within six months of the examination's conclusion.

§ 23 Absence, withdrawal, cheating & policy violation

- (1) ¹Candidates who have registered for an examination may withdraw without providing a rationale by submitting a written statement of withdrawal by the deadline announced by the board of examiners. ²If the candidate fails to appear for an examination for which he or she was registered for reasons under his or her control or withdraws subsequent to the deadline stated in sentence 1, he or she will be considered to have failed the examination.
- (2) ¹The grounds for failing to appear - or as long as paragraph 1 sentence 1 does not apply - for withdrawal must be submitted to the board of examiners without delay and substantiated by *prima facie* evidence. ²The same applies to inability to take the examination due to circumstances arising during the examination. ³Inability to take the examination due to illness must be documented with a medical certificate. ⁴If the board of examiners accepts the reasons given, a new examination time is to be offered under the terms of § 9 within six months.
- (3) If withdrawal or failure to appear is caused by reasons beyond the candidate's control, examinations elements completed up to that point are to be recognized.

- (4) ¹If the candidate attempts to influence the result on an examination by cheating or making use of materials that are not permitted, he or she shall be given the grade "*nicht ausreichend*" ["unsatisfactory"]. ²Any candidate who causes considerable disruption to the course of an examination may be removed by the invigilator and barred from continuing the examination. In this case, he or she shall be given the grade "*nicht ausreichend*" ["unsatisfactory"].
- (5) ¹Written work reports and the master's thesis present the results solely of the student's own work. ²Depending on the requirements of the relevant instructor, a graded work report may also present the results solely of a defined and disclosed group of students. ³Thoughts, records, and illustrations of third parties must be properly cited in written work reports and the bachelor's thesis; otherwise, it is a case of plagiarism. ⁴If a candidate plagiarizes, the relevant examination is to be graded as "*nicht ausreichend*" ["unsatisfactory"] (5,0). ⁵The board of examiners is to decide in such cases whether repetition is permissible.

§ 24 Invalidating the master's examination

- (1) If a candidate cheats or plagiarizes during an examination and this fact does not come to light until after the degree certificate is issued, the board of examiners may retroactively change the relevant grades accordingly and declare the master's examination to be failed either in part or entirely.
- (2) ¹If the registration requirements for the examinations were not met by the candidate without this having involved any cheating on the part of the candidate, and if this fact does not come to light until after the degree is issued, then this fault shall be considered rectified via the candidate's passing of the master's examination. ²If the candidate registered by intentionally providing false information, the board of examiners shall decide whether to revoke any unlawful administrative acts on the basis of the general principles of administrative law.
- (3) The candidate shall be permitted to make a statement prior to the decision.
- (4) The inaccurate degree certificate is to be taken away and, if applicable, replaced with a new one.

§ 25 Awarding the master's degree; diploma

- (1) ¹A diploma and a certificate for successful completion of the master's examination are to be issued within four weeks of demonstrating completion of the required module credits. ²The diploma is to include the title of the programme of study. ³It is to be signed by the Dean of the Faculty of Biology, Chemistry & Earth Sciences and stamped with the seal of the University. ⁴Upon issuance of the diploma, the graduate is given the right to bear the title "Master of Science". ⁵This title is to be abbreviated "M.Sc." and placed behind the surname.

- (2) ¹The certificate is to include the title of the programme of study, the final grade for the master's examinations, all completed modules and the titles of the relevant courses, grades and credit points, as well as the topic of the master's thesis and the grade received for the thesis. ²The certificate is to be signed by the chair of examiners. ³The date to be used is the day of the last examination or the date on which the last graded assignment was submitted. ⁴An English translation of the diploma and a Diploma Supplement shall be issued in addition; the Diploma Supplement shall be signed by the chair of examiners. ⁵In addition to the certificate, an ECTS grading table is to be issued under the terms of § 17 para 4.
- (3) Revoking the degree "Master of Science" is to be carried out in accordance with the legal regulations (Article 69 *BayHSchG*).

§ 26 Academic advising

- (1) General student advising is offered by the University of Bayreuth's Student Advising Office.
- (2) The programme advisor for the master's programme Environmental Chemistry is to be responsible for questions relating to the master's programme (i.e. structure of the programme, organization of studies, course selection, and questions concerning examinations).
- (3) ¹In the course of the semester, the programme advisor shall offer advising for all students enrolled in the master's programme. ²Programme-specific advising is recommended especially for the following persons:
1. new students,
 2. students who recently failed an examination,
 3. students who have considerably less than 30 credit points per semester in full-time study or 15 credit points per semester in part-time study,
 4. students transferring from a different subject, degree programme, or university, those changing from full-time study to part-time study or from part-time study to full-time study,
 6. those about to choose their core elective modules or the topic of their master's theses.

§ 27 Effective date

¹These regulations go into effect on 15 July 2016. ²They shall be valid for all students enrolling in this programme in Winter Semester of 2016/2017 or later.

*) The second set of amendments contains the following provisions with regard to the effective date:

¹These regulations go into effect on 21 November 2019. ²They shall be valid for all students

enrolling in this programme for the first time in Summer Semester of 2020 or later. ³The remaining students can organize their studies based on the present regulations upon request to the board of examiners.

Annex 1: Modules, Credit Points, and Examinations

¹Module examinations are as described in § 11 para 1, i.e. written examinations (abbreviated "WE"), oral examinations (OE), presentations (Pres), and reports (Rep). ²A diagonal slash in the "examination" column indicates a choice: the module is only assessed using one of the forms of examination given. ³The symbol "&" indicates that the module consists of two examination elements. ⁴With the exception of modules M1, M2, and M3 and module area E, all modules are considered when calculating the final grade for the master's certificate. ⁵The E- and M-Modules are not relevant to the final grade; a passing grade suffices.

SWS = contact hours, CP = credit points

1st Semester	SWS	CP	Examination
A1 Atmospheric Chemistry I	4	5	WE
S1 Soil and Terrestrial Biogeochemistry I	4	5	WE
W1 Aquatic Geochemistry	4	5	WE/OE
C1 Geochemical Modeling	4	5	WE/OE
M1 Scientific Writing and Symposium	3	5	Rep & Pres
E Elective/ Internship	according to the provisions of the relevant examination regulations.	5 ^{a)}	according to the provisions of the relevant examination regulations.
2nd Semester	SWS	CP	Examination
A2 Atmospheric Chemistry II ^{b)}	4	5	Rep
S2 Soil and Terrestrial Biogeochemistry II ^{b)}	4	5	WE (50 %) & Rep (50 %)
W2 Principles of Reactive Transport ^{b)}	4	5	WE/OE
C2 Environmental Analytical Chemistry I – Basic Methods ^{b)}	4	5	WE/OE
C3 Inorganic Pollutants & Environmental Forensics ^{b)}	4	5	WE/OE
EB1 Environmental Microbiology ^{b)}	4	5	WE (50 %) & Rep (50 %)
M2 Research Module	8	5	Pres/Rep
E Elective/ Internship	according to the provisions of the relevant examination regulations.	5 ^{a)}	according to the provisions of the relevant examination regulations.

3rd Semester	SWS	CP	Examination
S3 Organic and inorganic soil contamination ^{c)}	4	5	WE (50 %) & Rep (50 %)
W3 Biogeochemical Methods in Hydrology ^{c)}	4	5	Pres/Rep
W4 Hydrological Systems Analysis ^{c)}	4	5	WE/OE
C4 Environmental Analytical Chemistry II – Advanced Methods ^{c)}	4	5	WE/OE
C5 Mass Spectrometry ^{c)}	4	5	WE/OE
EB2 Analytical Microscopy Project ^{c)}	4	5	Rep
Iso1 Isotope Biogeochemistry ^{c)}	4	5	WE/OE
M3 Paper Seminar and Research Plan	3	5	Pres & Rep
E Elective/Internship	according to the provisions of the relevant examination regulations.	5 ^{a)}	according to the provisions of the relevant examination regulations.
4th Semester	SWS	CP	Examination
T Master's Thesis		30	Master's thesis

a) The modules and courses for the elective area (E) must total 15 credit points;

the 15 credit points can derive from any number of individual courses or modules with various credit points.

b) core elective modules: Select 4 out of 6 modules

c) core elective modules: Select 4 out of 7 modules

Annex 2: Aptitude assessment process

1. Purpose of aptitude assessment process

The applicant's aptitude for studying in the master's programme Environmental Chemistry at the University of Bayreuth is determined on the basis of the process under the terms of Article 43 para 5 BayHSchG in accordance with § 2 para 1 number 2 of the present regulations. Aptitude parameters are as follows:

1. a secure grasp of the following from the applicant's first degree programme: biology, chemistry, geoecology, geology, forestry, agricultural sciences, hydrology, ecological engineering, limnology, meteorology, physical geography, environmental physics, environmental informatics, environmental economics, environmental law, and related disciplines that are relevant to understanding and analysing issues in the field of environmental chemistry;
2. a profound interest in issues relating to environmental chemistry in addition to the ability to reflect and think abstractly to follow an interdisciplinary programme of study;
3. the ability to delve deeply into the subject area, passively and actively, in the English language.

2. Board responsible for the aptitude assessment process

The board of examiners is responsible for preparing and conducting the aptitude assessment process in accordance with § 4.

3. Process for determining aptitude

3.1 ¹The aptitude assessment process is administered once every year, in the summer semester. ²Applications for admission to the aptitude assessment process must be submitted online by 15 June of that year (deadline). ³ If the final documentation given in number 3.2.3 is not yet available, provisional certificates can be submitted with the application for admission to the aptitude assessment process.

3.2 The following are to be enclosed with the completed application as described in number 3.1 sentence 2:

3.2.1 ¹A written rationale of up to two pages in the English language explaining the applicant's choice of the master's programme Environmental Chemistry, in which the applicant explains the specific talents and interests that make him or her particularly suitable for the programme of study. ² For example, the specific motivation may be borne out by participation in professional training relating to

the programme of study, internships, stays abroad, or subject-related supplementary courses taken during the bachelor's programme beyond the required courses. ³ The relevant evidence is to be enclosed.

3.2.2 A statement that the cover letter containing the applicant's motivation for choosing the programme of study was written independently, without the help of others, and that any thoughts taken from other sources were identified as such

3.2.3 ¹ The relevant degree certificate with an examination grade of "gut" (2,5) or better in addition to a confirmation with individual grades for the coursework and examinations completed during the applicant's studies ²If the relevant degree certificate is not yet available, confirmation containing the individual grades for all examinations and courses up to the registration deadline must be submitted. ³Such coursework must amount to at least 135 ECTS points and correspond to a final grade of "gut" (2,5) or better. ⁴The relevant degree certificate is to be submitted by the end of the first semester of study. ⁵ Upon request, the board of examiners can extend the submission deadline for the relevant degree certificates to up to the end of the second semester, as long as the reasons for the extension are beyond the student's control. ⁶ This holds, in particular, if the student has already completed all examinations but the grades have not yet been disclosed or the certificate not yet issued.

3.2.4 a list of modules from the applicant's relevant degree programme for which evidence of completion cannot yet be submitted

3.2.5 a Curriculum Vitae in the English language (one A4-sized page) as supplementary information

3.2.6 evidence of a strong command of English as described in § 2 para 1 number 3 of the present regulations

3.2.7 if available, evidence of special knowledge and skills (e.g. interdisciplinary study skills, professional training relevant to the programme of study, awards such as scholarships or prizes, internships, stays abroad)

3.2.8 if applicable, a request for compensation for disadvantages as described in § 15 of the present regulations.

4. Admission to the aptitude assessment process

- 4.1 Admission to the process requires that the documents described in number 3.2 - or provisional certificates as described in number 3.1 sentence 3 - be submitted in the proper form and by the stated deadline.
- 4.2 The aptitude assessment process (number 5) is to be administered to those applicants who fulfil the requirements.
- 4.3 Applicants who are not admitted are to be sent a notice of denial with a rationale and information concerning legal remedies available; number 6.1 applies *mutatis mutandis*.

5. Overview of the aptitude assessment process

- 5.1 1 On the basis of the application documents submitted, the board of examiners shall determine whether the applicant is suited for studies in the master's programme Environmental Chemistry in view of his or her qualification and the specific talents and abilities he or she described. ² The assessment is carried out on a scale of 0 to 100, where 0 is the worst score and 100 is the best score. ³ The total number of points for the assessment is calculated as the sum of the individual assessments (number 5.1.1 to 5.1.3). ⁴ The points are to be awarded by two committee members of the board, independently of one another. ⁵ The number of points is calculated as the sum of the individual assessments divided by two and rounded to the nearest whole number value. ⁶ Points are awarded according to the following criteria:

5.1.1 Written rationale (as described in 3.2.1)

Up to 30 points are awarded for the written rationale according to the following criteria:

1. Verbal skills (up to 15 points): The applicant is able to express himself/herself precisely and comprehensibly in the English language.
2. Interest (up to 15 points): The connection between personal interest and the interdisciplinary and international character of the programme of study can be explained in a structured way.

5.1.2 Previous studies (as described in numbers 3.2.3 and 3.2.4)

¹The subject-specific coursework and examinations from the relevant degree programme are to be graded on a scale of "0" to "50". ² In doing so, the curricular analysis is to be based on competencies, not carried out via a schematic comparison of the modules. ³ The assessment of competencies is carried out in consideration of the identifiable spectrum of skills on the basis of a close connection to the elementary subject areas, including the natural science foundations of physics, chemistry, and biology, as well as concentrations in the environmental sciences, e.g. relating to the atmosphere, biosphere, chemosphere, hydrosphere, pedosphere, and geosphere.

5.1.3 Special knowledge and skills (according to 3.2.7)

¹The applicant has relevant qualifications that go beyond the knowledge and skills acquired in the initial degree programme, e.g. professional training relevant to the degree, additional studies, courses taken abroad, language courses, stays abroad, internships, awards such as scholarships or prizes. ²Up to an additional 20 points can be awarded for this.

5.1.4 ¹Applicants who received at least 70 points shall be sent a confirmation - signed by the chair of examiners - of having passed the aptitude assessment process.

5.1.5 ¹Applicants who received 50 points or less shall not be involved in the remainder of the process. ²They shall be sent a notice of denial with a rationale and information concerning legal remedies available; No. 6.1 applies *mutatis mutandis*.

5.1.6 ¹Applicants who received between 50 and 69 points but who were awarded less than 30 points for their subject-related coursework and examinations shall not be involved in the remainder of the process. ²They shall be sent a notice of denial with a rationale and information concerning legal remedies available; No. 6.1 applies *mutatis mutandis*.

5.2 ¹The remaining applicants with an assessment of between 50 and 69 points are to be invited to an interview, as long as their previous coursework and examinations according to number 5.1.2 were assessed with at least 30 points. ²The interview is to be conducted online, e.g. via Skype, in the English language. ³The date and time of the interview are to be announced at least one week in advance. ⁴The applicant is to comply with the date and time of the interview. ⁵ Anyone who fails to appear on the date and time announced will be denied admission. ⁶If a reason beyond the applicant's control prevents him or her from participating in the interview, a new appointment is to be scheduled no later than two weeks prior to the start of lectures upon justified request.

5.2.1 ¹The interview is to be conducted individually in the English language for each applicant. ²The interview is to last between 20 and 30 minutes for each applicant and should demonstrate whether it is to be expected that the aim of the programme of study can be achieved given the applicant's previous education. ³The interview should corroborate the impression that he or she is suited for the programme of study. ⁴ The interview is to be conducted by two members of the committee. ⁵ Up to 30 points are awarded for the interview according to the following criteria:

1. Verbal skills (up to 15 points): The applicant is able to express himself/herself orally in the English language in a precise and comprehensible manner, to appropriately explain statements using arguments and suitable examples and to provide appropriate responses to questions he or she was asked.
2. Motivation (up to 5 points): The applicant displays a specific aptitude for the programme of study such that a level of performance is to be expected that considerably exceeds the level of his or her previous degree.

3. Subject-related aptitude (up to 10 points): The applicant is able to analyse fundamental issues in the environmental sciences in an appropriate manner.

⁶ The points are to be awarded by two committee members of the board, independently of one another. ⁷ The number of points is calculated as the sum of the individual assessments divided by two and rounded to the nearest whole number value.

5.2.2 ¹The total number of points is calculated by taking the sum of points for the interview and the assessment of previous coursework and examinations according to number 5.1.2. ²Applicants who receive between 55 and 80 points for the interview and coursework and examinations shall be considered eligible.

5.2.3 ¹Applicants who receive 54 points or less are not eligible for the master's programme Environmental Chemistry. ²They shall be sent a notice of denial with a rationale and information concerning legal remedies available; No. 6.1 applies *mutatis mutandis*.

5.2.4 ¹ A written record shall be made of the interview, indicating the date, duration, location, name of committee members involved, the name of the applicant, the assessment of the committee members involved, and the overall outcome. ² The record must show the topics of the interview with the applicant and the rationale for the assessment. ³ The reasons and topics may be listed in note form. ⁴The record sheet is to be signed by the committee members who were involved.

6. Notification of the outcome

- 6.1 ¹The outcome of the aptitude assessment process is to be sent to the applicant in writing. ²The notice is to be signed by the chair of examiners. ³ A notice of denial containing a rationale and information concerning legal remedies available is to be signed by the chair of the board. ⁴As part of its supervisory duties in accordance with Article 20 para 3 sentence 1 *BayHSchG*, the chair of examiners, on behalf of the University Governing Board, shall check a random sample of 10 % of denials of admission.
- 6.2 Admission to the master's programme Environmental Chemistry resulting from the aptitude assessment process is only valid for the year in which the aptitude assessment process was carried out.

7. Repetition and conditional enrolment

- 7.1 Applicants who did not provide evidence of aptitude for the master's programme Environmental Chemistry may register for the aptitude assessment process one more time.
- 7.2 ¹Applicants who are not yet able to submit a bachelor's certificate or a degree certificate that has been recognized as equivalent and who do not pass the aptitude assessment process may enrol for one semester if it is possible for them to submit the degree certificate by the end of the first semester and to earn at least 55 points as described in 5.2.2 and an overall examination grade of "gut" (grade: 2,5) or better as described in § 2 para 1 number 1. ² Upon request, the board of examiners can extend the submission deadline for the relevant degree certificates to up to the end of the second semester, as long as the reasons for the extension are beyond the student's control. ³ This holds, in particular, if the student has already completed all examinations but the grades have not yet been disclosed or the certificate not yet issued.