

This is a translation of the original German document. For all legal purposes, only the German version of the examination regulations shall be considered binding.

## **Examination regulations**

**for the  
degree programs**

**Integrated Water Resources Management  
Natural Resources Management and Development  
Renewable Energy Management**

**awarding the degree  
Master of Science (M.Sc.)**

**of the**

**Institute for Technology and Resources Management in the Tropics  
and Subtropics**

**at Technische Hochschule Köln (University of Applied Sciences)**

**of**

**November 28, 2014**

**As amended on July 28, 2016**

By virtue of sections 2 (4) and 64 (1) of the North Rhine-Westphalia Higher Education Act (Gesetz über die Hochschulen des Landes Nordrhein-Westfalen - Hochschulgesetz (HG)) of September 16, 2014 (Gesetz und Verordnungsblatt NRW (GV. NRW), p. 547) Technische Hochschule Köln has adopted the following examination regulations by statute:

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## **I. General information**

### **Section 1 Applicability of the examination regulations; module catalog and curriculum**

- (1) The purpose of these examination regulations is to administer the studies and examinations of the Master's programs in
  - "Integrated Water Resources Management",
  - "Natural Resources Management and Development" and
  - "Renewable Energy Management"at the Institute for Technology and Resources Management in the Tropics and Subtropics at Technische Hochschule Köln.
- (2) Based on these examination regulations, Technische Hochschule Köln is to establish a curriculum (annex 1) and a module catalog. Taking into account developments in the fields of science and university teaching as well as profession-specific requirements, the module catalog is to outline the course contents and structure of the Master's program. The curriculum is to provide students with a recommendation on how to adequately structure their studies.

### **Section 2 Program objective; purpose of the examinations; academic degree**

- (1) By passing the Master's examination, graduates are awarded an additional science degree qualifying them to exercise professional work in the field relevant to the program and entitling them to admission to doctoral/PhD-level studies in accordance with section 67 (4) sentence 1, no. 3 of the Higher Education Act (HG).
- (2) Taking the general educational objectives (section 58 HG) into account, the program leading to the Master's examination is designed to convey scientific findings and application-oriented topics of the program's field of study. It is to qualify the students to analyze and manage processes, problems and interdependencies of natural resources in the tropics and subtropics using a holistic approach and taking social and economic systems into account. The program is designed to enhance the students' creative and planning skills and to prepare them for their Master's examination. Moreover, the program leading to the Master's examination is to provide students with an opportunity to specialize in a specific field and delve deeper into an academic discipline.
- (3) The general language of instruction is English. A sufficient offer of courses in English is guaranteed.
- (4) The Master's examination is to determine whether the examinee has acquired sound specialized knowledge thus expanding his/her professional qualification, and whether he/she is capable of independently exercising work and conducting research on the basis of scientific findings and methods.
- (5) By passing the examinations listed in section 5, students will have completed a scientific degree program, allowing them to exercise work in the designated profession. Based on the successful completion of all examinations, students are awarded the academic degree "Master of Science" in accordance with the regulations stated hereinafter.

### **Section 3 Admission requirements; selection procedure**

- (1) Admission to the Master's program requires a suitable undergraduate degree (Bachelor's degree or higher) or an equivalent qualification from a state or state-recognized university with a significant amount of relevant program content (section 3) and a minimum grade of 3.0 or better in the German grading system. Additionally, applicants must proof their aptitude for the Master's program (section 4).

- (2) Proof of sufficient English language proficiency is required.
- (3) A program is considered suitable if the program contents are relevant to the program objective as defined in section 2 (2) and covers topics relating to the respective natural, renewable resources, water, energy, as well as soil, flora and fauna and their efficient use and management. For the programs “Integrated Water Resources Management” and “Natural Resources Management and Development” suitable undergraduate programs also need to deal with the natural, rural or urban spaces in the tropics and subtropics.
- (4) Applicants participate in a selection process. Based on the documents submitted as part of the application, the following criteria will be assessed during the selection process:
  - Content of the previous degree program and its suitability
  - Personal motivation to enroll in the Master's program
  - Additionally, the suitability (section 3) of previous professional or other practical experienceA selection committee will conduct the selection process. The committee is appointed by the institute's executive board.
- (5) Applicants who possess the qualifications stated in subsection 1 and have additionally acquired knowledge and skills in ways other than in university studies are to be admitted to a stage of the program that corresponds to the results of the placement test pursuant to section 49 (12) HG, unless regulations on the allocation of study places conflict with this provision. Details are stipulated in Technische Hochschule Köln's regulations on placement tests.
- (6) An admissions commission appointed by the executive committee of the institute is in charge of managing the selection process.
- (7) The executive committee of the institute decides on the criteria to assess the suitability of program contents as per subsection 1 and 3 and the professional or other work experience as per subsection 4, the required English language proficiency as per subsection 2 and the assessment of the applicant's motivation as per section 4. The criteria are to be published (in writing) at the beginning of the application period.
- (8) Admission is to be denied if the applicant has irreversibly failed the Master's, Diplom or other final examination in the respective program within the jurisdiction of the German constitution or if he/she has lost the right to take examinations in this degree program. Admission is also to be denied if the applicant has - within the jurisdiction of the German constitution - irreversibly failed an examination comparable to a mandatory examination in this degree program or in another degree program whose content has strong similarities with this degree program, or if he/she has lost the right to take said examination.

#### **Section 4 Standard program duration; scope of the program**

- (1) The standard program duration is four semesters. Students are awarded a total of 120 credits (section 13) in accordance with the European Credit Transfer System (ECTS). The standard duration of the program includes the examination period.
- (2) The program is divided into individual modules. The curriculum (annex) provides additional details on the program structure.
- (3) If certain modules are chosen other modules may no longer be up for selection. Additional information is provided in the curriculum. The examinee is to take the module examinations in the modules he/she selected.

- (4) Students are enrolled in the program's first semester in the winter semester of each year.

### **Section 5 Scope and structure of examinations; examination deadline**

- (1) A student's successful completion of the program is to be determined by the examinations taken throughout the program (module examinations) and a final exam (Master's thesis and final oral examination). Group examinations are admissible.
- (2) In general, module examinations take place upon conclusion of the respective course. The curriculum is to guarantee that the examinee has the possibility to have taken all module examinations by the end of the third semester.
- (3) Registration for the final part of the Master's examination (registration for the Master's thesis) is to be filed prior to the end of the penultimate semester of the program.
- (4) The examination procedures make allowances for the legal provisions for maternity and parental leave periods as well periods of leave for the nursing and care of spouses, registered partners, relatives in direct line of descent or brothers and sisters in-law if they are in need of nursing or care.
- (5) Examinations are held in English. Examinations may be held in a language other than English upon request of the examinee if the chairperson of the examination board and the examiner agree. All persons involved must have sufficient proficiency in the other language.

### **Section 6 Examination board**

- (1) The Institute for Technology and Resources Management in the Tropics and Subtropics is to establish an examination board that is in charge of the organization of examinations and the arrangement of the duties assigned to it by these examination regulations. The examination board is an independent body of the institute.
- (2) Members of the examination board are elected by the executive board of the Institute for Technology and Resources Management in the Tropics and Subtropics. The examination board consists of
  - 1) the chairperson and vice chairperson selected from the pool of professors;
  - 2) one additional member selected from the pool of professors;
  - 3) one member selected from the pool of research assistants or lecturers;
  - 4) one member selected from the pool of students.
- (3) Deputies are to be elected for all members of the examination board except for the chairperson and the vice-chairperson. The members of the board employed in full-time positions at the university and their deputies have tenure of two years; the student members and their deputies have tenure of one year. Re-election is permissible.

### **Section 7 Rights and duties of the examination board**

- (1) The examination board is responsible for the organization of examinations. It is also to ensure that the examination regulations are complied with and examinations are conducted properly. In particular, it is to decide on objections brought forward against decisions that were made in exam-related matters.
- (2) Upon request, the examination board is to report annually to the executive board of the Institute for Technology and Resources Management in the Tropics and Subtropics on the developments related to examinations and the duration of studies. It is to give advice

on potential reforms of the examination regulations, the module catalog and the curricula. The examination board may transfer its regular duties to the chairperson of the examination board; this does not apply to decisions on objections.

- (3) Members of the examination board and a representative of the President's Office have the right to be present during examinations. Exempt from this right are student members of the examination board who are to take the examination concerned during the same examination period.
- (4) Meetings of the examination board are not open to the public.

### **Section 8 Decisions by the examination board**

- (1) The examination board has a quorum if, in addition to the chairperson or vice-chairperson, a member from the pool of professors and at least two additional members eligible to vote are present. Decisions require a simple majority. In case of a tie, the chairperson has the casting vote. Student members and research assistants do not contribute to decisions on matters related to education and academics, particularly when it comes to the recognition or other evaluation of examinations and assessments or the appointment of examiners or co-examiners. Moreover, student members are not to participate in the debate and decision-making on matters related to examination topics or their own examinations.
- (2) All members of the examination board, their deputies, the examiners as well as co-examiners are to be sworn to official secrecy. If they are not employed in the German civil service, they are to be sworn to secrecy by the chairperson of the examination board.
- (3) Negative decisions of the examination board or its chairperson are to be reported to the affected student immediately. Prior to any action, the affected student has to be granted the right to be heard.

### **Section 9 Examiners and co-examiners**

- (1) The examination board appoints the examiners and co-examiners. A person may be appointed examiner if he or she holds at least the qualification that is to be determined by the examination or an equivalent qualification and – provided that no compelling reasons necessitate a divergence – has held an independent teaching position in the subject relevant for the examination. A person may only be appointed examiner for a Master's thesis if he/she has, in addition to the requirements mentioned above, completed doctoral-level studies or holds an equivalent qualification. A person may only be appointed co-examiner if he/she has at least passed the corresponding Master's examination or a comparable examination or holds a comparable qualification (competent co-examiner). Examiners are independent for examination purposes.
- (2) The examinee may suggest one or more examiners for his or her oral examinations. He or she may also suggest an examiner to be his or her thesis advisor. The examination board is to ensure that examination duties are split as evenly as possible amongst the examiners. If possible, a student's suggestion is to be taken into consideration.
- (3) The examination board is to ensure that examination duties are split as evenly as possible amongst the examiners. The chairperson of the examination board is to ensure that the name of the examiner will be announced to the examinee in time. This shall happen simultaneously to the registration for the examination, i.e. usually at least two weeks before the examination is held or before the topic of the Master's thesis is

assigned. Posting the information on the corresponding bulletin board or on an electronic examination management system is deemed sufficient.

## **Section 10 Recognition of examinations and assessments**

- (1) Examinations and assessments completed in degree programs within the jurisdiction of the Convention on the Recognition of Qualifications concerning Higher Education in the European Region of April 11, 1997 (Federal Law Gazette (BGBl) II 2007; p. 712 - Lisbon Recognition Convention) are recognized upon request if it can be proven that they do not considerably differ from the examinations and assessments required. If the recognition of such examinations and assessments is denied, the university is to issue a substantiated notification on this matter. If it has been proposed to reject the recognition request the President's Office may be called upon to review the decision.
- (2) Examinations and assessments completed in degree programs outside the jurisdiction of the Lisbon Recognition Convention are to be recognized upon request as laid out in subsection 1.
- (3) Achievements that were not part of an academic program may be recognized as examinations or assessments upon request if they are equivalent (in terms of quality) to the examinations and assessments required. Quality is regarded as a way of learning that promotes research and the acquisition of scientific knowledge.
- (4) For examinations and assessments that have been recognized, students are awarded the number of ECTS credits specified in the curriculum (annex 1). Non-graded examinations taken at other institutions of higher education or in other programs are to be recognized in accordance with subsections 1 to 2. They are to be identified accordingly on the examination certificate and are not accounted for in the calculation of the final grade.
- (5) The examination board is the decision-making body in all cases laid out in subsections 1 to 4. In cases of doubt, it is to consult the examiners responsible for the individual courses.

## **Section 11 Evaluation of examinations**

- (1) Examinations are to be graded and evaluated in a differentiated manner, unless otherwise stated below. The Master's thesis and final oral examination are graded. Module examinations may be graded or non-graded. Evaluations for individual examinations are to be determined by the respective examiner.
- (2) Non-graded examinations are to be evaluated with either "passed" or "not passed".
- (3) Graded examinations are to be evaluated in a differentiated and comprehensible manner. Reasons for the evaluation are to be explained in writing upon request of the examination board. Grades for individual examinations are to be determined by the respective examiner.
- (4) If several examiners participate in an examination, the examiners are to jointly evaluate the examination, provided that no other provisions are made hereinafter. Should the evaluations differ from one another, the grade is to be determined by the arithmetic mean of the individual grades.
- (5) The following grades are to be used for the evaluation of graded examinations:

1.0 or 1.3	= excellent	= an excellent examination result
1.7 or 2.0 or 2.3	= good	= an examination result well above average requirements

2.,7 or 3.0 or 3.3	= satisfactory	= an examination result that meets average requirements
3.7 or 4.0	= sufficient	= an examination result that meets the requirements despite its shortcomings
5.0	= insufficient	= an examination result that does not meet the requirements due to substantial shortcomings

Grades 0.7, 4.3, 4.7 and 5.3 are invalid.

- (6) Calculated grades that differ from the grades listed above are to be determined as follows.

up to 1.5	grade: "excellent"
above 1.5 to 2.5	grade: "good"
above 2.5 to 3.5	grade: "satisfactory"
above 3.5 to 4.0	grade: "sufficient"
above 4.0	grade: "insufficient"

When it comes to the calculation of grades, only the first decimal is to be factored in; all other decimals are to be dropped without rounding.

- (7) An examination is passed if the student's performance is deemed at least "sufficient". If the module examination is made up of two or more individual examinations, the module is considered to be passed if the weighted average of examination grades equals the grade "sufficient" (4.0).
- (8) The evaluation of examinations is to be completed within six weeks of the examination. Students are to be informed of the results. Posting the results on the corresponding bulletin board or on an electronic examination management system is deemed sufficient. Students are to be notified of the results of the Master's thesis within eight weeks.

## **Section 12 Credits in accordance with the ECTS (European Credit Transfer System)**

- (1) Credits are to be assigned to each module of the Master's program as well as to the Master's thesis and final oral examination, enabling recognition in accordance with the European Credit Transfer System (ECTS). Credits are a quantitative measure of the workload that averagely gifted students need to successfully complete a component of the program. This workload includes courses, preparation and follow-up work of a course, self-study as well as examinations and preparation for examinations.
- (2) The workload required to successfully complete the Master's program as laid down in the curriculum amounts to 30 credits per semester. One credit corresponds to a workload of 30 hours.
- (3) Students only receive credits if they have successfully completed a module. Pursuant to section 11 (2 and 6), this means that students are awarded the total number of credits for every graded module examination that has been passed with a grade of at least "sufficient", irrespective of the grade received for the examination. A total of 120 credits is required to successfully complete the Master's program. Students will receive credits for non-graded examinations if these are passed.
- (4) An overview of the number of credits assigned to the individual modules and to the Master's thesis as well as final oral examination is provided in the curriculum (annex). More detailed information can be found in the module catalog.
- (5) Credits obtained in accordance with the ECTS at other institutions of higher education within and outside the jurisdiction of the German constitution are to be recognized, in accordance with section 10, with no more than the number of credits assigned in the current program, provided that the underlying examinations and assessments are



deemed equivalent. For all other relevant matters, the regulations set down in section 10 apply.

### **Section 13 Evaluation of examinations in accordance with the ECTS grading scheme**

The certificate awarded to graduates in accordance with section 30 (1) is to indicate the relative position of the final grade according to the ECTS grading table. The reference group are the students enrolled in the Master's program. All final grades awarded to members of the reference group over a course of at least two years are documented and the grade distribution in terms of percentage is calculated. According to section 30 (7) the grade distribution table is part of the Diploma Supplement.

### **Section 14 Retaking examinations**

- (1) Students may retake module examinations if they do not pass them or if the examinations are considered "not passed". If a module examination consisting of two or more components is not passed, all exam and module components of the concerned module are to be retaken, even if one or more of these components have been passed. The examination is to be retaken within two semesters of the failed examination attempt, otherwise the second examination attempt is considered "not passed". A second retake of the examination is also to be taken within two semesters of the failed first retake. If the second retake of the examination does not take place within this period, students will irreversibly lose the right to take this examination. If the student provides evidence that he or she is not responsible for missing the deadline stated in sentence 3 or 4, the deadline for the retake of the examination is extended by one semester. Times spent on a mandatory or optional semester abroad or internship and times on leave are not taken into account for the determination of the deadline for the retake, i.e. the deadline is extended by the amount of time spent on leave or on a semester abroad or internship.
- (2) If a student does not pass the Master's thesis or the final oral examination, he/she may retake each of these examinations once. Module examinations may be retaken twice.
- (3) An examination graded at least "sufficient" may not be retaken.

### **Section 15 Absence; withdrawal from examinations; cheating**

- (1) An examination is deemed "insufficient" (5.0) if the examinee does not appear for an examination and is not able to present a good reason for his/her absence. An examination is also deemed "insufficient" if the student withdraws from it without good reason after the examination has begun or if he/she does not submit the examination within the foreseen time. The provisions stated above also apply if the student fails to submit his/her Master's thesis in due time.
- (2) The reasons for missing or withdrawing from an examination are to be immediately reported to the examination board, to be documented in writing and to be substantiated by the student. In case of sickness, students are required to submit a comprehensible medical certificate confirming that they are incapable of taking the examination. If the examination board accepts the reasons given, the examinee is to be notified that he/she may again file a request to be admitted to the examination concerned.
- (3) If a student attempts to manipulate the result of his/her examination by cheating or by using non-permissible means, the respective examination is to be graded "insufficient" (5.0). Carrying non-permissible means already counts as a cheating attempt. An examinee who disrupts the proper course of an examination may be expelled from the examination by the examiner or the invigilator after having been given prior warning; in such a case, the examination concerned is to be graded "insufficient" (5.0). The reasons for the expulsion are to be put on record. If the examinee is barred from retaking the

examination, he/she may request the examination board to review this decision. This also applies to the decisions made by an examiner or an invigilator, such as the ones laid down in sentence 1. Possible penalties as set down in section 63 (5) HG are to be acknowledged.

- (4) Non-permissible means are all documents and resources not explicitly allowed for the examination concerned. Students are required to mark other people's intellectual property (text passages, images, statistics, etc. by other authors from offline or online sources) adopted in their written papers or examinations as quotations. Whether an examination may be retaken in cases of alleged plagiarism may be subject to meeting certain conditions, such as the successful participation in a seminar or workshop on academic writing. In cases of severe plagiarism (copying of long text passages not marked as quotations) or in case of multiple or serious cheating attempts the examination board may decide that the examination is deemed irreversibly failed.

## **II. Module examinations**

### **Section 16 Objectives, length and type of module examinations**

- (1) The Master's program is divided into individual modules, each of which concludes with an examination. The content of a module may be taught in one or more courses with different methods of teaching and study. A module examination may be subdivided into several individual examinations of the same or different type pursuant to sections 19 to 22. The examinations are to determine whether students are proficient in the essential topics and methods taught in the modules and whether they are capable of independently applying the knowledge and skills acquired.
- (2) On the basis of the courses offered, the examination requirements are to be aligned with the learning outcomes defined for the individual module, which are outlined in the module catalog. Students may be required to be familiar with relevant contents of previous modules.
- (3) A student's total workload for module examinations made up of a combination of several types of examination is not to exceed the typical workload that a single type of examination would generate.
- (4) After consultation with the examiners concerned and in observance of the module outline and the feasibility to complete the program within the allotted time frame, the examination board is to determine the type and modalities of examination for each module at the beginning of each semester. If an examination within a module comprises several components or a combination of different types of examination, the examination board is also to specify how to weight the individual components. If no specific weighting factors have been established, the final grade is to be determined based on the arithmetic mean of the individual evaluations.
- (5) At the suggestion of the respective examiners, the examination board sets the dates for the examination period for written and oral examinations usually one month prior to the examination period. The decision is binding for all students who intend to take the particular module examination. For scheduled examination dates, the regulations stipulated in subsection 6 apply.
- (6) In case of other examination types, the examiner is to determine the examination schedule in the first quarter of the respective course and is to notify the examination board. The examiner is to announce the examination schedule within this period. Posting the information on the corresponding bulletin board or on an electronic examination management system is deemed sufficient. Section 18 (1), sentence 2 does not apply.

## Section 17 Admission to module examinations

- (1) Students are to register for examinations within the registration period determined by the examination board using the electronic registration/withdrawal system provided by the Office of Student and Examination Services. If necessary, students may alternatively submit a written registration request to the Office of Student and Examination Services (or the examination board). Students are required to verify that their registration was properly recorded by consulting the appropriate registration lists. Only registered students may take part in an examination.
- (2) Students may only be admitted to an examination if they
  - 1) meet the admission requirements stated in section 3 and
  - 2) are enrolled at or admitted to Technische Hochschule Köln as regular students
  - 3) are cross-registered students pursuant to section 52 (1 and 2) HG at Technische Hochschule Köln and have neither taken nor registered for an examination in the subject concerned as regular students.
- (3) Students may be required to pass other module examinations or complete designated prerequisites in order to be admitted to a module examination; additional information is provided in the curriculum (annex 1) in connection with the module catalog.
- (4) The optional required modules (*Wahlpflichtmodule*) in which the student intends to take an examination and which are stated in the examination registration become binding with the registration request. For all other relevant matters, the regulations set down in subsection 6 apply.
- (5) Students are required to include the following documents with their registration or hand them in by a date set by the examination board, unless they have already done so at an earlier point in time:
  1. proof of having met the admission requirements stated in subsections 2 and 3
  2. a statement on previous relevant examination attempts as well as on previous endeavors to take the Master's examination or another final examination in the same program.
  3. a declaration on whether the student objects to the presence of an audience during oral examinationsIf the examinee cannot duly submit one of the documents required according to sentence 1, the examination board may allow him/her to provide the respective proof in a different manner.
- (6) Students may revoke the registration for a module examination by submitting a written request to the Office of Student and Examination Services or - if possible - via the electronic registration/withdrawal system provided by the Office of Student and Examination Services up until one week prior to the set examination date. In this case, this will not count as an examination attempt.
- (7) Admission to a module examination is to be decided upon by the chairperson of the examination board and, in cases of doubt, the examination board itself.
- (8) Admission is to be denied if
  - a) the examinee does not meet the requirements stated in subsections 2 to 4, or
  - b) the examinee fails to submit all documents and does not submit them by the date set by the examination board, or
  - c) the examinee has irreversibly failed a corresponding examination in a comparable program or has irreversibly failed a Master's or other type of final examination in the same program within the jurisdiction of the German constitution, or

- d) the examinee has – within the jurisdiction of the German constitution – lost the right to take an examination, that is deemed required according to the examination regulations, e.g. by missing the deadline for retaking an examination.

### **Section 18 Conduct of module examinations**

- (1) Generally, one examination date per semester is to be scheduled for each module examination. The examinations are to be held within the examination periods specified by the examination board and to be announced at the beginning of the semester or towards the end of the previous semester. No courses are to be held during the examination period.
- (2) Usually at the beginning of each semester, the examination periods for all examinations are set by the examination board at the suggestion of the respective examiners. The examination periods are binding and identical for all students.
- (3) Students are to be informed of the individual examination dates and their admission to the examinations in time - usually at least two weeks prior to the examination concerned. Posting the information on the corresponding bulletin board or on an electronic examination management system is deemed sufficient.
- (4) Upon request, students are to identify themselves with an official photo ID.
- (5) If a student substantiates – by submitting a medical certificate or in a different manner - that he/she is not capable of completely or partly taking the examination or assessment in its intended form due to a permanent disability or chronic disease pursuant to section 3 of the German Act on Equal Opportunities for Disabled Persons (*Behindertengleichstellungsgesetz*), the chairperson of the examination board may extend the time frame allotted for writing an examination or the deadline for taking an examination. The chairperson may also allow the student to take an equivalent examination in a different form. If several equivalent ways of offsetting a disabled person's disadvantage are considered suitable, the chairperson of the examination board is to decide on the type, date and duration of the examination at his/her discretion after having duly considered all circumstances. This provision also applies to assessments and admission tests. In exceptional cases, sentences 1 to 3 also apply to persons with temporary health impairments.
- (6) Examinations which conclude a program and retakes of examinations whose passing is a prerequisite for continuing a program are to be evaluated by a minimum of two examiners.

### **Section 19 Written examinations**

- (1) In written examinations the examinee is to prove that – within a limited time frame and with limited resources – he/she is capable of identifying and correctly solving problems stemming from areas covered by the module by means of common scientific methods of his/her subject field.
- (2) A written examination is to be held under supervision. It is the examiner's responsibility to decide as to whether students may use additional resources.
- (3) A written examination is normally drawn up and evaluated by one examiner only. In specific cases, especially when a module examination covers several subject fields, the examination may also be drawn up and evaluated by more than one examiner. In such a case, the examiners (or in exceptional cases the examination board) jointly determine prior to the examination how the individual elements of the examination shall be weighted. If the evaluation by the individual examiners differs by more than two grades

or more than 30% of the maximum possible score, the examination board decides on how to proceed. Notwithstanding sentence 3, subclause 2, the examination board may alternatively determine that due to the special character of a subject field, an examiner shall only evaluate the part of a written examination that corresponds to his/her subject field.

- (4) Examinations held using electronic equipment are to be treated like written examinations.

## **Section 20 Written multiple-choice examinations**

- (1) Written examinations may be completely or partly held as multiple-choice examinations. In multiple-choice examinations, students are asked to answer written questions under supervision by selecting the correct answers from a list of suggested solutions. Multiple-choice examinations may be held in modules suitable for this type of examination upon request by the examiners and with approval of the examination board.
- (2) The questions asked in multiple-choice examinations are to target the knowledge and skills taught in the module concerned and need to ensure reliable examination results.
- (3) It is the examiners' responsibility to determine the examination questions and the suggested solutions (examination exercises). It is to be recorded in writing which of the suggested solutions are to be accepted as correct answers.
- (4) The evaluation of a written examination is to include the following information:
  - a. The number of questions asked and the number of questions answered correctly by the examinee,
  - b. the minimum number of correct answers required to pass the examination,
  - c. in case the examination has been passed, the percentage by which the number of correctly answered questions exceeds the minimum requirements,
  - d. the grade obtained by the student.
- (5) When evaluating examinations, examiners are to pay attention as to whether a frequent occurrence of wrong answers to a specific question might indicate that the question was worded incorrectly. If it is determined after the examination that individual questions or possible answers are erroneous, the examination exercises concerned will not be factored in. As a consequence, the number of examination exercises is to be reduced. This reduced number of exercises is to form the basis of the evaluation. Reducing the examination exercises may not put students at a disadvantage.

## **Section 21 Oral Examinations**

- (1) Oral examinations are to be held in the presence of an examiner and a competent co-examiner (section 9 (1)) or in the presence of several examiners (panel examination) as group examinations or individual examinations, unless one of the provisions set down in section 18 (6) applies. Prior to grading the examination, the examiner is required to consult with the co-examiner or the other examiners.
- (2) A written record of the essential topics and the results of the examination, in particular of facts that are essential for the grading of the examination, is to be kept. The grade is to be reported to the students after the examination.
- (3) Students enrolled in the same program are to be given the opportunity to be present at oral examinations as audience, provided that there is enough space and that no student has objected to this provision when registering for the examination. Students may neither

be present during the examiners' consultation nor during the announcement of examination results.

## **Section 22 Other types of examination**

- (1) Besides written and oral examinations, other types of examination may be applicable for module examinations, in particular oral reports and presentations, term papers, project papers, concepts or internship reports.
- (2) Other types of examination are usually evaluated by one examiner, unless one of the provisions set down in section 18 (6) applies.
- (3) A term paper (e.g. a case study or research paper) is to determine whether the examinee is capable of independently completing a written technical assignment within a given time frame, using scientific and subject-related methods. The examiner is to determine the topic and length of the paper (e.g. number of pages of the main part) at the beginning of the semester. The grade given for the term paper is to be announced to the examinee three weeks after the term paper was submitted at the latest.
- (4) An oral report (e.g. presentation, negotiation, mediation) is to determine whether the examinee is capable of independently solving and adequately presenting a practice-based assignment by means of verbal communication within a given time frame, using scientific and subject-related methods. The examiner is to determine the duration of the oral report at the beginning of the semester. Minutes are to be kept about facts that are essential for the grading of an oral report. The grade is to be announced to the examinee within one week of the oral report at the latest.
- (5) Term papers and oral contributions in the form of a joint team project may be treated as an examination if the individual student's contribution to be evaluated as an examination is clearly distinguishable and can be assessed accordingly. In order to verify the student's contribution, identifiers such as passages, chapters, subject fields, page numbers (for term papers) or other objective identifiers allowing for a clear distinction are to be indicated.

## **III. Curriculum**

### **Section 23 Modules and completion of the program; additional modules**

- (1) In all compulsory modules (required and optional required modules), module examinations are to be held as specified in sections 19–22, or a combination of these types of examination. The program's modules are listed in in the curriculum (annex); the corresponding types of examination can be found in the module catalog, unless individually determined by the examination board (section 17 (4), sentence 1). Information on the selection of modules and courses can be found in the curriculum (annex) and is further explained in the module catalog.
  - a) Students enrolled in the **program "Integrated Water Resources Management"** are to select 10 elective courses (50 ECTS) out of the electives offered. Out of these 10 elective courses
    - at least five optional required modules (25 ECTS) are to be selected be from the electives area "Integrated Water Resources Management" and
    - at least two optional required modules (10 ECTS) are to be selected from the electives area "Methods and Tools"

- b) Students enrolled in the **program "Natural Resources Management and Development"** are to select 10 elective courses (50 ECTS) out of the electives offered. Out of these 10 elective courses
    - at least five optional required modules (25 ECTS) are to be selected be from the electives area "Natural Resources Management and Development" and
    - at least two optional required modules (10 ECTS) are to be selected from the electives area "Methods and Tools"
  - c) Students enrolled in the **program "Renewable Energy Management"** are to select 10 elective courses (50 ECTS) out of the electives offered. Out of these 10 elective courses
    - at least five optional required modules (25 ECTS) are to be selected be from the electives area "Renewable Energy Management" and
    - at least two optional required modules (10 ECTS) are to be selected from the electives area "Methods and Tools"
- (2) The curriculum and the examination procedures are to be designed in a way that makes it possible for students to have taken all required examinations by the end of the fourth semester.
  - (3) Students pursuing a double-degree program are required to spend at least one of the first three semesters at each of the two institutions of higher education involved.
  - (4) Students pursuing a double-degree program are required to obtain a minimum of 30 credits at each of the two institutions of higher education involved. This excludes the Master's thesis and final oral examination.
  - (5) The institute's executive board may decide to include additional modules from partner institutions into the course catalog.
  - (6) If a student has successfully passed the examinations of more electives than required, those module examinations which have been taken at an earlier point in time will be accounted for in the calculation of the final grade unless student objects to this at the time of registration. In their request for admission to the module examination, students bindingly declare if the module in question is to be deemed an additional module.

#### **IV. Master's thesis and final oral examination**

##### **Section 24 Master's thesis; purpose; topic; examiners**

- (1) The Master's thesis is to be submitted as a written paper. It is to demonstrate that the examinee is capable of independently completing an assignment on a subject from his/her field of study within a given time frame by elaborating on subject-related specifics as well as on interdisciplinary contexts. The student is to take scientific and subject-related aspects into account. When writing their Master's theses, students should take an interdisciplinary collaboration into consideration.
- (2) The topic of the Master's thesis may be determined by any professor who is appointed as examiner in accordance with section 9 (1). This examiner may also function as thesis adviser. Examiners from other faculties may be chosen as thesis advisers if the topic of the thesis so allows. Upon request of the examinee, the examination board may also name an adjunct professor or a qualified adjunct lecturer as thesis adviser in accordance with section 9 (1) if it has been determined that no professor of the faculty is able to function as thesis adviser for the intended topic of the Master's thesis. Students may write their Master's thesis at an institution outside the institution of higher education if this institution provides sufficient advice and support. In this case, members of said

institution may be accepted as examiners. In this cases, section 9 (1) applies accordingly. Students are to be given an opportunity to suggest topics for their Master's thesis.

- (3) Upon request, the chairperson of the examination board is to ensure that an examinee is provided with a topic for the Master's thesis in time.
- (4) A Master's thesis may also be written as part of a team project if the individual student's contribution to be evaluated as examination is clearly distinguishable and can be assessed accordingly and if it complies with the requirements stated in subsection 1. In order to verify a student's contribution, aspects such as passages, page numbers or other objective criteria allowing for a clear distinction are to be indicated.

### **Section 25 Admission to Master's thesis**

- (1) Students are permitted to write their Master's thesis if they
  - 1) meet the requirements stated in section 17 (2),
  - 2) have accumulated a minimum of 85 ECTS credits and
  - 3) have passed all required modules.
- (2) The registration request is to be sent in writing or electronically to the address specified by the Office of Student and Examination Services. Students are required to submit the following documents along with their registration request, unless they have already done so:
  - 1) proof of having met the admission requirements stated in subsection 1,
  - 2) declaration on previous attempts of writing a Master's thesis and on taking the Master's examination in the same program or a Master's examination in a comparable program,
  - 3) statement on which examiner is willing to prepare the topic of the Master's thesis and to function as thesis adviser,
  - 4) suggested topic of the Master's thesis.
- (3) Students may revoke the registration for the Master's thesis in writing up until the day the decision on admission is announced. By complying with this provision, students will not lose an attempt to write the Master's thesis.
- (4) Admission to the Master's thesis is to be granted by the chairperson of the examination board and, in cases of doubt, the examination board itself. Admission is to be denied if
  - 1) the student does not meet the requirements stated in subsection 1, or
  - 2) the documents to be submitted are incomplete, or
  - 3) within the jurisdiction of the German constitution, a final thesis written by the student has been evaluated as "insufficient" and may not be written again, or if the student has irreversibly failed one of the examinations stated in subsection 2 sentence 2 no. 2.

In all other cases, admission is only to be denied if the examinee has, within the jurisdiction of the German constitution, lost the right to take examinations in the same program, e.g. due to having failed to meet a deadline for retaking examinations.

### **Section 26 Assignment of the topic and completion of the Master's thesis**

- (1) The topic of the Master's thesis is to be assigned by the chairperson of the examination board. The time of assignment is to be the day on which the chairperson of the examination board informs the student of the topic of the Master's thesis assigned by the thesis adviser; the time of assignment is to be put on record.
- (2) Students have 4 months to write the Master's thesis (starting with the time of assignment to the day of submission). The thesis may be submitted four weeks prior to the



submission deadline at the earliest. The topic and assignment must be designed in a way that allows for the Master's thesis to be completed within the allocated time frame. In exceptional cases, the chairperson of the examination board may extend the submission deadline by up to four weeks upon request. This request is to be submitted prior to the deadline; reasons are to be detailed. The thesis adviser is to be consulted on the request.

- (3) Students may withdraw from a topic of their Master's thesis only once and may only do so within the first four weeks of the assigned time frame, without stating their reasons for doing so. If a student undertakes a second attempt to write a Master's thesis in compliance with section 14 (2), the student is only permitted to withdraw from the thesis if he/she did not do so during their first attempt of writing a Master's thesis.
- (4) Section 18 (5) applies accordingly.

### **Section 27 Submission and evaluation of the Master's thesis**

- (1) A digital copy of the Master's thesis is to be submitted to the address specified by the Office of Student and Examination Services prior to the submission deadline; a common word processing format is to be used. Submission deadlines are set in Central European Time. The date of submission is to be put on record. In addition, two hardcover copies of the thesis are to be submitted prior to the submission deadline to the chairperson of the examination board or to another person or office determined by the chairperson.
- (2) When submitting the thesis, the student is required to declare in writing that he/she has independently written the thesis – in case of a joint team project his/her part of the thesis, which has been identified accordingly – and has used no other sources and means than the ones indicated. In case of quotations sources are to be identified. Regulations on cheating as specified in section 15 (3 and 4) apply.
- (3) The Master's thesis is to be evaluated by two examiners entitled to do so. One of the examiners is to be the thesis adviser. The other examiner is to be determined by the examination board.
- (4) If the examiners' evaluations differ from each other and the divergence of both grades is less than 2.0, the grade for the Master's thesis is calculated by the arithmetic mean of both individual grades. If there is a divergence of 2.0 or greater, the examination board is to determine a third examiner. In this case, the grade for the Master's thesis is calculated by the arithmetic mean of the two better individual grades. However, the Master's thesis can only be graded "sufficient" or better if at least two of the grades are "sufficient" or better.

### **Section 28 Final oral examination ("*Kolloquium*")**

- (1) The final oral examination complements the Master's thesis. It is to be evaluated as an independent examination and is to be held within one month of the submission of the Master's thesis. The final oral examination is used to determine whether the examinee is capable of orally presenting and independently justifying the findings of the Master's thesis, its scientific fundamentals as well as inter- and multidisciplinary contexts, and of assessing the thesis' significance for practice. The examinee's approach to the topic shall also be discussed in the final oral examination.
- (2) Students may only be admitted to the final oral examination if they
  1. have successfully completed all module examinations,
  2. are enrolled or admitted as students or cross-registered students ("*Zweithörer/in*") in compliance with section 52 (2) HG and
  3. have received a grade of at least "sufficient" for their Master's thesis.

- (3) The written registration request for the final oral examination is to be sent to the address specified by the Office of Student and Examination Services. Students are required to submit proof of having met the admission requirements stated in subsection 2, unless the examination board is already in possession of such proof. Students may submit a registration request for the final oral examination along with their application for admission to the Master's thesis; in this case, students are admitted to the final oral examination as soon as all required proof and documents have been submitted to the Office of Student and Examination Services.
- (4) The final oral examination is usually held and evaluated by the examiners of the Master's thesis. If section 27 subsection 4 sentence 2 applies, the final oral examination is to be held by those examiners whose individual evaluations were used to calculate the grade for the Master's thesis
- (5) The final oral examination is an oral examination (section 21) and is jointly held and evaluated by the examiners of the Master's thesis. The duration of the final oral examination is approximately 45 minutes.
- (6) In accordance with section 12, a total of 30 credits, 25 for passing the Master's thesis and 5 for passing the final oral examination, are awarded.

## **V. Results of the Master's examination**

### **Section 29 Results of the Master's examination**

- (1) The examinee has passed the Master's examination if he/she has obtained 120 credits. This requires students to have passed all required module examinations and to have obtained a grade of at least "sufficient" for the Master's thesis and the final oral examination.
- (2) The examinee has failed the Master's examination if one of the examinations stated in subsection 1 has been irreversibly evaluated as "insufficient" or is irreversibly deemed "insufficient". Students are to be notified of having failed the Master's examination. This notification is to include information on legal remedies. After the student's removal from the register of students, the chairperson of the examination board will upon request issue a certified document listing all examinations and assessments taken by the student, including the respective grades, as well as the examinations missing in order for the student to complete the Master's examination. This certification must include a statement that the student has irreversibly failed the Master's examination. Upon request, the chairperson of the examination board will issue a document listing only the completed examinations and assessments and the respective grades.

### **Section 30 Examination certificate; final grade; diploma supplement**

- (1) Graduates are to receive a certificate on the passed Master's examination promptly, if possible within four weeks after the last examination. This examination certificate is to include the grades and credits for all module examinations, the topic of the Master's thesis, the grades for the Master's thesis and the final oral examination, the final grade for the Master's examination and - for transferred grades or recognized assessments from other institutions – the name of the institution where these assessments were completed.
- (2) The final grade for the Master's examination is determined by the arithmetic mean of the grades awarded for the module examinations, the Master's thesis and the final oral examination which have been weighted by the corresponding credits.

- (3) Grades for additional modules are not accounted for in the calculation of the final grade.
- (4) The examination certificate is to be signed by the chairperson of the examination board and is to bear the date of the day on which the last examination was completed.
- (5) Graduates are to receive their Master's certificate (*Masterurkunde*) along with the examination certificate. The Master's certificate bears the same date as the examination certificate. The Master's certificate certifies that the Master's degree has been awarded in compliance with section 2 (5).
- (6) The Master's certificate is to be signed by the director of the Institute for Technology and Resources Management in the Tropics and Subtropics and the chairperson of the examination board and is to bear Technische Hochschule Köln's seal.
- (7) Along with the examination certificate and Master's certificate, graduates receive a diploma supplement (issued in English), which corresponds to the guidelines and agreements of the German Rectors' Conference.

## **VI. Final provisions**

### **Section 31 Access to examination papers**

After having taken a module examination or having completed the Master's thesis and the final oral examination, the examinee is, upon request, to be granted access to the written examination concerned, of – if available – the examiners' records related to the written examination and of the examination records of an oral examination. Access to a Master's thesis that was graded at least "sufficient" is to be granted only after completion of the corresponding final oral examination. Access to these documents is to be requested with the chairperson of the examination board within one month of the announcement of the grade for the module examination or within one month of the delivery of the examination certificate or the certification on irreversibly failing the Master's examination. The chairperson is to determine time and place of the inspection.

### **Section 32 Invalidity of examinations**

- (1) If a student cheated during an examination and the cheating was detected only after the delivery of the examination certificate, the Master's certificate or the certifications mentioned in section 29 (2) sentences 3 and 5, the examination board is entitled to retroactively amend the grades for those examinations during which the student cheated and to render the Master's examination failed or partially failed.
- (2) If the requirements for admission to an examination were not met but the student did not attempt to cheat and if this matter was detected only after the delivery of the examination certificate, Master's certificate or the certification mentioned in section 29 (2) sentences 3 and 5 was delivered, this shortcoming is offset by the student's passing of the examination. If the student deliberately effected a wrongful admission, the examination board is to decide on the legal consequences with due regard to the Administrative Procedures Act (*Verwaltungsverfahrensgesetz*) of North Rhine-Westphalia.
- (3) The incorrect examination certificate, the Master's certificate and the diploma supplement or the incorrect certification mentioned in section 29 (2), sentences 3 and 5 are to be collected and reissued if need be. A decision pursuant to subsection 1 is to be ruled out after five years have passed since the examination certificate or certification mentioned in section 29 (2) sentences 3 and 5 were issued.

### Section 33 Entry into force; transitional regulations\*

- (1) These examination regulations enter into force as of September 1, 2014 and are to be published in Cologne University of Applied Sciences' official communication (*Amtliche Mitteilungen*).

These examination regulations apply to all students who have enrolled or will enroll in the Master's programs in

- Integrated Water Resources Management
- Natural Resources Management and Development and
- Renewable Energy Management

at Cologne University of Applied Sciences in the winter semester 2014/2015 or later.

- (3) The examination regulations are published on the basis of the resolution of the executive committee of the Institute for Technology and Resources Management in the Tropics and Subtropics at Cologne University of Applied Sciences of February 12, 2014 and after legal review by the Presidium of Cologne University of Applied Sciences on November 26, 2014.

Cologne, November 28, 2014

The President  
Cologne University of Applied Sciences

Prof. Dr.-Ing. Chr. Seeßelberg

\*Section 34 refers to the initial version of the examination regulations.

The following paragraphs refer to the amendments of July 28, 2016:

- (1) The amendments of July 28, 2016 enter into force on March 1, 2016 and will be published in Technische Hochschule Köln's official communication (*Amtliche Mitteilung*).
- (2) Section 3 of the amended examination regulations apply to all students and applicants who have will enroll in the Master's programs in Integrated Water Resources Management, Natural Resources Management and Development and Renewable Energy Management at Technische Hochschule Köln. The rest of the amended examination regulations apply to all students of these programs.
- (3) The amendments are based on the decisions of the executive committee of the Institute for Technology and Resources Management in the Tropics and Subtropics of TH Köln of February 15, 2016. The legal basis of all amendments was reviewed by Technische Hochschule Köln's President's Office on July 27, 2016.

Cologne, July 28, 2016

The President  
of Technische Hochschule Köln  
p.p.  
[signature of Prof. Becker]  
Prof. Dr.-Ing.K. Becker  
(Vice President 2)

This is a translation of the original German document. For all legal purposes, only the German version of the examination regulations shall be considered binding.

## Annex 1: Module catalog, Curriculum

Title	Semester			
	1	2	3	4
<b>Required Modules, Master's thesis and final oral examination</b>				
Management of Natural Resources Systems	5			
Natural Resources Economics and Governance	5			
Project and Business Management	5	5		
International Cooperation and Development		5		
Project I	5			
Project II		5		
Project III			5	
Preparation of Master's thesis			5	
Master's Thesis and final oral examination				30
<b>Elective Modules:</b>				
<b>Methods and Tools</b>				
Scientific Work and Research Methods	5			
Geographic Information Systems and Remote Sensing	5			
Statistics	5			
Empirical Social Research Methods		5		
Environmental Monitoring		5		
Economic Evaluation Methods			5	
Environmental Assessment			5	
<b>Integrated Water Resources Management IWRM</b>				
Water Resources Management	5			
Hydrology		5		
Hydraulic Structures		5		
Water and Agriculture		5		
Water Economics and Governance		5		
Watershed Management		5		
Sanitation and Public Health			5	
Flood Management			5	
Water Scarcity and Drought			5	
Water Supply			5	
Water System Analysis			5	
<b>Natural Resources Management and Development NRM</b>				
Land Use Systems and the Environment	5			
Eco-balancing and decision-support systems	5			
Soil Management		5		
Farming System Economics		5		
Ecosystem Management and Conservation		5		
Public Services and Housing Provision		5		
Ecological and Social Risks			5	
Food Security			5	
Resources Efficient Buildings and Quarters			5	
Urban, Regional and Community Based Management			5	
Water-Energy-Food Security Nexus			5	
<b>Renewable Energy Management REM</b>				
Energy Resources and Energy Systems	5			
Bioenergy and Geothermal Energy	5			
Energy Economics and Markets		5		

Energy Efficiency and Environment		5		
Photovoltaics and Solar Thermal Systems		5		
Energy Policy, Legislation and Management			5	
Wind Energy and Hydropower			5	
Decentralized Energy Systems Planning			5	

**Annex 2: Double degree in cooperation with our partner university “Universidad Autónoma de San Luis Potosí – UASLP“, Mexico**

Programs involved:

1. UASLP - “Multidisciplinary Postgraduate Programme on Environmental Sciences – PMPCA”
2. CUAS - "Natural Resources Management and Development - NRM"

Recognition process

<b>PMPCA - Module title</b>	<b>ECTS</b>	<b>NRM - Module title</b>
Ecología	5	Management of Natural Resources Systems
	5	Ecología – Curso optativo
Desarrollo sustentable	5	International Cooperation and Development
Problemática y Gestión Ambiental	5	Project I
Economía Ecológica	5	Natural Resources Economics and Governance
Seminario Multidisciplinario	5	Project II
Estadística	5	Applied Statistic
Curso optativo	5	Modules selected from the PMPCA electives catalog (Specialization NRM or Methods & Tools)
Curso optativo	5	
Curso optativo	5	
Curso optativo	5	

Translated on October 17, 2014 by Michèle Lohr (Conference Interpreter, M.A.), Translator at the Department of Academic Affairs at TH Köln – University of Applied Sciences.

Amendments added on April 12, 2017 by Michèle Lohr (Conference Interpreter, M.A.), Translator at the Department of Academic Affairs at TH Köln – University of Applied Sciences.

For all legal purposes, only the German version of the examination regulations shall be considered binding.