Study and Examination Regulations for the International Master's Programme in Water Engineering in the Department of Water and Waste Management at Magdeburg-Stendal University of Applied Sciences of 08.10.2012

Based on Art. 9, paragraph 7, Art. 13, paragraph 1 as well as Art. 67, paragraph 3 subparagraph 8 and Art. 77, paragraph 2 subparagraph 1 of the Higher Education Act of Saxony-Anhalt (HSG LSA), as promulgated in the reformed Higher Education Act of Saxony-Anhalt of 14.12.2010 (Official Gazette for the State of Saxony-Anhalt p. 600 ff.) Magdeburg-Stendal University of Applied Sciences has enacted the following study and examination regulations:

Index

I. Provisions specific to studies
§ 1 Scope
§ 2 Objective of the programme
§ 3 Academic title
§ 4 Admission to the study programme
§ 5 Duration and commencement of the programme
§ 6 Organisation of the course of studies
§ 7 Contents of studies
§ 8 Structure of studies
§ 9 Types of classes and seminars
§ 10 Departmental academic counselling
§ 11 Individual study plans
§ 12 Individual part-time study programme

II. Provisions specific to examinations
§ 13 Board of Examiners
§ 14 Examiners and assessors
§ 15 Recognition of periods of study, academic achievements and examinations
§ 16 Internship semester(s)
§ 17 Study phases abroad
§ 18 Mid-term evaluations
§ 19 Types of examinations during the programme
§ 20 Compensation for disadvantages/Statutory protection periods
§ 21 Public access to oral examinations
§ 22 Admission to participate in examinations during the programme
§ 23 Assessment of examination results and determination of module grades

§ 24 Repetition of examinations during the programme
§ 25 Free attempt
§ 26 Supplementary examinations

III. Master's degree
§ 27 Registration for Master's thesis
§ 28 Setting of the topic, submission and assessment of the Master's thesis
§ 29 Colloquium for the Master's thesis
§ 30 Repetition of the Master's thesis and colloquium
§ 31 Overall grading of the Master's exam
§ 32 Academic transcripts and certificates
§ 33 Degree certificate

IV. Final provisions
§ 34 Access to examination files
§ 35 Non-attendance, withdrawal, cheating, breach of regulations
§ 36 Invalidity of examinations
§ 37 Decisions, appeal procedure
§ 38 University-wide announcements by the Board of Examiners
§ 39 Effective date of regulations

Appendix
Standard curriculum and examination schedule
I. General Provisions

§ 1 Scope

(1) The present study and examination regulations provide the framework for the "International Master's Programme in Water Engineering" at Magdeburg-Stendal University of Applied Sciences. The Master's programme is run as a joint degree programme by the Department of Water and Waste Management at Magdeburg-Stendal University of Applied Sciences together with the School of Civil and Environmental Engineering at the Universidad de La Coruña in La Coruña / Spain, hereafter referred to as "the participating universities".

(2) This Master's programme is a course of studies that requires on-campus attendance and is assigned to the "more application-oriented" profile type. The on-campus phases take place at both participating universities.

(3) It is run as a full-time programme of studies.

(4) This course of studies does not require fees.

(5) The language of instruction is English.

§ 2 Programme objective

The objective of the programme is to acquire fundamental professional knowledge and the ability to work independently in accordance with scientific methods, to integrate oneself in fields of employment relating to application, research and teaching, and to deal with the frequently changing tasks that arise in the professional life of an engineer working in water management. Professional expertise is built in the field of water management. Graduates acquire expertise in water management in the areas of national and international water management planning processes, drinking water and wastewater management in hydrology, in hydraulic engineering and experimental hydraulics, in restoration ecology and in biotechnology and river morphology and in flow and process modelling.

§ 3 Academic title

Upon passing the Master's examination successfully, the participating universities award the academic title of

“Master of Engineering (M. Eng.)."

§ 4 Admission to the study programme

(1) For admission to a Master's degree programme at a university, evidence is required of a Bachelor's degree or a 'Diplom' from a university, a 'Magister' degree or a programme of studies completed by passing a state examination.

(2) Additional admission requirements for this International Master's degree programme are that the first degree mentioned in paragraph 1 included grades of "very good" or "good" in the subject areas of Water Management, Construction or very similar courses of study, and the standard period of study encompassed at least 7 semesters, or a minimum of 210 credits were acquired.

Decisions on graduates in other subject areas and in cases of doubt are made on a case-by-case basis by the Board of Examiners.

(3) Applicants who cannot meet the requirement for 210 credits but can provide evidence of at least 180 credits are given the opportunity to acquire the missing 30 credits during one semester before the start of the Master's course. Modules (theoretical and/or practical modules) are selected by the Board of Examiners, making reference to the application forms submitted.

(4) English language skills at level B2 of the Common European Framework of Reference are a prerequisite which non-native-speakers must demonstrably satisfy by means of the following tests:

- IELTS exam - 5 points or
- Cambridge exam - First Certificate in English FCE (A-C) or
- TOEIC - 541 points or
- TOEFL iBT - 87 points (computer based) or
- UNIcert II or
- ALTE level - Level 3 or
- equivalent tests.

In cases of doubt, the Board of Examiners will decide whether sufficient evidence of English language skills has been demonstrated.
Applicants can be exempted from demonstrating evidence of English language skills if they were taught at a bilingual school, are native speakers, or can demonstrate evidence of a period spent at an English-speaking school, university or other institution.

(5) Applicants who cannot demonstrate evidence of English language skills pursuant to paragraph 4 have to demonstrate their English language skills in an aptitude test.

(6) Applicants for the degree programme apply to one of the participating universities, which checks whether they meet the programme admission requirements. Applicants who satisfy the admission criteria are enrolled by the given university. For the purposes of (double) registration at the other participating universities, the details of the eligible applicants to the other universities will be transmitted in the form of an Excel table in compliance with data protection principles.

(7) Passing the aptitude test confers an entitlement to commence the programme in the winter semester of the current year or the winter semester of the next year. Justifiable decisions at variance with the above can be made on a case-by-case basis by the Board of Examiners.

(8) The aptitude test serves to demonstrate the language skills that are necessary for admission to the Master’s programme.

(9) A Board of Examiners is constituted to administer the aptitude test. It is responsible for the organisation and implementation of the aptitude test and for the setting of the test assignments. The Board of Examiners has two members (and two additional members as their proxies). One of the members must be a professor in the department, and the programme director should preferably be a member of the Board of Examiners. The Board of Examiners elects its chairperson. The Board of Examiners can call in other members of the teaching staff in an advisory capacity. The Board of Examiners consults and makes decisions in private meetings.

(10) The aptitude test is held once a year, normally in June/July for the winter semester. Admission to the aptitude test is conditional upon having submitted a proper application in due time, which must have been received together with all the required documents. Later applications can only be taken into consideration with lower priority, depending on available capacities. The Board of Examiners sends out the invitation to the aptitude test no later than two weeks before the date of the test.

(11) The aptitude test consists of an oral examination lasting a maximum of 30 minutes. Applicants must demonstrate in the aptitude test that they
- understand the main content of complex texts on concrete and abstract themes,
- understand technical texts in their own field of specialisation,
- can communicate with sufficient spontaneity and fluency that a normal conversation with native speakers is easily possible without undue effort on either side,
- can express themselves clear and in detail on a broad range of themes,
- can explain a point of view on a question and state the advantages and disadvantages of different options.

(12) Aptitude for the degree programme is demonstrated if the applicant has achieved at least 50% of the maximum points score in each part of the test.

(13) If the aptitude test has not been passed, no admission is granted to the programme of studies. The aptitude test can be repeated once, no sooner than the next possible cycle of the application procedure. For this it is necessary to submit in due time a new, fully and properly completed application for admission to the programme of studies. In the event that a test is repeated, all examination elements must be repeated. The aptitude test has been irrevocably failed if it has been assessed as "not successfully completed" or is deemed to have been assessed as "not successfully completed" and no further repetitions are permitted.

(14) The aptitude test is not public. A written record is made of the aptitude test, which is signed by the members of the Board of Examiners. In addition to the applicant’s personal data it must contain at least the following details:
- date of the aptitude test,
- the members of the Board of Examiners,
- duration and content of the aptitude test,
- assessment and result.
The examiners can exclude an applicant from the aptitude test if it becomes apparent that he or she influenced or attempted to influence the result of the aptitude test by cheating or making use of unauthorised means of assistance. If any reason for exclusion comes to light after the aptitude test has been taken, the examiners' decision can be reversed within a six-week time limit after the reason becomes known. If an applicant withdraws before the start of the aptitude test or, having been invited to the aptitude test, fails to attend at the appointed time, he or she can normally reapply to take the test at the next possible opportunity. In this case the registration is treated as a first-time application. §35, §36 and §37 apply accordingly.

The Board of Examiners informs the applicant in writing of the result of the aptitude test. If the aptitude test has been failed, the notification will include information on the possibility of repeating the test at a later admission date as well as instructions on the right to appeal. §37 applies accordingly.

The Board of Examiners makes a list of the applicants who have successfully passed the aptitude test.

Per university at least 5 and a maximum of 12 places on the programme will be made available. The degree course is designed to accommodate a maximum of 25 students. If the number of qualified applicants is greater than the number of places to be allocated, the Board of Examiners compiles a ranking list of applicants based on the percentage results of the aptitude test, the final grade of the first degree, and the Bachelor's thesis mark, and passes this to the admissions office. Admission to the programme takes place on the basis of this list.

At Magdeburg-Stendal University of Applied Sciences, transcripts and certificates have to be submitted in German.

§ 5

Duration and commencement of the programme

The course of studies is organised in such a manner that, including the Master's thesis and colloquium, it can be successfully completed within the standard period of study of 3 semesters.

The course programme is scheduled to begin in the winter semester at the Universidad de La Coruña.

§ 6

Organisation of the study programme

The course of studies is divided into modules. Modules can consist of several classes and seminars. At least one examination must be taken for each module. Module exams normally consist of one examination. Examinations take place at intervals during the programme of studies, either during or at the end of the respective module. In accordance with the European Credit Transfer System (ECTS), a certain number of credits will be given at the end of each successfully completed module.

The scope of compulsory and mandatory elective modules during the entire course of studies amounts to 60 semester hours. The students' course load for this period of time amounts to 90 credits. For this, it is necessary to pass the compulsory and mandatory elective modules. It is also possible for students to take additional elective modules. Further information on the modules, examinations and allocation of credits to the individual modules can be obtained from the appended Standard Curriculum and Examination Schedule. The organisation of the programme requires the completion of modules

- 1 to 7 (semester 1) at the Universidad de La Coruña/Spain (studies)
- 8 to 14 (semester 2) at Magdeburg-Stendal University of Applied Sciences (studies)
- 15 to 16 (semester 3) at Magdeburg-Stendal University of Applied Sciences/Germany or at the Universidad de La Coruña/Spain or at other participating universities (project partners) or in companies/institutions (traineeship placement, academic project; more specific regulations are set out in §16).

As long as evidence has been shown that the requirements for admission to the given examination have been satisfactorily met, the module exams can be taken before the end of the semester indicated in the examination schedule.

The Master's exam comprises module examinations taken during the programme and the Master's thesis with colloquium.
The required modules necessary for successful completion of the study programme, and the associated classes and seminars including examinations, and the recommended distribution of the modules over the semesters, are prescribed in the Standard Curriculum and Examination Schedule. Examinations are held at intervals during the programme of studies.

(1) The course programme can include compulsory modules, mandatory elective modules and elective modules. Within the framework of the current regulations, tutors are responsible for determining the subject-specific balance between different forms of teaching on their modules. More specific details are given in the Standard Curriculum and Examination Schedule.

(2) The designation compulsory modules applies to all modules which are necessary for the successful completion of the programme in accordance with the examination and study regulations.

(3) The designation mandatory elective modules applies to all modules which the students have to select from a certain number of modules as prescribed by the Examination and Study Regulations. Within the chosen course of studies, these modules facilitate the pursuit of individual inclinations and interests while simultaneously allowing for the development of field-related knowledge in the students’ subsequent field of employment. The list of mandatory elective modules will vary in accordance with developments and the availability of tutors and will be adapted to the department’s course programme. Upon application by the student to the Board of Examiners and in consultation with the programme director or the departmental academic counsellor, further modules from all departments of Magdeburg-Stendal University of Applied Sciences can also be recognised as mandatory elective modules.

(4) The designation elective modules applies to modules which the students may choose from the modules offered by Magdeburg-Stendal University of Applied Sciences in addition to the compulsory and mandatory elective modules which are necessary for their programme of study. Students are free to take examinations for the elective modules. The results of this examination will not be taken into consideration when determining the cumulative grade. On request a certificate will be issued.

(5) Registration for a specific mandatory elective module must take place no later than four weeks after the beginning of the respective semester, in the Dean’s office of the Department of Water and Waste Management. If fewer than five students register for a mandatory elective module, the module in question will be cancelled and students will be required instead to select one of the remaining modules. Variations of this provision are possible for good cause.

The department offers lectures, seminars, tutorials, colloquia, laboratory practicals, projects and excursions, and combinations of the above.

Through comprehensive and systematic presentations, lectures convey fundamental technical, theoretical and methodological knowledge.

In seminars, students and professors interact in analysing and evaluating theoretical and practical issues. This work can take place in a variety of forms (informational presentations, oral presentations, developing hypotheses, discussions) and in groups.

Tutorials permit students to acquire fundamental methods and proficiencies.

In colloquia, students and professors engage in more thorough academic debate on selected issues.

Laboratory practicals facilitate the practical application of skills acquired during studies.

Projects serve to develop skills for independent scientific work and for finding practical solutions to integral problems. Projects are carried out in groups.

Excursions facilitate observation and information-gathering and direct contact with on-site practical work.
§ 10
Departmental academic counselling

The department offers academic counselling, especially concerning the progression of studies, switching of modules, and any problems that could lead to significant transgression of the standard period of study.

§ 11
Individual study plans

(1) In principle, individual study plans are possible upon approval by the programme director/departmental academic counsellor.

(2) Individual study plans facilitate the successful completion of the degree programme within the standard period of study. In particular, individual study plans are offered to those students who, in spite of fulfilling admission requirements, still lack prior knowledge in one or more modules.

(3) The programme director/departmental academic counsellor is the students’ contact person for the preparation of an individual study plan.

§ 12
Individual part-time studies

No provision is made for individual part-time study programmes.

II. Provisions specific to examinations

§ 13
Board of Examiners

(1) A Board of Examiners, comprised of members of the department, will be formed in order to organise the examinations and implement the tasks prescribed in these study and examination regulations. In general, it is to be comprised of at least 5 members, 3 of whom are members of the faculty, one representative of the research associates/adjunct professors, and 1 student representative. The members of the Board of Examiners are elected by the respective status groups of the Departmental Council. The chairperson or vice-chairperson must be a professor. For decisions regarding examinations, the student is a non-voting board member. One proxy each can be appointed for the status groups of research assistants/adjunct professors and students, respectively.

(2) The Board of Examiners ensures proper implementation of the exams. It enforces compliance with the terms set out in these Study and Examination Regulations. It reports to the Departmental Council on a regular basis regarding the development of examinations and study periods, and makes suggestions on reforms to these Study and Examination Regulations. Special emphasis is placed on compliance with the standard period of study and with examination deadlines.

(3) The Board of Examiners makes its decisions based on a majority vote. Abstention from voting is not permissible. In the case of an even split, the chairperson or, when absent, his or her proxy, shall have the casting vote. The Board of Examiners constitutes a quorum when the majority of its members, among them at least two members of the faculty (professors’ status group), are present.

(4) The term of office of the members of the Board of Examiners is four years, with student incumbency limited to one year. Re-election is possible.

(5) Minutes are to be taken of each session of the Board of Examiners. The essential matters for discussion and the decisions of the Board are to be recorded in these minutes.

(6) If necessary in a given case, the Board of Examiners can delegate a strictly defined and revocable power of authority to the chairperson or his or her proxy. The chairperson prepares and executes the resolutions of the Board of Examiners, and regularly informs members as to his or her activities.

(7) The members of the Board of Examiners have the right to participate as observers during the examinations.

(8) The members of the Board of Examiners are bound to maintain confidentiality by virtue of their office. Where they are not public service employees, members must make a pledge of secrecy to the chairperson.
§ 14
Examiners and assessors

(1) The Board of Examiners appoints the examiners and assessors. Only members and associates of this or another university who possess the necessary qualifications to teach independently on the examination module in question are authorised to be examiners. As and when necessary, adjunct professors or other qualified persons with professional and vocational training experience can also be appointed as examiners. People may only be appointed as examiners and/or assessors if they possess at least the qualification that is subject to examination or an equivalent qualification.

(2) Examinations at the university are normally to be assessed by at least two examiners. The oral examination is to be conducted by several examiners or by one examiner in the presence of one expert assessor. The assessor is to be consulted before a final grade is given. If the Board of Examiners determines that, taking into consideration all those authorised to be examiners or assessors pursuant to paragraph 1 whose appointment would be inappropriate because of additional undue burdens, taking account of their normal professional responsibilities, or when two examiners are not available for the examination date in question, it can thereupon resolve that the written examination can be marked by just one examiner. The resolution must be communicated to the students when registering for the examination.

(3) Two examiners must be appointed for the assessment of the written Master's thesis.

(4) Students can propose examiners for oral examinations and the Master's thesis. The proposal is legally non-binding.

(5) The examiners are independent in carrying out their examination duties.

(6) The Board of Examiners is to ensure that students are informed in good time as to the names of the examiners.

(7) § 13, paragraph 8 applies to examiners and assessors accordingly.

§ 15
Recognition of prior periods of study, academic achievements and examinations

(1) Upon written application, the Board of Examiners will decide on the recognition of prior periods of study, academic achievements and examinations. The application is to be addressed to the Board of Examiners of the respective department within four weeks from the beginning of the relevant programme of studies. For purposes of recognition, students must present the necessary original documents or certified copies thereof.

(2) Prior periods of study, academic achievements and examinations (qualifications) from other universities (in Germany and abroad) will be recognised provided that there is no essential difference between the previously completed academic achievements and those which they are intended to replace. The university bears the burden of proof. If recognition is denied, the university must state the reason.

For the recognition of periods of study completed and university qualifications obtained at universities outside the Federal Republic of Germany, due regard must be given to the Lisbon Convention of 11 November 1997, the equivalence agreements approved by the Standing Conference of the Ministers of Education and Cultural Affairs of the German Länder and by the German Rectors' Conference, and agreements reached in the context of university partnerships. As long as it is already being applied by both parties, the basis of valuation is the European Credit Transfer System (ECTS).

(3) Upon recognition of examinations the ECTS grades, if available, are adopted and written onto the transcript. They will not be considered when assessing the cumulative grade.

(4) Where grading systems are comparable, the grades will be adopted and used in calculating the cumulative grade.
§ 16  
Practical semester of studies

(1) The course of studies includes a traineeship in semester 3, which is the basis of the Master’s thesis to be written and comprises 10 weeks of full-time employment.

The traineeship report must be written in English and submitted to the supervising tutor no later than 2 weeks after completion of the traineeship. 15 credits are awarded for successful completion. The traineeship report is assessed without awarding a grade (§ 23 applies accordingly). If the traineeship report is assessed as “not successfully completed” it must be repeated in accordance with § 24.

(2) As a prerequisite for eligibility to undertake the traineeship, students must demonstrably have accumulated at least 54 credits from module examinations of the Master’s examination.

(3) Where a student is unable, due to a prolonged or permanent illness or disability, to undertake full-time employment in the prescribed form, in accordance with § 20 the Board of Examiners must provide him or her with the possibility of making part-time arrangements.

(4) More specific regulations can be found in the Traineeship Regulations.

§ 17  
Study phases abroad

(1) It is obligatory for students from Magdeburg-Stendal University of Applied Sciences to complete modules 1 to 7 at the Universidad de La Coruña in Spain.

It is obligatory for students from Universidad de La Coruña / Spain to complete modules 8 to 14 at Magdeburg-Stendal University of Applied Sciences.

(2) Specific requirements for beginning and successfully completing a phase of study abroad can be found in the module descriptions.

(3) The integration of the study placement abroad into the study programme is intended to help students to consolidate and apply the acquired professional knowledge and their cultural and linguistic skills in English and Spanish.

§ 18  
Mid-term evaluations

(1) A mid-term evaluation is a prerequisite for admission to module assessment examinations taken during the programme. A module assessment examination during the programme can only be taken when proof is shown of a successfully completed mid-term evaluation.

(2) Mid-term evaluations are listed as such in the appended Standard Curriculum and Examination Schedule.

(3) Mid-term evaluations are graded as either “passed” or “failed”.

(4) Failed mid-term evaluations can be repeated as many times as necessary.

§ 19  
Types of examinations during the programme

(1) During the programme the following types of examinations are possible:

1. Written examination (WE) (para. 2)
2. Oral examination (OE) (para. 3)
3. Academic paper (APa) (para. 4)
4. Design project (DP) (para. 5)
5. Experimental coursework (EC) (para. 6)
6. Academic project (APr) (para. 7)
7. Oral presentation (OP) (para. 8)

(2) In a written exam, to be completed in a limited time with limited means of assistance and under invigilation, students are required to demonstrate their comprehension of a problem and their ability to find ways of solving it using the standard methodology within their specific field. At least 60 minutes, but no longer than 180 minutes, are given for completion of a written exam.

(3) In an oral examination, students should be able to demonstrate a coherent knowledge of the subject area being examined and the capacity to classify and relate complex issues to this subject background.
The oral examination is conducted either as an individual examination or a group examination (whereby up to 3 students can form a group). In general, the length of the examination for each student is 30 minutes. The essential points of the examination and its assessment must be recorded in writing. This record must be signed by the examiners and the assessors. The results of the examination are to be made known to the student directly following the presentation of the oral exam.

(4) An academic paper requires an experimental, empirical or theoretical approach to some specific assignment from within the field of study. The assignment should be set in such a manner that it can be completed within 1 to 4 weeks. Students are free to propose topics and task assignments for their papers. These proposals are legally non-binding. In appropriate cases the solutions developed can be presented orally in a form typically used in the professional field in question. If students are overburdened with other coursework, the length of time given for the presentation of the paper can be extended only once by up to one-half. In doing so, due consideration must be given to compliance with the standard period of study.

(5) A design project involves addressing a subject-specific or an interdisciplinary assignment from the perspective of conceptual and constructive design, giving special consideration to planning aspects such as the exposition and explanation of the solutions developed in a manner suitable to the respective professional field. Paragraph 4, subparagraphs 2 to 5, apply accordingly.

(6) Experimental coursework especially refers to:
- the theoretical preparation of experiments
- the construction and execution of experiments
- the written presentation of the steps in the experimental procedure and the results of experiments as well as critical appraisal of them. Paragraph 4, subparagraphs 2 to 5, apply accordingly.

(7) By working on a joint academic project, students must demonstrate their capacity to produce scientific work independently as well as to work in a team. The individual's contribution to a project must be clearly demonstrated.

(8) An oral presentation encompasses:
- an independent and thorough written examination of a problem from within the context of the course of studies which takes into account and evaluates relevant literature, as well as
- presentation of the work and communication of the results in an oral presentation and in the ensuing discussion.

In general, the assignment should be set in such a manner that it can be completed within a period of 1 to 2 weeks.

(9) The examiners are to determine the task assignment for the examinations. At the beginning of each semester, the Board of Examiners determines the examination schedule for the oral and written examinations.

(10) For suitable types of examination, group projects are also an admissible form of assessment. The contribution of each individual student must meet the examination requirements and be clearly discernible and assessable on the basis of sections, pages or other objective criteria. The group size is limited to 3 students.

(11) The type and scope of individual module examinations taken during the programme can be found in the Standard Curriculum and Examination Schedule appended to these regulations.

§ 20 Compensation for disadvantages/Statutory protection periods

(1) Where a student provides credible evidence (medical certificate) that, due to a prolonged or permanent illness or disability, he or she is completely or partially unable to fulfil the examination requirements in the prescribed form, the Board of Examiners must provide the student with the possibility of taking equivalent examinations in a different form.

(2) The protective provisions pursuant to Articles 3, 4, 6 and 8 of the Maternity Protection Act and, in accordance with the time limits set out by the Federal Child-Raising Allowance Act as to parental leave, are to be strictly adhered to and promoted in applying these study and examination regulations, especially in terms of the calculation of time limits. During a leave of absence granted on the grounds of family responsibilities, students are free to continue with their studies and examinations. Upon written application to the Board of Examiners, the repetition of a failed examination during the leave of absence is admissible.
§ 21
Public access to oral examinations

Students of this programme who have yet to successfully complete the respective examination may be present at the oral examinations as observers (§ 19, paragraph 3) provided that they themselves are not registered to take this exam. This does not extend to the counselling and notification of students as to their examination results. Pursuant to subparagraph 1, a student can apply to exclude observers from his or her examination.

§ 22
Admission to participate in examinations during the programme

(1) All students who are enrolled at Magdeburg-Stendal University of Applied Sciences may be admitted to take part in the examinations.

(2) Students are automatically registered for the examinations stipulated in the Standard Curriculum and Examination Schedule for the current programme semester. The possible forms of examination in each module are set out in the current version of the Standard Curriculum and Examination Schedule. Students who do not yet wish to sit this examination must notify the university of their withdrawal no later than one week before the respective examination date. If a student fails to sit the examination without having given notice of withdrawal, the exam is deemed to have been taken and “failed”. In the event of withdrawal, the student is responsible for re-registering for the examination at a later date by means of the Online Service for students (“Prüfungsabmeldung”, exam deregistration).

(3) The examiners are normally the professors for the module in which the examination is to be taken, provided that they are duly authorised examiners pursuant to § 14. Where this is not the case, it is the responsibility of the Board of Examiners to notify students of the names of examiners in good time.

§ 23
Assessment of examination results and determination of module grades

(1) Each examination is evaluated and graded by the respective examiner. For written exams, grades should be announced no later than four weeks after having taken the exam.

(2) The following grades are to be applied for the assessment of examinations:

<table>
<thead>
<tr>
<th>Mark at Hochschule Magdeburg-Stendal</th>
<th>Grade</th>
<th>Description</th>
<th>Points at Universidad de La Coruña</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0 sehr gut (very good)</td>
<td>an outstanding performance</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>1.3 sehr gut (very good)</td>
<td>an outstanding performance</td>
<td>9.2-9.9</td>
<td></td>
</tr>
<tr>
<td>1.7 gut (good)</td>
<td>a performance which is significantly above-average</td>
<td>8.6-9.1</td>
<td></td>
</tr>
<tr>
<td>2.0 gut (good)</td>
<td>a performance which is significantly above-average</td>
<td>8.1-8.5</td>
<td></td>
</tr>
<tr>
<td>2.3 gut (good)</td>
<td>a performance which is significantly above-average</td>
<td>7.5-8.0</td>
<td></td>
</tr>
<tr>
<td>2.7 befriedigend (satisfactory)</td>
<td>performance which meets the average requirements</td>
<td>7.0-7.4</td>
<td></td>
</tr>
<tr>
<td>3.0 befriedigend (satisfactory)</td>
<td>performance which meets the average requirements</td>
<td>6.5-6.9</td>
<td></td>
</tr>
<tr>
<td>3.3 befriedigend (satisfactory)</td>
<td>performance which meets the average requirements</td>
<td>5.9-6.4</td>
<td></td>
</tr>
<tr>
<td>3.7 ausreichend (sufficient)</td>
<td>a performance which, in spite of deficits, is considered to be sufficient</td>
<td>5.3-5.8</td>
<td></td>
</tr>
<tr>
<td>4.0 ausreichend (sufficient)</td>
<td>a performance which, in spite of deficits, is considered to be sufficient</td>
<td>5.0-5.2</td>
<td></td>
</tr>
<tr>
<td>5 nicht ausreichend (insufficient)</td>
<td>a performance which, because of substantial deficits, does not meet requirements</td>
<td>0-4.9</td>
<td></td>
</tr>
</tbody>
</table>

When examinations are designated for assessment without grading, the assessment result is either “successfully completed” or “not successfully completed”.

The type of assessment can be found in the appended Standard Curriculum and Examination Schedule.
(3) An exam has been passed successfully if it has been awarded a minimum mark of 4.0 (Magdeburg-Stendal University of Applied Sciences) or 5.0 points (Universidad de La Coruña). If the exam is assessed by several examiners, it has been passed successfully if each assessment is a minimum mark of 4.0 (Magdeburg-Stendal University of Applied Sciences) or 5.0 points (Universidad de La Coruña). In this case, deviating from the regulation stipulated in paragraph 2, the mark awarded for the exam corresponds to the arithmetic average of the individual marks determined by the examiners, cut off after the first decimal place.

A non-graded exam has been passed successfully if it has received the assessment result “successfully completed”. If the non-graded exam is assessed by several examiners, it has been passed successfully if all of them award the assessment result “successfully completed”.

(4) A module examination has been passed successfully if all the necessary exams have been awarded a minimum mark of 4.0 (Magdeburg-Stendal University of Applied Sciences) or 5.0 points (Universidad de La Coruña) and all required non-graded exams have been assessed as “successfully completed”.

If a module examination comprises only one exam, the grade for the module corresponds to the grade awarded for the exam. If a module examination comprises several exams, then deviating from the regulation stipulated in paragraph 2, the module mark corresponds to the arithmetic average (if necessary weighted) of the individual grades determined by the examiners, cut off after the first decimal place.

The weightings placed on the individual modules are to be taken from the appended Standard Curriculum and Examination Schedule or derived from the relative share of credits attributable to the respective module.

The module grades are determined in the department and communicated to the examinations office by the programme director.

(5) When arriving at grades or grade points by means of averaging, only the first decimal place following the point will be considered; all other decimal places are cut off without rounding. Grading structure:

<table>
<thead>
<tr>
<th>Grade point average from individual assessments</th>
<th>Grade (Hochschule Magdeburg-Stendal)</th>
<th>Average points from individual assessments</th>
<th>Grade (Universidad de La Coruña)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>ausgezeichnet (excellent)</td>
<td>10</td>
<td>excellent</td>
</tr>
<tr>
<td>from 1.1 up to and including 1.5</td>
<td>sehr gut (very good)</td>
<td>9.2-9.9</td>
<td>very good</td>
</tr>
<tr>
<td>from 1.6 up to and including 2.5</td>
<td>gut (good)</td>
<td>7.5-9.1</td>
<td>good</td>
</tr>
<tr>
<td>from 2.6 up to and including 3.5</td>
<td>befriedigend (satisfactory)</td>
<td>5.9-7.4</td>
<td>satisfactory</td>
</tr>
<tr>
<td>from 3.6 up to and including 4.0</td>
<td>ausreichend (sufficient)</td>
<td>5.0 -5.8</td>
<td>passed</td>
</tr>
<tr>
<td>from 4.1</td>
<td>nicht ausreichend (insufficient)</td>
<td>0 to 4.9</td>
<td>failed</td>
</tr>
</tbody>
</table>

(6) In accordance with the recommendations of the German Rectors’ Conference (HRK), the German grades are to be complemented with an ECTS grade.

§ 24

Repetition of examinations during the programme

(1) Examinations which do not receive a passing grade or are deemed to have been failed can be repeated once. As long as the student is not granted a grace period, an examination can be repeated within 12 months after notification is received of having failed the examination. § 23 applies to the assessment accordingly.

If the grace period is exceeded, the examination is given the assessment “insufficient” or “not successfully completed” and is deemed to have been failed. § 31, paragraph 4 applies accordingly.

(2) A second repetition of an examination during the programme, generally held on the subsequent regular examination date, is admissible in justified exceptional cases and as long as there is a sufficient prospect of passing the exam. Upon written application, the Board of Examiners can determine an earlier date in agreement with the student. A second repetition is only admissible for a maximum of 4 examinations during the entire degree programme.

(3) The second repetition of an examination during the programme is to be applied for and justified before the Board of Examiners in written form within the 6-week cut-off period immediately following notification of having failed the first repetition.
(4) An exceptional case in terms of paragraph 2 is constituted by undue burdens or health limitations which caused the student to fail the first repetition of the examination.

(5) An examination during the programme that is passed on the second repetition will be awarded a mark of 4.0 (Magdeburg-Stendal University of Applied Sciences) or 5.0 points (Universidad de La Coruña).

(6) Unsuccessful attempts at passing an exam from the same or a comparable course of studies at another university within Germany should be counted towards the total permissible number of repetitions.

(7) The repetition of an examination that has already been passed successfully is inadmissible.

§ 25
**Free attempt**

There is no provision for a free attempt at any examination.

§ 26
**Supplementary examinations**

(1) Students also have the opportunity to take examinations in modules other than those prescribed in the Standard Curriculum and Examination Schedule appended to these regulations.

(2) The results of supplementary examinations can be included in academic transcripts or certificates upon application by the student. The results of supplementary examinations are not taken into consideration when calculating grade point averages and when determining the cumulative grade.

III. Master's degree

§ 27
**Registration for Master's thesis**

(1) The Master's thesis is an independent academic research paper which is to be submitted in writing and defended orally. Only those persons will be admitted to register a Master's thesis who are enrolled at Magdeburg-Stendal University of Applied Sciences on the Master's Programme in Water Engineering and can provide evidence of having acquired at least 60 credits from module exams towards the Master's examination.

(2) Students are to make a written application to the Board of Examiners for admission to write the Master's thesis. Elements to be included in the application for the Master's thesis are:
- a proposal for the field in which the topic of the Master's thesis is to be developed
- if necessary, an application for permission to carry out the work in a team
- and proposals, if any, for examiners.

(3) Before the beginning of the completion period, it is possible to withdraw the application to register for a Master's thesis. In case of withdrawal, admission to write the thesis at a later date must be re-applied for.

§ 28
**Setting of the topic, submission and assessment of the Master's thesis**

(1) The Master's thesis should demonstrate that the student is capable of working independently and in a scientific manner within a given time frame on a specific subject in his or her chosen field of studies. The topic and task assignment of the Master's thesis must be suited to the purpose of the examination as well as the time allowed for completion. The type of task and assignment must be determined when the topic is issued.

(2) The topic for the Master's thesis will normally be issued at the beginning of the third semester. The Master's thesis topic must be issued in a timely manner so that it can be finished within the stipulated standard period of study. The Master's thesis must be written in English. The student should be given the opportunity to make proposals for the topic and task assignment of the Master's thesis and the language in which the Master's thesis will be written. Whenever possible, a student's proposal should be accommodated, but it is legally non-binding.

(3) After hearing the proposal of the student to be examined, the first examiner will determine the topic of the thesis. Upon application, the Board of Examiners will ensure that the student receives a topic for his or her thesis in a timely manner. With the issuance of the thesis topic, the first examiner (who determined the topic) and second examiner are officially appointed. During the preparation of his or her thesis, the student is supervised by the first examiner. Details of the topic, the examiners and the completion time must be put on official record.
(4) The Master’s thesis topic can be determined by any professor in the participating departments at the Magdeburg-Stendal University of Applied Sciences or at the Universidad de La Coruña, or by project partners. With the approval of the Board of Examiners, the same is true for professors who are not members of these departments. In this case, the second examiner must be a tutor in the participating department at Magdeburg-Stendal University of Applied Sciences or the Universidad de La Coruña. The same applies to other examiners or assessors authorised pursuant to § 14 paragraph 1. In this case the second examiner must be a professor in the participating department at Magdeburg-Stendal University of Applied Sciences or the Universidad de La Coruña.

(5) The Master’s thesis can be completed in the form of a group project. The contribution of each individual student must meet the examination requirements as per paragraph 1 and be clearly discernible and assessable on the basis of sections, pages or other objective criteria. The group size is limited to 2 students.

(6) The topic, task assignment and scope of the Master’s thesis should be kept within suitable limits so that it can be completed within the set time frame. The completion time for the Master’s thesis is 10 weeks. An exception to this deadline is possible where the student can provide proof of illness. In this case, the completion time is extended in accordance with the length of the illness, but by no longer than 6 weeks. An attempt abandoned because of unduly long illness will not be counted towards the one repetition that is permissible. Upon application from the student due to reasons beyond his or her control, the completion time can be extended by a maximum of 6 weeks. The Board of Examiners will decide on the outcome of the application. Pursuant to subparagraph 2, the topic can only be returned once and only within the first one-third of the completion time.

(7) Upon submission of their Master’s theses, students must guarantee in writing that their thesis – or their identified section in the case of a group thesis – has been written individually and that no other sources or tools have been used other than those cited in the bibliography.

(8) Four copies of the Master’s thesis are to be handed in within the established time frame:

- three copies in printed form and
- once in electronic form (CD,DVD)

(9) The Master’s thesis has to be reviewed and assessed by 2 examiners. The outcome of their assessment of the Master's thesis should be available within four weeks from the date on which it is handed in. § 23 applies accordingly.

(10) 15 credits will be given for successful completion of the Master’s thesis and colloquium.

(11) Two-thirds of the module grade will be made up of the mark from the Master’s thesis and one-third from the mark awarded for the colloquium.

§ 29 Master’s thesis and colloquium

(1) With the colloquium for the Master’s thesis, students should be able to demonstrate that they are capable of defending the results of an independent scientific work in an academic debate within their chosen field of studies.

(2) Conditions for admission to the colloquium are having passed the module examinations of the Master’s exam and having received a mark from both examiners of the Master’s thesis of at least 4.0 (Magdeburg-Stendal University of Applied Sciences) or 5.0 points (Universidad de La Coruña).

(3) The colloquium on the Master’s thesis will be conducted as an individual or group examination by two examiners, at least one of whom must have reviewed and assessed the Master’s thesis. For the appointment of the second examiner, § 14 paragraph 2 applies accordingly.

In general, the length of the colloquium for each student is 45 minutes, but no longer than 60 minutes. § 23 applies to the assessment of the colloquium accordingly.

(4) The colloquium has been passed successfully if the examiners have awarded it a minimum mark of 4.0 (Magdeburg-Stendal University of Applied Sciences) or 5.0 points (Universidad de La Coruña). In the case of a grade of "insufficient", repetition is possible in accordance with the provisions of § 30.
§ 30
Repetition of the Master's thesis and colloquium

(1) A Master's thesis can be repeated once if it has been, or is deemed to have been, graded as "insufficient".

(2) If a Master's thesis is repeated, returning the issued topic is only admissible if no use was made of this possibility the first time.

(3) The new topic of the Master's thesis will be issued in a timely manner, generally within three months.

(4) A second repetition of the Master's thesis is inadmissible.

(5) Repetition of a successfully completed Master's thesis is impermissible.

(6) The Master's thesis colloquium can be repeated once if it has received a grade of "insufficient" or is deemed to have been graded "insufficient".

(7) A second repetition of the colloquium is inadmissible.

(8) Repetition of a successfully completed colloquium is impermissible.

§ 31
Overall grading of the Master's exam

(1) The Master's exam has been passed successfully if all examinations during the course and the Master's thesis and colloquium have been awarded a minimum mark of 4.0 (Magdeburg-Stendal University of Applied Sciences) or 5.0 points (Universidad de La Coruña).

(2) Deviating from the regulation stipulated in § 23 paragraph 2, the cumulative grade of the Master's exam is calculated from the – if necessary, weighted – arithmetic average of the grades for the module examinations and the module grade of the Master's thesis and colloquium. § 23, paragraph § 5 applies accordingly. The weightings assigned to the individual modules are to be taken from the appended Standard Curriculum and Examination Schedule or derived from the relative share of credits attributable to the respective modules.

(3) If the average of the cumulative grade is better than 1.3, then the overall result "passed with distinction" will be awarded.

(4) A Master's exam is irrevocably failed when a mandatory exam or a Master's thesis and colloquium has received a grade of "insufficient" or is deemed to have been graded "insufficient" and no further repetitions are permitted.

§ 32
Academic transcripts and certificates

(1) The university to which the application was originally submitted is responsible for completing academic transcripts and presenting them to students.

(2) Once the Master's examination has been passed, an academic transcript in English is to be completed without delay, if possible within six weeks. The transcript contains all modules, module assessments and the corresponding credits, and bears the date on which the last examination was completed.

(3) With the transcript, students who applied to Magdeburg-Stendal University of Applied Sciences will receive a Diploma Supplement in German and English.

(4) If the Master's exam has been failed or is deemed to have been failed, then the Board of Examiners will present the student with a written notification which also provides information as to whether and to what extent it is possible to repeat examinations. Notification of an irrevocably failed Master's exam must be furnished with instructions on the right to appeal.
(5) If students leave the university or change their programme of studies, upon application they will be issued with a certificate showing the examinations taken and grades achieved. In the case of paragraph 3, a certificate will be provided without the need to place an application. It indicates the examinations remaining to be completed as well as the fact that the Master’s exam has been failed or irrevocably failed. Upon application, in the case of paragraph 3, students will receive a notification which simply indicates those exams which have been successfully completed.

§ 33
Degree certificate

(1) The university to which the application was originally submitted is responsible for issuing degree certificates and presenting them to students.

(2) Together with the transcript, students receive a degree certificate showing the same date as the academic transcript. The degree certificate confers the title of Master upon the holder. It is to be stated on the degree certificate that it refers to a joint degree programme of the participating universities. The degree certificate is to bear both universities’ logos.

(3) The degree certificate issued at Magdeburg-Stendal University of Applied Sciences is to be signed by the dean of the department and the rector of Magdeburg-Stendal University of Applied Sciences, and to be furnished with the seal of Magdeburg-Stendal University of Applied Sciences. The signing of the degree certificate for the students who applied to the Universidad de La Coruña will be done in accordance with that institution’s regulations.

IV. Final provisions

§ 34
Access to examination files

Following completion of each module exam and the Master’s examination and within a respective cut-off period of one month after notification of the results, students may, upon written application, have access to the written exams and the corresponding assessments by the examiners.

§ 35
Non-attendance, withdrawal, cheating, breach of regulations

(1) An examination will be deemed to have been graded "insufficient" when students, for no good reason:
   • do not attend on a mandatory examination date
   • withdraw from the examination after it has already begun, or
   • do not retake an examination within the established time frame.

(2) The justifications claimed for any withdrawal or non-attendance must be notified to the Board of Examiners immediately in writing and credibly substantiated. Otherwise, the examination will be graded as "insufficient". In case of illness, a medical report must be presented. Unless the Board of Examiners resolves otherwise, upon recognition of the reasons for non-attendance or withdrawal, the exam must be taken on the next regular examination date.

(3) An examination will be graded "insufficient" if a student attempts to alter the results of an exam through deceit or the use of other unauthorised means. If any student disrupts the orderly conduct of the examination, examiners and invigilators are authorised to exclude him or her from further participation in the exam. If this is the case, the examination will be graded as "insufficient". In extreme cases, the Board of Examiners is authorised to exclude the student from any further examinations.

(4) An examination will be graded as "insufficient" if the student does not provide sufficient reason for not having respected the submission deadline for an assessment. Paragraph 2 applies accordingly.

§ 36
Invalidity of examinations

(1) The Board of Examiners, in the case that a student has cheated in an exam and this becomes known after the degree has been granted, is authorised to declare an examination to have been failed either partially or in its entirety.
(2) In the case that the conditions for admission to the examination were not met but without any intentional deception, and this only becomes known after the degree has been granted, the deficiency is deemed to have been righted if the examination is passed successfully. In the case that a student has deliberately used unfair means to gain admission, the Board of Examiners, taking into consideration relevant legal regulations, will decide as to the revocation of illegal administrative acts.

(3) Prior to such a decision, the affected student is to be given the opportunity to make a statement on the matter to the Board of Examiners.

(4) An incorrect transcript is to be revoked and replaced with a corrected transcript in accordance with § 32. Once a period of five years has elapsed from the date the transcript is issued, a decision pursuant to paragraphs 1 and 2 is thereafter excluded.

§ 37
Decisions, appeal procedure

(1) All decisions made in accordance with these Study and Examination Regulations and which constitute an administrative act are to be justified in writing and furnished with instructions on appeal in compliance with Art. 41 of the Administrative Procedures Act of Saxony-Anhalt (VwVfG LSA). An appeal can be made to the Board of Examiners within one month of having received the decision.

(2) The Board of Examiners will decide as to the validity of the appeal. In the event that the appeal involves a grade, the appeal will be sent to the examiner or examiners for their review. If the grade is changed in accordance with the appeal, the Board of Examiners grant the appeal. Otherwise, the Board of Examiners only reviews the decision in terms of

1. whether or not the exam procedures were properly conducted,
2. whether or not the examiner relied on unfounded facts or circumstances,
3. whether or not the generally valid principles of grading were applied,
4. whether or not the examiner was influenced by immaterial considerations.

If the Board of Examiners does not grant the appeal, it will be forwarded to the Departmental Council for a decision.

(3) A decision as to the validity of the appeal will take place within the period of one month. If the appeal is not granted, the Rector will inform the appellant.

§ 38
University-wide announcements by the Board of Examiners

Decisions and other measures related to these Study and Examination Regulations, especially with regard to admission to examinations, refusal of admission, examination and registration dates and deadlines as well as exam results, will be made known university-wide in the institution's customary manner. In doing so, data protection regulations are to be observed.

§ 39
Effective date of regulations

Following Rector approval, these Study and Examination Regulations take effect the day after their university-wide announcement in the Magdeburg-Stendal University of Applied Sciences Official Notices.

Issued pursuant to the resolutions of the Department of Water and Waste Management Departmental Council of 08.10.2012 and the Magdeburg-Stendal University of Applied Sciences Senate of 17.10.2012.

The Rector
### Abbreviations used in the Standard Curriculum and Examination Schedule:

<table>
<thead>
<tr>
<th>German</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>A = Art der Lehrveranstaltung</td>
<td>Type = Type of course</td>
</tr>
<tr>
<td>SWS = Semesterwochenstunden</td>
<td>SWS = Semester hours</td>
</tr>
<tr>
<td>V = Vorlesung</td>
<td>L = Lecture</td>
</tr>
<tr>
<td>S = Seminar</td>
<td>S = Seminar</td>
</tr>
<tr>
<td>U = Übung</td>
<td>T = Tutorial</td>
</tr>
<tr>
<td>Ko = Kolloquium</td>
<td>Co = Colloquium</td>
</tr>
<tr>
<td>LP = Laborpraktika</td>
<td>LP = Laboratory practicals</td>
</tr>
<tr>
<td>Pr = Praktikum</td>
<td>?Pr = ?</td>
</tr>
<tr>
<td>Exk = Exkursionen</td>
<td>Exc = Excursions</td>
</tr>
<tr>
<td>P = ?</td>
<td>?P = ?</td>
</tr>
<tr>
<td>PVL = Prüfungsforleistung</td>
<td>MTE = Mid-term evaluation</td>
</tr>
<tr>
<td>PL = Prüfungsleistung</td>
<td>E = Examination</td>
</tr>
<tr>
<td>C = Credits</td>
<td>C = Credits</td>
</tr>
<tr>
<td>K = Klausur</td>
<td>WE = Written exam</td>
</tr>
<tr>
<td>K90 = Klausur 90 Minuten</td>
<td>WE90 = Written exam 90 minutes</td>
</tr>
<tr>
<td>K120 = Klausur 120 Minuten</td>
<td>WE120 = Written exam 120 minutes</td>
</tr>
<tr>
<td>K180 = Klausur 180 Minuten</td>
<td>WE180 = Written exam 180 minutes</td>
</tr>
<tr>
<td>M = Mündliche Prüfung</td>
<td>O = Oral examination</td>
</tr>
<tr>
<td>H = Hausarbeit</td>
<td>APa = Academic paper</td>
</tr>
<tr>
<td>E = Entwurf</td>
<td>DP = Design project</td>
</tr>
<tr>
<td>EA = Experimentelle Arbeit</td>
<td>EA = Experimental coursework</td>
</tr>
<tr>
<td>WP = Wissenschaftliches Projekt</td>
<td>APr = Academic project</td>
</tr>
<tr>
<td>R = Referat</td>
<td>OP = Oral presentation</td>
</tr>
<tr>
<td>MA = Masterarbeit</td>
<td>MTh = Master’s thesis</td>
</tr>
</tbody>
</table>

/ = oder (z.B. V/Ü = Vorlesung oder Übung) / = or (e.g. L/T = lecture or tutorial)

, = und (z.B. V,Ü = Vorlesung und Übung) , = and (e.g. L,T = lecture and tutorial)

* = die Modulnote wird am Fachbereich gebildet und von dem Studiengangleiter oder der Studiengangleiterin an das Prüfungsamt übermittelt * = the module grade is determined in the department and communicated to the examinations office by the programme director
### Appendix

#### Standard Curriculum and Examination Schedule

[Translator’s note: The following tables contain German abbreviations only, pending some necessary typographical corrections. Please read in conjunction with ‘Abbreviations used’, above.]

<table>
<thead>
<tr>
<th>No.</th>
<th>Pflichtmodule/Compulsory modules</th>
<th>1st semester (La Coruna)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>1</td>
<td>Hydrological Planning and Projects I</td>
<td>6</td>
</tr>
<tr>
<td>1.1</td>
<td>Analysis of water resource systems</td>
<td>V,Pr</td>
</tr>
<tr>
<td>1.2</td>
<td>Design of water resources systems</td>
<td>V,Pr</td>
</tr>
<tr>
<td>1.3</td>
<td>Water management plans</td>
<td>V,Pr</td>
</tr>
<tr>
<td>1.4</td>
<td>Water economy and legislation</td>
<td>V,Pr</td>
</tr>
<tr>
<td>2</td>
<td>Water Supply and Drainage Systems</td>
<td>6</td>
</tr>
<tr>
<td>2.1</td>
<td>Supply systems design</td>
<td>V</td>
</tr>
<tr>
<td>2.2</td>
<td>Urban drainage</td>
<td>V</td>
</tr>
<tr>
<td>3</td>
<td>Physico-Chemistry and Quality of Water</td>
<td>6</td>
</tr>
<tr>
<td>3.1</td>
<td>Principles of water chemistry</td>
<td>V,LP</td>
</tr>
<tr>
<td>3.2</td>
<td>Water quality</td>
<td>V,LP</td>
</tr>
<tr>
<td>3.3</td>
<td>Analytical technics</td>
<td>LP</td>
</tr>
<tr>
<td></td>
<td>Wahlpflichtmodule (2 von 4)/ Optional Courses (2/4)</td>
<td>12</td>
</tr>
<tr>
<td>4</td>
<td>Experimental Hydraulics I</td>
<td>6</td>
</tr>
<tr>
<td>4.1</td>
<td>Scale models I</td>
<td>V,LP</td>
</tr>
<tr>
<td>4.2</td>
<td>Experimental field techniques</td>
<td>V,LP</td>
</tr>
<tr>
<td>5</td>
<td>Computational Fluid Dynamics I</td>
<td>6</td>
</tr>
<tr>
<td>5.1</td>
<td>Mathematics I</td>
<td>V,U</td>
</tr>
<tr>
<td>5.2</td>
<td>Finite element programming</td>
<td>V,U</td>
</tr>
<tr>
<td>5.3</td>
<td>Porous media and geochemical models</td>
<td>V,U</td>
</tr>
<tr>
<td>6</td>
<td>Water Treatment and Energy Efficiency</td>
<td>6</td>
</tr>
<tr>
<td>6.1</td>
<td>Water treatment processes</td>
<td>V,Pr</td>
</tr>
<tr>
<td>6.2</td>
<td>Power consumption</td>
<td>V,Pr</td>
</tr>
<tr>
<td>6.3</td>
<td>Environmental implications</td>
<td>V</td>
</tr>
<tr>
<td>7</td>
<td>Groundwater Engineering I</td>
<td>6</td>
</tr>
<tr>
<td>7.1</td>
<td>Physical Hydrogeology</td>
<td>V,U</td>
</tr>
<tr>
<td>7.2</td>
<td>Hydrogeochemical principles</td>
<td>V</td>
</tr>
<tr>
<td>7.3</td>
<td>Hydrodynamic in aquifers</td>
<td>V,U</td>
</tr>
<tr>
<td></td>
<td>Σ Mandatory and mandatory elective modules, semester 1</td>
<td>30</td>
</tr>
</tbody>
</table>

**Notes:**
- **A** stands for practical work.
- **SWS** stands for semester work steps.
- **PVL** stands for practical learning hours.
- **PL** stands for practical work hours.
- **C** stands for seminar hours.
<table>
<thead>
<tr>
<th>No.</th>
<th>Pflichtmodule/Compulsory modules</th>
<th>2nd semester (Magdeburg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>8.</td>
<td>Hydraulic Planning and Projects II</td>
<td>6</td>
</tr>
<tr>
<td>8.1</td>
<td>Global Water resource management and strategies</td>
<td>V,P</td>
</tr>
<tr>
<td>8.2</td>
<td>Design of dams, water treatment and wastewater plants</td>
<td>V</td>
</tr>
<tr>
<td>8.3</td>
<td>Planning and project</td>
<td>V,P</td>
</tr>
<tr>
<td>9.</td>
<td>Computational Fluid Dynamics II</td>
<td>6</td>
</tr>
<tr>
<td>9.1</td>
<td>Mathematics II</td>
<td>V,Ü</td>
</tr>
<tr>
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<td>D-Models</td>
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