



**Studies and Examination Regulations of Karlsruhe Institute of Technology  
(KIT) for the Master's Program of Mathematics**

dated July 26, 2016

Pursuant to Article 10, par. 2, clause 5 and Article 20, par. 2, clause 1 of the Act on Karlsruhe Institute of Technology (KIT Act – KITG) of July 14, 2009 (bulletin, p. 317 f.), last amended by Article 5 of the Third Act on the Modification of University Regulations (3<sup>rd</sup> University Regulations Modification Act – 3. HRÄG) of April 01, 2014 (bulletin, pp. 99, 167), and pursuant to Article 32, par. 3, clause 1 of the Act of Baden-Württemberg on Universities and Colleges (Landeshochschulgesetz – LHG) of January 01, 2005 (bulletin, p. 1 f.), last amended by Article 2 of the Act on the Implementation of Equal Opportunities of Women and Men in the Public Service Sector in Baden-Württemberg and on the Modification of the Act of Baden-Württemberg on Universities and Colleges (Equal Opportunities Act – ChancenG) of February 23, 2016 (bulletin, pp. 108, 118), the Senate of KIT adopted the following Studies and Examination Regulations for the Master's Program of Mathematics on July 18, 2016.

The President expressed his approval according to Article 20, par. 2, clause 1, KITG in conjunction with Article 32, par. 3, clause 1, LHG on July 26, 2016.

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## **Preamble**

Within the framework of the implementation of the Bologna process for establishment of a European higher education area, it is the declared objective of KIT that higher education at KIT should be completed by a master's degree. KIT therefore understands the consecutive bachelor's and master's programs offered to represent an integrated concept with a consecutive curriculum.

## **I. General Provisions**

### **Article 1 – Scope**

The present master's examination regulations shall cover the course of studies, examinations, and graduation in the Master's Program of Mathematics at KIT.

### **Article 2 – Objective of Studies, Academic Degree**

(1) During the consecutive master's program, scientific qualifications acquired in the course of the bachelor's program shall be further enhanced, expanded, extended, or complemented. The student shall be able to independently apply scientific findings and methods and to evaluate their significance and applicability to the solution of complex scientific and social problems.

(2) Upon successful completion of the master's examination, the academic degree of "Master of Science" (abbreviated by "M.Sc.") shall be conferred for the Master's Program of Mathematics.

### **Article 3 – Regular Period of Studies, Organization of Studies, Credits**

(1) The regular period of studies shall be four semesters.

(2) The curriculum of the program is divided into subjects, the subjects into modules, and the modules are divided into courses. The subjects and their scopes are defined in Article 19. Details are outlined in the module manual.

(3) The work expenditure envisaged for passing courses and modules is expressed in credits. The criteria for assigning credits correspond to the European Credit Transfer System (ECTS). One credit corresponds to a work expenditure of about 30 hours. As a rule, the credits shall be distributed equally over the semesters.

(4) The coursework and examinations required for the successful completion of the studies are measured in credits and amount to a total of 120 credits.

(5) Upon prior announcement, the courses may also be offered in English.

#### **Article 4 – Module Examinations, Coursework and Examinations**

(1) The master's examination shall consist of module examinations. Module examinations shall consist of one or several controls of success. Controls of success shall consist of coursework and examinations.

(2) Examinations are:

1. Written examinations,
2. oral examinations, or
3. examinations of another type.

(3) Coursework shall be written, oral, or practical work that is usually accomplished by students parallel to the courses. The master's examination must not be completed by a coursework.

(4) At least 70% of the module examinations shall be graded.

(5) In case of complementary contents, module examinations of several modules may be replaced by a module-overlapping examination (par. 2, nos. 1-3).

## **Article 5 – Registration for and Admission to Module Examinations and Courses**

(1) To participate in module examinations, students shall register online on the Students Portal for the corresponding controls of success. In exceptional cases, registration can be made in writing with the Students Office or another institution authorized by the latter. For controls of success, registration deadlines may be specified by the examiners. Registration of the master's thesis is outlined in the module manual.

(2) If choices between several options are possible, then in order to be admitted to an exam in a certain module students shall submit, prior to the first examination in this module, a binding declaration concerning their choice of the module and its assignment to a subject along with their registration for the examination. At the request of the student to the examination committee, the choice or assignment can be changed later on.

(3) Admission to a control of success shall be granted to students, who

1. are enrolled in the Master's Program of Mathematics at KIT, with the admission of students on leave being limited to examinations, and to students, who
2. can prove that they meet the requirements for admission to a control of success outlined in the module manual and
3. can prove that their entitlement to an examination in the Master's Program of Mathematics has not been lost.

(4) According to Article 30, par. 5, LHG, admission to individual mandatory courses may be restricted. The examiner shall decide on the selection of students, who have registered in due time before the deadline given by the examiner, taking into account the study progress made by these students and taking into consideration Article 13, par. 1, clauses 1 and 2, if the surplus of registrations cannot be reduced by other or additional courses. In the case of identical study progress, further criteria shall be specified by the KIT departments. The result shall be announced to the students in due time.

(5) Admission shall be refused, if the conditions outlined in pars. 3 and 4 are not fulfilled. Admission may be refused, if the corresponding control of success was already passed in a KIT bachelor's program that was required for admission to this Master's Program. This shall not apply to premature master's examinations. Admission to these shall be approved explicitly according to clause 1.

## **Article 6 – Execution of Controls of Success**

(1) Controls of success shall be performed parallel to the studies, usually while imparting the contents of the individual modules or shortly afterwards.

(2) The type of control of success (Article 4, par. 2, nos. 1 – 3, par. 3) shall be specified by the examiner of the respective course depending on the contents of the course and teaching objectives of the module. The type of controls of success, their frequency, sequence, weighting, and the determination of the module grade, if applicable, shall be announced in the module manual six weeks prior to the start of the lecturing period at the latest. The type of examination and the examination language may be changed later on if both the examiner and the student agree. In the former case, Article 4, par. 4 has to be observed. When organizing examinations, the needs of students with a disability or chronic disease shall be considered according to Article 13, par. 1. Article 13, par. 1, clauses 3 and 4 shall apply accordingly.

(3) In case of an unreasonably high examination expenditure, a written examination may also be passed orally or an oral examination may also be passed in writing. This modification shall be announced six weeks prior to the examination at the latest.

(4) In case of courses in the English language (Article 3, par. 5), the corresponding controls of success can be executed in this language. Article 6, par. 2 shall apply accordingly.

(5) *Written examinations* (Article 4, par. 2, no. 1) shall usually be evaluated by an examiner according to Article 17, par. 2 or par. 3. If an evaluation is made by several examiners, the grade shall be the arithmetic mean of the individual evaluations. If the arithmetic mean does not correspond to any of the grade levels defined in Article 7,

par. 2, clause 2, the grade shall be rounded to the next higher or lower grade level. In case of equal distance to the next higher and lower levels, the grade shall be rounded to the next higher grade level. The evaluation procedure shall not exceed six weeks. Written examinations shall last at least 60 and not more than 300 minutes.

(6) *Oral examinations* (Article 4, par. 2, no. 2) shall be performed and evaluated as group or individual examinations by several examiners (examining board) or by one examiner in the presence of an associate. Prior to determining the grade, the examiner shall consult the other examiners of the examining board. Oral examinations shall usually last at least 15 minutes and not more than 60 minutes per student.

Major details and results of the *oral examination* shall be documented in the minutes. The result of the examination shall be announced to the student directly after the oral examination.

Students who intend to take the same examination in a later semester shall be admitted to oral examinations as an audience depending on the space available and upon approval of the examinee. They shall not be admitted to the consultation of the examining board and announcement of the examination results.

(7) For *examinations of another type*, (Article 4, par. 2, no. 3), appropriate deadlines and submission dates shall be specified. Proper description of the task and adequate documentation shall ensure that the examination passed can be credited to the student. Major details and results of the control of success shall be recorded in the minutes.

During *oral examinations of another type*, an associate shall be present in addition to the examiner, who shall also sign the minutes together with the examiner.

*Theses or papers to be written for an examination of another type* shall be provided with the following declaration: "Ich versichere wahrheitsgemäß, die Arbeit selbstständig angefertigt, alle benutzten Hilfsmittel vollständig und genau angegeben und alles kenntlich gemacht zu haben, was aus Arbeiten anderer unverändert oder

mit Abänderungen entnommen wurde.” (I herewith declare that the present thesis/paper is original work written by me alone and that I have indicated completely and precisely all aids used as well as all citations, whether changed or unchanged, of other theses and publications). If the thesis/paper does not contain this declaration, it shall not be accepted. Major details and results of such a control of success shall be recorded in the minutes.

### **Article 6 a – Controls of Success by a Multiple Choice Test**

It is outlined in the module manual whether and to what an extent controls of success can be made by a *multiple choice test*.

### **Article 6 b – Computer-based Controls of Success**

(1) Controls of success can be carried out in a computer-based way. In this case, the reply or solution of the student is transmitted electronically and, if possible, evaluated automatically. The examination contents shall be generated by an examiner.

(2) Prior to the computer-based control of success, the examiner shall ensure that the electronic data can be identified clearly and allocated unambiguously and permanently to the student. A trouble-free computer-based control of success shall be guaranteed by the corresponding technical support. In particular, the control of success shall be carried out in the presence of a competent person. All examination tasks must be available for work by the examinee during the entire examination period.

(3) As for the rest, the execution of computer-based controls of success shall be subject to Articles 6 and 6a.

### **Article 7 – Evaluation of Coursework and Examinations**

(1) The result of an examination shall be specified by the examiners in the form of a grade.

(2) The following grades shall be used:

“sehr gut” (very good)	for an outstanding performance;
“gut” (good)	for a performance that is far above the average;
“befriedigend” (satisfactory)	for a performance meeting average requirements;
“ausreichend” (sufficient)	for a performance that is still acceptable in spite of its deficiencies;
“nicht ausreichend” (failed)	for a performance that is no longer acceptable due to major deficiencies.

For the differentiated evaluation of individual examinations, the following grades shall be applied exclusively:

1.0, 1.3	sehr gut (very good),
1.7, 2.0, 2.3	gut (good),
2.7, 3.0, 3.3	befriedigend (satisfactory),
3.7, 4.0	ausreichend (sufficient), and
5.0	nicht ausreichend (failed).

(3) Coursework shall be evaluated with “bestanden” (passed) or “nicht bestanden” (failed).

(4) When determining the weighted means of module grades, subject grades, and the total grade, only the first decimal place shall be considered. All following decimal places shall be deleted without rounding.

(5) Every module and control of success may only be credited once in the same program.

(6) An examination shall be passed, if the grade is at least “ausreichend” (4.0, sufficient).

(7) A module examination shall be passed, if all required controls of success are passed. The module examination and determination of the module grade shall be

outlined in the module manual. If the module manual does not contain any regulation about the determination of the module grade, the module grade shall be calculated from the grade average weighted according to the credits of the individual partial modules. The differentiated grades (par. 2) shall be used for calculating the module grades.

(8) The results of the controls of success as well as the credits acquired shall be administered by the Students Office of KIT.

(9) The grades of the modules of a subject shall be considered proportionally to the credits assigned to the modules when calculating the subject grade.

(10) The total grade of the master's examination, the subject grades, and the module grades are:

Down to 1.5	“sehr gut” (very good),
from 1.6 to 2.5	“gut” (good),
from 2.6 to 3.5	“befriedigend” (satisfactory),
from 3.6 to 4.0	“ausreichend” (sufficient).

## **Article 8 – Repetition of Examinations, Ultimate Failure**

(1) Students may repeat once a written examination that has not been passed (Article 4, par. 2, no. 1). In case a repeated written examination is given the grade of “nicht ausreichend” (5.0, failed), an oral reexamination shall take place soon after the date of the failed examination. In this case, the grade of this examination may not be better than “ausreichend” (4.0, sufficient).

(2) Students may repeat once an oral examination that has not been passed (Article 4, par. 2, no. 2).

(3) Repeated examinations according to paragraphs 1 and 2 shall correspond to the first examination in terms of contents, scope, and type (oral or written). At request, exceptions may be approved by the responsible examination committee.

(4) Examinations of another type (Article 4, par. 2, no. 3) can be repeated once.

(5) Coursework can be repeated several times.

(6) An examination shall ultimately not be passed, if the oral reexamination according to par. 1 was evaluated with the grade of “nicht ausreichend” (5.0, failed). The examination also shall ultimately not be passed, if the oral examination according to par. 2 or the examination of another type according to par. 4 was evaluated twice with the grade of “nicht bestanden” (failed).

(7) The module shall ultimately not be passed, if an examination required for passing the module is ultimately not passed.

(8) A second repetition of the same examination according to Article 4, par. 2 shall be possible in exceptional cases at the request of the student only (“Antrag auf Zweitwiederholung” – application for a second repetition). As a rule, the application shall be submitted in writing to the examination committee within two months upon announcement of the grade.

The examination committee shall decide on the first application of a student for a second repetition. If the examination committee dismisses the application, a member of the Presidential Committee shall decide. Upon comment of the examination committee, a member of the Presidential Committee shall decide on further applications for a second repetition. If the application is accepted, the second repetition shall take place on the next but one examination date at the latest. Paragraph 1, clauses 2 and 3 shall apply accordingly.

(9) Repetition of a passed examination shall not be permitted.

(10) In case a master’s thesis has been granted the grade “nicht ausreichend” (5.0, failed), it can be repeated once. A second repetition of the master’s thesis shall be excluded.

## **Article 9 – Loss of the Entitlement to an Examination**

In case coursework or an examination required according to the present Studies and Examination Regulations is ultimately not passed or the master's examination, including potential repetitions, is not passed completely by the end of the examination period of the 8<sup>th</sup> semester, the entitlement to examination in the Mathematics Program shall expire, unless the student is not responsible for having exceeded the deadline. The decision on extending the deadline and on exceptions from the deadline regulations shall be made by the examination committee taking into account the activities listed in Article 32, par. 6, LHG at the request of the student. This request shall be made in writing usually six weeks prior to the expiry of the deadline.

## **Article 10 – Deregistration, Absence, Withdrawal**

(1) Students can revoke their registration for *written examinations* until the issue of the examination tasks without having to indicate any reasons (deregistration). Deregistration can be made online on the Students Portal by 12 pm on the day before the examination or in justified exceptional cases with the Students Office during office hours. If the deregistration is addressed to the examiner, the latter shall ensure that the deregistration is documented in the Campus Management System.

(2) In case of *oral examinations*, deregistration shall be declared to the examiner at least three working days before the date of examination. Withdrawal from an oral examination less than three working days before the date of examination shall be possible under the conditions outlined in par. 5 only. In principle, withdrawal from oral reexaminations in the sense of Article 9, par. 1 shall be possible under the conditions of par. 5 only.

(3) Withdrawal from *examinations of another type* and from coursework shall be subject to the provisions given in the module manual.

(4) An examination shall be deemed to have been “nicht ausreichend” (5.0, failed), if the student fails to be present at the examination without a good reason or if she/he withdraws from the examination after its start without a good reason. The same shall

apply, if the master's thesis is not submitted within the period envisaged, unless the student is not responsible for having exceeded the deadline.

(5) The reason given for withdrawal after the start of the examination or absence shall be notified immediately and credibly in a letter to the examination committee. In case of sickness of the student or of a child of a student who is a single parent, or of a relative in need of care, submission of a medical certificate may be required.

### **Article 11 – Deception, Breach of Regulations**

(1) In case the student tries to influence the result of her/his examination by deception or the use of impermissible aids, this examination shall be deemed to have been “nicht ausreichend” (failed, 5.0).

(2) A student disturbing the proper execution of the examination may be excluded from the continuation of this examination by the examiner or supervisor. In this case, the examination shall be deemed to have been “nicht ausreichend” (failed, 5.0). In serious cases, the examination committee can exclude this student from other examinations.

(3) Details relating to honesty during examinations and internships are outlined in the General Statutes of KIT, as amended.

### **Article 12 – Maternity Protection, Parental Leave, Assumption of Family Obligations**

(1) At the student's request, the maternity protection periods as defined by the Act on the Protection of the Working Mother (Mutterschutzgesetz, MuSchG), as amended, shall be considered. The required evidence shall be enclosed with this request. The maternity protection periods suspend any deadline according to the present examination regulations. The duration of maternity protection shall not be included in the deadline given.

(2) At request, the deadlines of parental leave shall be considered according to the valid legislation (Bundeselterngeld- und Elternzeitgesetz (Parental Benefit and Parental Leave Act - BEEG)). Four weeks prior to the desired start of the parental leave period at the latest, the student shall inform the examination committee in writing about the time when she/he wishes to be on parental leave. The required evidence shall be enclosed. The examination committee shall then check whether the legal prerequisites would justify an employee's claim for parental leave and inform the student immediately of the result and the new times of examination. The period of work on the master's thesis may not be interrupted by parental leave. In this case, the thesis shall be deemed to have not been assigned. Upon expiry of the parental leave period, the student shall receive a new subject that is to be dealt with within the period defined in Article 14.

(3) At request, the examination committee shall decide on the flexible handling of examination deadlines according to the provisions of the Act of Baden-Württemberg on Universities and Colleges (LHG), if students have to take on family obligations. Paragraph 2, clauses 4 to 6 shall apply accordingly.

### **Article 13 – Students with a Disability or Chronic Disease**

(1) When organizing studies and examinations, the needs of students with a disability or chronic disease shall be considered. In particular, students with a disability or chronic disease shall be granted preferred access to courses with a limited number of participants and the order for passing certain courses shall be adapted to their needs. According to the Federal Equality Act (Bundesgleichstellungsgesetz, BGG) and Vol. 9 of the Social Code (SGB IX), students are disabled, if their bodily function, mental capacity, or emotional health most probably deviates from the state typical of the age for a period longer than six months and, hence, their participation in social life is impaired. At the request of the student, the examination committee shall decide on the existence of conditions outlined in clauses 2 and 3. The student shall submit the required evidence for this purpose.

(2) If a student provides evidence of a disability or chronic disease, as a result of which she/he is not able to pass examinations completely or partly within the planned time or in the form envisaged, the examination committee may permit examinations

within other time periods or in another form. In particular, disabled students shall be permitted to use the required aids.

(3) In case students provide evidence of a disability or chronic disease, as a result of which they are not able to attend courses regularly or to pass the required coursework or examinations as outlined in Article 19, the examination committee may permit at the student's request passing of certain coursework and examinations after the expiry of the deadlines given in the present Studies and Examination Regulations.

#### **Article 14 – Master's Thesis Module**

(1) For admission to the master's thesis module, the module examinations in the amount of 70 credits must have been passed successfully. At the request of the student, the examination committee shall decide on exceptions.

(2) The master's thesis can be assigned by university teachers, executive scientists according to Article 14, par. 3, clause 1, KITG, and habilitated members of the KIT Department. In addition, the examination committee can authorize other examiners to assign the subject according to Article 17, pars. 2 and 3. The student shall be given the possibility of making proposals relating to the subject. If the master's thesis is to be written outside of the KIT Department of Mathematics, the approval of the examination committee shall be required. The master's thesis may also be accepted in the form of group work, if the contribution of the individual student to be evaluated in the examination can be distinguished clearly based on objective criteria and if the requirement outlined in par. 4 is fulfilled. In exceptional cases, the chairperson of the examination committee shall take care of the student receiving a subject for the master's thesis within four weeks upon her/his request. In this case, the subject is issued by the chairperson of the examination committee.

(3) The subject, task, and scope of the master's thesis shall be limited by the supervisor such that it can be handled with the expenditure outlined in par. 4.

(4) The master's thesis shall demonstrate that the student is able to deal with a problem of her/his subject area in an independent manner and within a limited period of time using scientific methods. The scope of the master's thesis shall correspond to 30 credits. The maximum duration of work on the thesis shall amount to six months. The subject and task shall be adapted to the scope envisaged. The examination committee shall specify in which languages the master's thesis can be written. At the request of the student, the examiner can permit the master's thesis to be written in a language other than German or English.

(5) When submitting the master's thesis, the student shall assure in writing that the thesis is original work by her/him alone and that she/he has used no sources and aids other than indicated, marked all citations in word and content, and observed the Statutes of Karlsruhe Institute of Technology (KIT) for Safeguarding Good Scientific Practice, as amended. If this declaration is not contained, the thesis will not be accepted. The wording of the declaration may be: "Ich versichere wahrheitsgemäß, die Arbeit selbständig verfasst, alle benutzten Hilfsmittel vollständig und genau angegeben und alles kenntlich gemacht zu haben, was aus Arbeiten anderer unverändert oder mit Abänderungen entnommen wurde sowie die Satzung des KIT zur Sicherung guter wissenschaftlicher Praxis in der jeweils gültigen Fassung beachtet zu haben." (I herewith declare that the present thesis is original work written by me alone and that I have indicated completely and precisely all aids used as well as all citations, whether changed or unchanged, of other theses and publications, and that I have observed the Statutes of KIT for Safeguarding Good Scientific Practice, as amended).

If the declaration is not true, the master's thesis shall be evaluated "nicht ausreichend" (5.0, failed).

(6) The time of assignment of the subject of the master's thesis shall be recorded in the files of the examination committee by the supervisor and the student. The time of submission of the master's thesis shall be recorded in the files of the examination committee by the examiner. The student shall be allowed to return the subject of the master's thesis once only within the first month of the period of work on the thesis. At the justified request of the student, the examination committee may extend the time of work on the thesis given in par. 4 by three months at the maximum. If the master's

thesis is not submitted in time, it shall be deemed to have been “nicht ausreichend” (failed, 5.0), unless the student is not responsible for this failure.

(7) The master’s thesis shall be evaluated by a university teacher, an executive scientist according to Article 14, par. 3, clause 1, KITG or a habilitated member of the KIT Department, and another examiner at least. As a rule, one of the examiners is the person who assigned the thesis according to par. 2. In case of deviating evaluations of both persons, the examination committee shall fix the grade of the master’s thesis within the limits of the evaluations of both persons. It may also appoint another expert. The evaluation period shall not exceed eight weeks upon submission of the master’s thesis.

### **Article 15 – Additional Achievements**

(1) Further credits (additional achievements) in the amount of 30 credits at the maximum may be acquired in the courses offered by KIT. Articles 3 and 4 of the examination regulations shall remain unaffected. These additional achievements shall not be considered when calculating the total and module grades. The credits not considered when determining the module grade shall be listed as additional achievements in the transcript of records. At the student’s request, additional achievements shall be indicated in the master’s certificate and marked as additional achievements. Additional achievements shall be listed with the grades outlined in Article 7.

(2) The student shall declare a module examination an additional achievement when registering for this examination already. At the student’s request to the examination committee, allocation of the module can be changed later on.

### **Article 15a – Transferable Skills**

Apart from scientific qualifications, KIT attaches high importance to transferable skills. These skills of at least 6 credits shall be part of the Master’s Program of Mathematics. Transferable skills may be imparted additively or integratively.

## **Article 16 – Examination Committee**

(1) For the Master's Program of Mathematics, an examination committee shall be formed. It shall consist of six members entitled to vote: three university teachers / executive scientists according to Article 14, par. 3, cl. 1, KITG / assistant professors, three representatives of the group of academic staff members according to Article 52, LHG / scientific staff members according to Article 14, par. 3, cl. 2, KITG, and one student with an advisory vote. When establishing a joint examination committee for the Bachelor's Programs of Mathematics, Technomathematics, and Business Mathematics as well as for the Master's Programs of Mathematics and Technomathematics, the number of student members with an advisory vote shall be increased to the number of these programs, with these members coming from one of these programs each. Other members with an advisory vote may be appointed by the KIT Department Council. The term of office of the non-student members shall be two years, the term of office of the student member or members shall be one year.

(2) The chairperson, her/his deputy, the other members of the examination committee, and their deputies shall be appointed by the KIT Department Council. The members of the group of academic staff according to Article 52, LHG, the scientific staff members according to Article 14, par. 3, cl. 2, KITG, and the students shall be proposed by the members of the respective groups. Reappointment shall be possible. The chairperson and her/his deputy shall be university teachers or executive scientists according to Article 14, par. 3, cl. 1, KITG. The chairperson of the examination committee shall be responsible for current transactions and supported by the respective examination office.

(3) The examination committee shall take care of the provisions of the present Studies and Examination Regulations being observed and shall decide on examination matters. It shall decide on the recognition of study periods, coursework, and examinations according to Article 18, par. 1, cl. 1. It shall regularly report to the KIT Department about the development of examination and study periods as well as about the times of work on the master's theses and the distribution of module and total grades. It shall make suggestions for reforms of the Studies and Examination Regulations and module descriptions. The examination committee shall decide with

the majority of its votes. In the case of a split vote, the chairperson of the examination committee shall decide.

(4) The examination committee may delegate the execution of its tasks for all standard cases to its chairperson. In urgent cases that cannot be postponed until the next meeting of the examination committee, the chairperson of the examination committee shall decide.

(5) The members of the examination committee shall have the right to attend examinations. The members of the examination committee, the examiners, and the associates shall be obliged to secrecy. If they do not work in the public service sector, they shall be obliged to secrecy by the chairperson.

(6) In matters of the examination committee, which are related to an examination to be passed at another KIT Department, a competent person authorized to examine and to be appointed by the respective KIT Department shall be consulted at the request of a member of the examination committee.

(7) The student shall be informed in writing about incriminating decisions by the examination committee. These decisions shall be justified and provided with an information on legal remedies available. Prior to a decision, the student shall be given the opportunity to comment. Objections against decisions made by the examination committee shall be addressed to the examination committee in writing or for record within one month upon receipt of the decision. In case of objections, the Presidential Committee Member responsible for higher education shall decide.

## **Article 17 – Examiners and Associates**

(1) The examination committee shall appoint the examiners. It may transfer this task to its chairperson.

(2) Examiners shall be university teachers and executive scientists according to Article 14, par. 3, cl. 1, KITG, habilitated members, and academic staff members according to Article 52, LHG from the respective KIT Department, who have been

authorized to examine students. Also scientific staff members according to Article 14, par. 3, cl. 2, KITG may be authorized to examine. For appointment as examiner, persons shall have the scientific qualification corresponding to the examination subject at least.

(3) If courses are held by persons other than those mentioned in par. 2, these shall be appointed examiners, if the KIT Department has authorized them to examine and they have the scientific qualification required in par. 2, cl. 2.

(4) Associates shall be appointed by the examiners. Only persons having completed a master's program of mathematics or having an equivalent academic degree may be appointed associate.

#### **Article 18 – Recognition of Coursework and Examinations as well as of Study Periods**

(1) Coursework and examinations made as well as study periods passed in study programs at state or state-recognized universities and cooperative state universities of the Federal Republic of Germany or at foreign state or state-recognized universities shall be recognized at the request of the student, if the competencies acquired do not differ considerably from the achievements or degrees to be replaced. For this, no schematic comparison, but an overall analysis shall be made. As regards the scope of a coursework to be recognized, the principles of the ECTS shall be applied.

(2) The student shall submit the documents required for recognition. Students newly enrolled in the Master's Program of Mathematics shall submit the application together with the documents required for recognition within one semester upon enrollment. If documents are not available in the German or English language, an officially certified translation may be required. The examination committee shall bear the burden of proving that the application does not meet the recognition requirements.

(3) If achievements made not at the KIT are recognized, they are listed as "anerkannt" (recognized) in the certificate. If grades exist, they shall be taken over in

case of comparable grade scales and shall be included in the calculation of module grades and the total grade. In case of incomparable grade systems, the grades can be converted. In the absence of grades, the note “bestanden” (passed) shall be entered.

(4) When recognizing coursework and examinations as well as study periods passed outside of the Federal Republic of Germany, the equivalence agreements adopted by the Conference of Ministers of Education and the German Rectors' Conference as well as agreements concluded within the framework of university partnerships shall be considered.

(5) Knowledge and skills acquired outside of the university system shall be recognized, if they are equivalent to the coursework and examinations to be replaced in terms of contents and level and if the institution, where the knowledge and skills were acquired, has a standardized quality assurance system. Recognition may be refused in parts when more than 50% of the university's study program is to be replaced.

(6) The examination committee shall be responsible for recognitions. To determine whether a considerable difference in the sense of par. 1 exists, the responsible subject representatives shall be heard. Depending on the type and scope of coursework and examinations to be recognized, the examination committee shall decide on admission to a higher semester.

## **II. Master's Examination**

### **Article 19 – Scope and Type of the Master's Examination**

(1) The master's examination shall consist of the module examinations according to par. 2 and the master's thesis module (Article 14).

(2) Module examinations shall be passed in the following mandatory subjects:

1<sup>st</sup> subject: Mathematische Methoden 1 (Mathematical methods 1): module(s) in the amount of 24 credits

2<sup>nd</sup> subject: Mathematische Methoden 2 (Mathematical methods 2): module(s) in the amount of 16 credits

3<sup>rd</sup> subject: Ergänzungsfach (Complementary subject): module(s) in the amount of 16 to 24 credits

4<sup>th</sup> subject: Mathematisches Seminar (Mathematical seminar): module(s) in the amount of 6 credits

5<sup>th</sup> subject: Mathematische Vertiefung (Mathematical specialization): module(s) in the amount of 14 to 22 credits

6<sup>th</sup> subject: Überfachliche Qualifikationen (transferable skills): in the amount of at least 6 credits according to Article 15a.

The modules available for selection and their allocation to subjects shall be specified in the module manual. The total of credits in the mandatory subjects of Mathematische Vertiefung (Mathematical specialization) and Ergänzungsfach (Complementary subject) shall be 38 at least. The number of 38 credits may be exceeded once only at the time of registration for a module examination.

## **Article 20 – Passing of the Master’s Examination, Calculation of the Total Grade**

(1) The master’s examination shall be passed, if all module examinations mentioned in Article 19 were evaluated with the grade “ausreichend” (sufficient) at least and all credits listed in Article 19 were reached.

(2) The total grade of the master’s examination shall be the mean of the subject grades of Mathematische Methoden 1 (Mathematical methods 1), Mathematische Methoden 2 (Mathematical methods 2), Mathematische Vertiefung (Mathematical specialization), Ergänzungsfach (Complementary subject), and the master’s thesis module weighted with the credits.

(3) In case the student has completed the master’s thesis module with the grade 1.0 and the master’s examination with an average of 1.2 or better, the predicate “mit Auszeichnung” (with distinction) shall be granted.

## **Article 21 – Master’s Transcript, Master’s Certificate, Diploma Supplement, and Transcript of Records**

(1) Upon evaluation of the last examination, a master’s certificate and a transcript shall be issued about the master’s examination. The master’s certificate and transcript shall be issued not later than three months upon the last examination. The master’s certificate and transcript shall be issued in the German and English languages. The master’s certificate and transcript shall bear the date of the successful passing of the last examination. They shall be handed over to the student together. The master’s certificate shall document conferral of the academic degree of master. The master’s certificate shall be signed by the President and the Dean of the KIT Department and provided with the seal of KIT.

(2) The transcript shall list the subject and module grades, the credits assigned to the modules and subjects, and the total grade. If a differentiated evaluation of individual examinations was made according to Article 7, par. 2, cl. 2, the respective decimal grade shall be indicated in the transcript. Article 7, par. 4 shall remain unaffected. The transcript shall be signed by the Dean of the KIT Department and the chairperson of the examination committee.

(3) In addition, the student shall be given a diploma supplement in the German and English languages, which corresponds to the requirements of the applicable ECTS Users’ Guide, as well as a transcript of records in German and English.

(4) The transcript of records shall list all courseworks and examinations of the student in a structured form. It shall include all subjects and subject grades as well as the assigned credits, the modules assigned to the respective subject with the module grades and the credits assigned as well as the controls of success assigned to the modules together with the grades and the credits. Paragraph 2, cl. 2 shall apply accordingly. The transcript of records shall clearly reflect the assignment of courses to the individual modules. Recognized coursework and examinations shall be included in the transcript of records. All additional achievements shall be listed in the transcript of records.

(5) The master's certificate, master's transcript, and the diploma supplement, including the transcript of records, shall be issued by the Students Office of the KIT.

### **III. Final Provisions**

#### **Article 22 – Certificate of Examination Achievements**

(1) In case a student has ultimately failed in the master's examination, she/he shall be given at request and against submission of the exmatriculation certificate a written certificate about the coursework and examinations made, the respective grades, as well as the confirmation that the overall examination has not been passed. The same shall apply when the entitlement to an examination has expired.

#### **Article 23 – Revocation of the Master's Degree**

(1) If a student has been guilty of deception during an examination and if this fact becomes known upon the hand-over of the certificate only, the grades of the module examinations, during which the student was guilty of deception, can be corrected. If applicable, this module examination may be declared to have been "nicht ausreichend" (5.0, failed) and the master's examination may be declared to have been "nicht bestanden" (failed).

(2) If the conditions for admission to an examination were not fulfilled without the student wanting to deceive and if this fact becomes known upon the hand-over of the certificate only, this default shall be remedied by the passing of the examination. If the student intentionally and wrongly obtained admission to the examination, the module examination may be declared to have been "nicht ausreichend" (5.0, failed) and the master's examination may be declared to have been "nicht bestanden" (failed).

(3) Prior to a decision of the examination committee, the student shall be given the opportunity to comment.

(4) The incorrect certificate shall be confiscated and, if applicable, a new certificate shall be issued. Together with the incorrect certificate, the master's certificate shall also be confiscated, if the master's examination was declared to have been "nicht bestanden" (failed) due to a deception.

(5) A decision pursuant to par. 1 and par. 2, cl. 2 shall be excluded after a period of five years upon the date of issue of the certificate.

(6) Deprivation of the academic degree shall be subject to Article 36, par. 7, LHG.

#### **Article 24 – Inspection of Examination Files**

(1) Upon completion of the master's examination, the students shall be granted the right to inspect the examination copy of their master's theses, the related opinions, and minutes of the examinations within one year at request.

(2) For inspection of the written module examinations, written module part examinations, and examination minutes, a period of one month after announcement of the examination result shall apply.

(3) The examiner shall determine the place and time of inspection.

(4) Examination documents shall be kept for at least five years.

#### **Article 25 – Entry into Force, Transition Regulations**

(1) The present Studies and Examination Regulations shall enter into force on October 01, 2016 and shall apply to

1. students, who start their studies within the Master's Program of Mathematics at KIT in the first semester, and
2. students, who, as of the 2016/17 winter semester, start their studies within the Master's Program of Mathematics at KIT in a higher semester, provided that this semester is not higher than the semester reached by students of the first year according to clause 1.

(2) The Studies and Examination Regulations of Universität Karlsruhe (TH) for the Master's Program of Mathematics of August 28, 2009 (Official Announcement of Universität Karlsruhe (TH) No. 74 of August 28, 2009, last amended by the Statutes on the Implementation of the Agreement on Recognition of Qualifications in the University Sector of the European Region of April 11, 1997 (Lisbon Convention) according to Article 32, pars. 2 and 4, and Article 36a of the Act of Baden-Württemberg on Universities and Colleges (Landeshochschulgesetz, LHG) in the Studies and Examination Regulations of Karlsruhe Institute of Technology (KIT) of March 27, 2014 (Official Announcement of KIT No. 19 of March 28, 2014) shall remain in force for

1. students, who started their studies within the Master's Program of Mathematics at KIT not later than in the summer semester 2016, and
2. students, who, as of the winter semester 2016/17, start their studies within the Master's Program of Mathematics at KIT in a higher semester, provided that this semester is higher than the semester reached by the first year of students according to par. 1, clause 1.

As for the rest, it shall cease to be in force.

(3) Students, who started their studies based on the Studies and Examination Regulations of Universität Karlsruhe (TH) for the Master's Program of Mathematics of August 28, 2009 (Official Announcement of Universität Karlsruhe (TH) No. 74 of August 28, 2009), last amended by the Statutes on the Implementation of the Agreement on Recognition of Qualifications in the University Sector of the European Region of April 11, 1997 (Lisbon Convention) according to Article 32, pars. 2 and 4 and Article 36a of the Act of Baden-Württemberg on Universities and Colleges (Landeshochschulgesetz, LHG) in the Studies and Examination Regulations of Karlsruhe Institute of Technology (KIT) of March 27, 2014 (Official Announcement of KIT No. 19 of March 28, 2014), may pass examinations based on the present Studies and Examination Regulations by the end of the 2020 summer semester examination period for the last time.

(4) Students, who started their studies based on the Examination Regulations of Universität Karlsruhe for the Diploma Program of Mathematics of October 24, 1991 (Official Announcement of Universität Karlsruhe No. 1 of January 22, 1992), last amended by the 2<sup>nd</sup> Statutes for Modification of the Examination Regulations of Universität Karlsruhe (TH) for the Diploma Program of Mathematics of February 28, 2001 (Official Announcement of Universität Karlsruhe (TH) No. 7 of March 14, 2001), may apply for admission to examinations based on the present Studies and Examination Regulations until the end of the 2020 summer semester examination period.

Karlsruhe, July 26, 2016

Professor Dr.-Ing. Holger Hanselka  
(President)