
**Degree-Specific Examination Regulations (Rules) of the Faculty of Engineering
of Christian-Albrechts-Universität zu Kiel for students working towards a
Master of Science (M.Sc.) in Computer Science
(Degree-Specific Examination Regulations (FPO)
for Computer Science (1-subject, Master))
of 10 June 2015**

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Based on Section 52 (1) of the Schleswig-Holstein Higher Education Act (HSG) of 28 February 2007 (Law and Official Gazette for the Land of Schleswig-Holstein (GVOBl. Schl.-H.), p. 184), last amended by Section 34 of the Act of 11 December 2014 (Law and Official Gazette for the Land of Schleswig-Holstein (GVOBl. Schl.-H.), p. 440), after a resolution was passed by the Convention of the Faculty of Engineering of 20 May 2015, the following Rules were issued:

**Section 1
Scope of application**

- (1) In conjunction with the Examination Procedure Regulations of Christian-Albrechts-Universität zu Kiel for students of Bachelor's and Master's Degree Programmes (PVO), these degree-specific examination regulations apply to the 1-subject Master's degree programme in Computer Science at Kiel University.
- (2) They apply to all modules at the Department of Computer Science that form part of the degree programme subject to these examination regulations.
- (3) Special regulations for individual imported or exported modules may be agreed upon between the Examination Boards involved.

**Section 2
Aim of the degree programme, purpose of the examination**

- (1) The Master of Science (M.Sc.) degree programme in Computer Science is based on the preceding Bachelor's programme in Computer Science. It is designed to teach students advanced Computer Science skills and methods, expand and solidify their academic knowledge and lay the foundations for the development of young researchers. This includes enabling students to master the principles and methods of Computer Science for independent work and forming the basis of ongoing and critical discussion of developments in the subject. The selection of teaching content takes developments in the subject of Computer Science into account and is defined in good time as a "Master's programme" or created individually for students in agreement with a specialist representative.
- (2) The Master's transcript and Master's certificate document a professional and academic qualification obtained on completion of the Computer Science degree programme. These documents prove that the holder grasps the contexts of the subject, is able to apply the academic methods and knowledge independently, and has acquired the necessary in-depth specialist knowledge of the subject for the transition to professional practice.

Section 3 Academic title

Based on the passed Master's examination, the Faculty of Engineering awards the academic title of "Master of Science (M.Sc.)"

Section 4 Admission to the Master's degree programme

Admission to the Master of Science degree programme in Computer Science is only permitted if the candidate has a recognised, eligible Bachelor's degree that is comparable to the Bachelor of Science in Computer Science offered at Kiel University.

Section 5 Language-related admission requirements

- (1) If German is not the candidate's native language or the candidate has not obtained a German university entrance qualification or German Bachelor's degree, evidence must be provided of German language skills corresponding with the "Deutsche Sprachprüfung für den Hochschulzugang (DSH)" (German language proficiency test for university entrance) following general regulations in accordance with the resolution of the German Rectors' Conference (HRK) of 8 June 2004 and the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany (Kultusministerkonferenz/KMK) of 25 June 2004, in the version of the resolution of HRK / KMK of 3 May 2011 / 17 November 2011. This requirement to provide evidence does not apply if all lectures of the Master's programme are conducted in English.
- (2) If English is not the candidate's native language or the candidate has not obtained an English university entrance qualification or English Bachelor's degree, evidence must be provided of English language skills corresponding with TOEFL-ITP (paper-based test): 550 points, Cambridge Proficiency, Oxford Higher Certificate, International Certificate Conference ICC Stage 3 (Technical) or IELTS 6.0. This requirement to provide evidence does not apply if all lectures of the Master's programme are conducted in German.

Section 6 Structure of curriculum

- (1) The standard period of study for the Master's degree programme is four semesters. The degree programme encompasses 120 ECTS credit points and covers around 80 Semesterwochenstunden (SWS) (weekly 45-minute teaching units for the duration of one semester of about 12 weeks). Lectures are conducted in German and English.
- (2) The degree programme may be started in a winter or a summer semester.
- (3) The degree programme is made up of the following:

Compulsory elective modules in Computer Science worth 60-65 ECTS credit points

The Module Handbook for Computer Science lists the compulsory elective modules for Computer Science. These modules are usually made up of a lecture course with an accompanying practical exercise. Modules that have already been completed in the Bachelor's degree programme may not be repeated.

The Module Handbook for Computer Science includes several compulsory elective modules as modules for the fields of *Theoretical Computer Science* and/or *Practical Computer Science*. In order to achieve sufficient breadth of subject matter in the Master's

degree programme, students must obtain at least 12 ECTS credit points in each of these fields. The Examination Board decides on how to allocate modules to the fields of Theoretical Computer Science and Practical Computer Science following consultation with lecturers for the particular field.

Seminar module in Computer Science worth 5 ECTS credit points

The aim of the seminar module is to produce an independent analysis of the scientific themes of Computer Science, write scientific texts and present scientific findings. The Module Handbook for Computer Science lists the seminars for the Master's degree programme in Computer Science.

Master's project in Computer Science worth 10 ECTS credit points

The aim of the Master's project is to produce an intensive and practical analysis of a current Computer Science topic. Its content should focus, in particular, on the fields of problem analysis, specification and implementation. The Master's project should normally be a group project so that aspects of group and project work are learnt in addition to specialist content. The results of the Master's project should be conveyed within the framework of a presentation.

Optional section from another field worth 10-15 ECTS credit points

In this section, students may select modules offered at Kiel University that are not also available in another area of this degree programme. Language courses that do not go above upper secondary school level cannot be chosen.

In addition to a free choice of any module, students may also select a coordinated minor subject. The minor subject may either be consecutive in character, continuing the same minor subject taken from the Bachelor's degree programme, or it may be a completely new minor subject. The Module Handbook lists possible minor subjects together with the modules to be completed. Other minor subjects may be agreed in consultation with the Examination Board of the chosen subject and the Examination Board for Computer Science. The minor subject should be decided prior to allocation of the first module of the minor subject. The minor subject is stated on the certificate.

The total of 75 ECTS credit points must be obtained in the optional section of Computer Science and the optional section from another field.

Master's thesis worth 30 ECTS credit points

Students produce a Master's thesis to complete their Master's degree programme. Details are provided in Section 11.

(4) Additional optional choice

The Department of Computer Science offers modules in the following categories as a possible additional optional choice:

- **Research project (participation in a working group) worth up to 10 ECTS credit points**

As a way of introducing students to research before they have completed their Master's degree programme, they can acquire up to 10 ECTS credit points by participating in a research group of the Department of Computer Science. Participation is to be documented in a project report and a project journal.

- **Project group worth up to 20 ECTS credit points**

The project group represents a variation of the Master's project in which more complex tasks are addressed over the course of two semesters. It provides students with the opportunity to carry out more detailed problem analysis and specification. It may be combined with a Master's project. Project groups can only be conducted if at least five students take part.

Students may choose the project group as an alternative to the Master's project. Alternatively, it is also possible for students to complete a second seminar, a research project or a second Master's project. The additional credit points obtained are allocated to

the compulsory elective modules in Computer Science, but do not replace any modules from Theoretical Computer Science or Practical Computer Science.

(5) Mobility windows

It is recommended for students to complete a stay abroad. As there are no compulsory modules in the Master's degree programme in Computer Science, any semester is suitable for this. It is also possible for the Master's thesis to be completed abroad. Rules on the procedure for the Master's thesis must be observed, however, in accordance with Section 9.

**Section 7
Examination Board**

The Examination Board for Computer Science is responsible for organising the module examinations subject to these Rules in accordance with the Examination Procedure Regulations (PVO). Its work is managed by the Examination Office for Computer Science.

**Section 8
Module examinations and module grades**

- (1) A module examination may be oral, written, a group examination or an assignment.
- (2) Admission to module examinations may be subject to rules on active participation in work experience and practical exercises, as defined in the Module Handbook. These are checked on admission to the module examination.
- (3) Positive course achievements completed during the module may be taken into account in grading the module examination.
- (4) In seminars students are to demonstrate that they are able to work independently in an advanced field of Computer Science, reflect the content in a structured manner in a seminar project and convey this within the framework of a presentation. In grading the seminar, both the seminar project and presentation are to be taken into account.
- (5) The module examination for Master's projects and the project group comprises regular, active participation in project work and at least one concluding presentation. It may also contain project reports and documentation of interim results (also in the form of presentations).
- (6) The module examination for the research project comprises regular, active involvement in the research group, the production of a project report and a project journal. This is not graded.
- (7) The type of module examination, other admission requirements in accordance with (2), consideration of positive course achievements in accordance with (3) and permitted resources are announced by the Examination Office at the start of the module.
- (8) Any failed module examination may be resat while completing the module at that time or at a later time. Evidence of admission requirements in accordance with (2) does not need to be provided again for resits. Positive course achievements in accordance with (3) may only be taken into account for the two examinations offered directly after the module is completed. For seminars, the Master's project, the project group and the research project, there is no opportunity to resit while completing the module at that time. The concluding project is not a module and may only be repeated once if failed.

**Section 9
Compulsory academic study advice**

- (1) If a student has not obtained any ECTS credit points in two consecutive semesters, the Examination Board shall invite him/her to a compulsory academic study advice session.

The aim of the compulsory academic study advice session is to reintroduce regular study.

- (2) In order to participate in the compulsory academic study advice session, the student is invited to an appointment with appropriate notice of at least one month. The invitation becomes invalid if the student proves before the date of the session that there is a reason to extend the deadline in accordance with paragraph 1 in terms of Section 20 (4) Examination Procedure Regulations (PVO). The next invitation will be sent once this extended deadline has expired.
- (3) If the student does not attend the appointment, he/she shall not be permitted to participate in further modules and module examinations. In order to participate in modules and module examinations again, the student must first attend the compulsory academic study advice session. This is possible at the student's request.
- (4) If the student has attended the compulsory academic study advice session, the Examination Board shall set a new appropriate deadline for restarting studies, taking account of the results of the advice session. If the deadline passes without ECTS credit points being obtained, the student shall not be permitted to continue participating in modules and module examinations.

Section 10 Master's programmes

In order to help students with their study choices, the university lecturers of the Department of Computer Science define advanced subject areas and corresponding Master's programmes that can be completed within the standard period of study and offer adequate preparation for a Master's thesis in the university lecturer's working group in the selected advanced subject area. At the start of their Master's degree programme, students should select a Master's programme that they can modify according to their personal interests. The (if necessary, modified) Master's programme serves as the basis for the Specialist Academic Advisors and the specific academic study advice with the university lecturer responsible for a Master's programme. Any agreements made concerning the selected modules are documented and binding both for the responsible university lecturer and for the students. Alternatively, students may also agree individual study plans with the Specialist Academic Advisors and a supervising university lecturer.

Section 11 Master's thesis

- (1) The Master's thesis is an examination paper that concludes the degree programme. It is designed to show that the candidate is able to deal with a problem from the subject area of Computer Science independently, following scientific methods, within a given period.
- (2) Students may write a Master's thesis if they have obtained at least 80 ECTS credit points in the Master's degree programme in Computer Science.
- (3) The topic of the Master's thesis is to be determined by the university lecturer responsible for the selected Master's degree programme and be suitable for the chosen advanced subject area. The choice of task must allow for the Master's thesis to be completed within 6 months. The topic is issued by the Examination Board and must be recorded. The period for completing the Master's thesis is six months. This deadline may only be extended by a maximum of three months in exceptional cases. More details can be found in the Examination Procedure Regulations (PVO).
- (4) Students convey the results of their Master's thesis in a presentation to members of the Department of Computer Science lasting 30-45 minutes. This is followed by a brief discussion. The presentation is to be held within the 6 month preparation period for the Master's thesis, but at the earliest two months before the end of this period.
- (5) The Master's thesis must be submitted to the Examination Office on time in the form of

three bound copies. It may be produced in English or German.

- (6) Alongside the actual Master's thesis itself, the grade for the Master's thesis also takes into account the student's processing of the problem, the final presentation and the subsequent discussion. The grade must be announced at the latest 4 weeks after submission of the Master's thesis.
- (7) Students may return the topic of the Master's thesis once within the first two months.
- (8) If a Master's thesis is graded 5.0, it may be repeated once. The repeated Master's thesis must be completed at the latest during the academic year following the failed attempt.
- (9) If the repeated Master's thesis is graded 5.0, the student has irrevocably failed the Master's examination in Computer Science.

Section 12 Calculating the overall grade

The overall grade is calculated from the arithmetic average of the module grades weighted with ECTS credit points, excluding grades from optional subjects outside the field of Computer Science. Ungraded modules, such as the research project, are also not included in the final grade.

Section 13 Entry into force, expiry, transitional provisions

- (1) These Examination Regulations enter into force on the day after the date they are published and first apply to students taking up their studies in the winter semester 2015/2016. At the same time, the Examination Regulations (Rules) of the Faculty of Engineering at Christian-Albrechts-Universität zu Kiel for students of the Master of Science in Computer Science degree programme of 9 July 2008 (Bulletin of the Ministry of Science, Economic Affairs and Transport of the Land Schleswig-Holstein (NBl. MWV Schl.-H.), p. 163) cease to apply.
- (2) By request, students from higher semesters may continue their studies according to the new Examination Regulations. Examinations that have already been taken according to the old Examination Regulations remain valid and recognised. Module examination procedures that were started according to the old Examination Regulations are completed according to these.
- (3) Students from higher semesters may sit Master's examinations up until 31 March 2018 according to the Examination Regulations of 8 July 2008. After this date, these Examination Regulations shall apply to these students, too.

The University Board at Christian-Albrechts-Universität zu Kiel granted its approval in accordance with Section 52 (1) 1 of the Schleswig-Holstein Higher Education Act (HSG) in its letter dated 10 June 2015.

Kiel, 10 June 2015

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at Kiel University