



Subject-specific Study and Examination Regulations for the Master's Programme in Communications Technology offered by the Faculty of Engineering and Computer Science of Ulm University of 10 March 2015

In its meeting of 25 February 2015, the Senate of Ulm University, at the proposal of the Faculty of Engineering and Computer Science, adopted the following subject-specific study and examination statutes for the master's programme in Communications Technology pursuant to § 34 (1) in conjunction with § 19 (1) sentence 2 no. 9 of the state university law of Baden-Württemberg (LHG="Landeshochschulgesetz") in the version of 1 January 2005 (Law Gazette p. 1 ff), last amended by article 1 of the third law on changes to higher education regulations (Drittes Hochschulrechtsänderungsgesetz) of 1 April 2014 (law gazette no. 6, p. 99 ff). The President of Ulm University approved these on 10 March 2015 pursuant to § 34 (1) sentence 3 LHG.

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Preliminary remarks on language use

According to Article 3 (2) Basic Law men and women have equal rights; all male designations of persons and positions used in these Regulations apply equally to men and women.

I. General provisions

§ 1 Scope of application

- (1) These Subject-Specific Study and Examination Regulations contain specific regulations for the master's programme in Communications Technology.
- (2) The Subject-Specific Study and Examination Regulations supplement the General Provisions for Study and Examination Regulations regarding Bachelor's and Master's Programmes at Ulm University (General Framework) in the applicable version. In case of doubt, the General Framework has priority.

§ 2 Academic degrees, study courses (General Framework, § 2)

The Faculty of Engineering and Computer Science of Ulm University offers the master's programme in Communications Technology leading to the academic degree of "Master of Science" ("MSc") offering the two specialty areas of "Communications Engineering" and "Communications Circuits and Systems". Students decide on one of the two specialty areas when registering for the first exam specific to one of the specialty areas. It is possible to change the specialty area once.

§ 3 Beginning of the programme (General Framework, § 3)

The master's programme in Communications Technology begins in the summer semester.

§ 4 Standard period of study (General Framework, § 5)

The standard period of study is 4 semesters.

§ 5 Deadlines (General Framework, § 6 (8,9))

Master students must complete the modules indicated in the corresponding study curriculum by the end of the examination period of their fourth semester in the programme. They lose their right to examination if they fail to complete the modules indicated in the corresponding study curriculum –and to thus complete the master's programme- by the end of the examination period of the seventh semester in the programme unless they are not responsible for exceeding this deadline.

§ 6 Courses and examinations in English (General Framework, § 7)

- (1) The courses of the compulsory and the elective modules (except language courses) are taught in English. It is possible to select modules taught in German.

- (2) As a rule, examinations are conducted in the language of the course.

§ 7 Internships (General Framework, § 8)

In the master's programme in Communications Technology students may complete an internship with a minimum duration of 9 weeks; this can be recognized as an ungraded elective module according to § 17 (2) no. 4. Successful completion of this module requires the submission of an internship report written by the student and a certificate of completion of the internship by the employer (proof of completion of internship). The requirements for such an internship are described in the instruction sheet "Industriepraxis" [internship]. A successfully completed internship corresponds to 9 CP (CP = Credit Point).

§ 8 Subject-specific examination board (General Framework, § 10)

- (1) A subject-specific examination board is formed for the master's programme in Communications Technology.
- (2) The subject-specific examination board decides in cases of doubt not covered by these Subject-Specific Study and Examination Regulations or the General Framework.
- (3) The subject-specific examination board consists of seven members. It is composed of four full-time university lecturers or assistant professors (*Privatdozenten*) from the Faculty of Engineering and Computer Science of Ulm University, two scientific staff members from the Faculty of Engineering and Computer Science of Ulm University and one student of Communications Technology in an advisory capacity. The term of office of the members with voting rights is two years; that of the student member is one year. It is possible to re-elect members.

§ 9 Types of courses, examination achievements (General Framework, § 16)

- (1) Study contents are conveyed, in particular, by the following types of courses:
 - lectures
 - exercises
 - tutorials
 - practical courses
 - projects
 - seminars
- (2) The master's examination consists of the master's thesis and a concluding presentation and discussion as well as written and/or oral examinations according to the modules listed in the study curriculum.
- (3) The master's programme may require study achievements delivered in a different written or oral form. These may be, in particular, active participation in classes or accompanying practical courses conducted as part of the respective courses of a (partial) module. Achieving a certain number of points or certain grades, e.g. in classes or accompanying practical courses, may be established as a requirement for admission to the final examination of a (partial) module. Details regarding type, scope and content of such achievements are determined by the person responsible for the respective course. Such requirements must be published in the module handbook no later than two weeks before the

beginning of the course.

- (4) Furthermore, written examination achievements such as
 - design work, presentations and implementations, as well as
 - written elaborations on a topic (seminar paper, internship report, assignment)may be required.
- (5) Examinations may be –fully or partially– conducted via a computer programme; however, confidentiality of data and integrity of results must be guaranteed.

§ 10 Organisation of module examinations (General Framework, §§ 13 and 16)

- (1) As a rule, written module examinations in the master's programme are conducted in the first four weeks of the lecture-free period; repeat exams take place in the three weeks preceding and the first week of the lecture period of the following semester (examination periods). The subject-specific examination board may allow exceptions. The period between the publication of examination results and corresponding repeat exams must be at least two weeks.
- (2) Written examinations may not have more than 50% multiple choice questions.
- (3) Admission to concluding module examinations may, according to § 9 (3), be made subject to certain study achievements to be completed during a course.
- (4) Place and time of oral examinations are organised by the examiners themselves. The duration of oral examinations is between 30 and 50 minutes per student. As a rule, dates for oral examinations are first offered in the lecture-free period following the module and then, in the two subsequent semesters, at least once per semester.

§ 11 Related study programmes (General Framework, § 12)

Study programmes related to Communications Technology as defined in § 12 (7) of the General Framework are, in particular, courses in electrical engineering, communications technology, telecommunications and media technology, communications systems technology and computer engineering.

§ 12 Provisions regarding the module master's thesis (General Framework, § 16c)

- (1) The master's thesis corresponds to 30 CP. Students have six months to complete it.
- (2) The module master's thesis comprises a presentation of about 45 minutes before the examiners including a discussion of the topic of the master's thesis or a colloquium on the topic of the thesis.
- (3) The master's thesis must be submitted in due time to the *Studiensekretariat* (student administration and examinations office) in two bound copies (DIN A 4). Furthermore, electronic copies in the form of PDF files must be submitted, one to the first examiner and one to the *Studiensekretariat*. The date of submission must be recorded.
- (4) As a rule, the master's thesis is written in English; however, with the consent of the first examiner it may be written in German.
- (5) If a master's thesis is prepared outside the institutes involved in the programme, a thesis project plan must be submitted to the subject-specific examination board for approval. The

subject-specific examination board must check, in particular, whether the planned external thesis project complies with the scientific principles of the study programme in Communications Technology. This approval must be submitted to the *Studiensekretariat* when registering the master's thesis.

§ 13 Subject-specific requirements for admission to the master's thesis

- (1) Admission to the module master's thesis is subject to students having obtained a minimum of 75 CP. They must have passed all general and specialty area-specific compulsory modules of the study curriculum.
- (2) Should one of the requirements under paragraph 1 above not be met, the subject-specific examination board may still grant admission to the master's thesis at the student's request.

§ 14 Assessment of module examinations (General Framework, § 17)

All examination results according to § 17 (2) no. 1, 3, 6 and 7 –weighted relative to their corresponding credit points– count towards the overall grade of the master's programme.

§ 15 Retake of module examinations (General Framework, § 20)

- (1) Module examinations that were awarded a "fail" (5.0) or deemed not to have been passed may be repeated once.
- (2) Up to two failed (partial) module examinations may be repeated twice.

II. Master's programme in Communications Technology

§ 16 Study objectives of Communications Technology programme

The objective of the master's programme is to qualify students to work independently as engineers. The master's programme expands and complements the scientific and methodological qualifications acquired during undergraduate studies. The master's degree is an advanced academic degree in the field of electrical engineering. The master's examination leading to the award of the master's degree establishes whether a student is capable of independently investigating problems in the field of engineering whilst applying scientific principles, relevant methods and the acquired knowledge.

§ 17 Study contents, admission to (partial) module examinations in the master's programme in Communications Technology

- (1) All modules conclude with a module or partial module examination.
- (2) Module and partial module examinations corresponding to the study curriculum of Communications Technology must be done in the following module groups:
 1. Compulsory and track specific elective modules corresponding to a minimum of 39 CP
 2. Compulsory modules in languages corresponding to 8 CP
 3. In-depth modules corresponding to a minimum of 18

4. Practical modules corresponding to a minimum of 10 CP
 5. Supplementary modules corresponding to a minimum of 3 CP
 6. One seminar corresponding to 3 CP
 7. Master's thesis, 30 CP
- (3) The modules (specialty area, practical and supplementary) completed according to paragraph 2 no. 3, 4 and 5 above must total a minimum of 40 CP. The module group "supplementary modules" is restricted to two modules.
- (4) The modules selectable in the module groups under paragraph 2 no. 1 to 6 are listed in the study curriculum; requirements are described in the module handbook. Study curriculum and module handbook must be kept up to date.

III. Final provisions

§ 18 Effective date and transitional provisions

- (1) These Subject-Specific Study and Examination Regulations first apply to the summer semester 2015. They are published in the Official Bulletin ("Amtlichen Bekanntmachungen") of Ulm University. At the same time, the subject-specific study and examination regulations for the master's programme in Communications Technology offered by the Faculty of Engineering and Computer Science of Ulm University of 23 December 2011, published in the Official Bulletin of Ulm University no. 1 on 4 January 2012, p. 28-34, cease to have effect subject to paragraph 2 below.
- (2) Paragraph 1 above is not applicable to students enrolled in the second or a higher subject-related semester of the master's programme in Communications Technology at the effective date of these Regulations. Such students complete their studies under the subject-specific study and examination regulations for the master's programme in Communications Technology offered by the Faculty of Engineering and Computer Science of Ulm University of 23 December 2011.
- (3) Paragraph 1 above is not applicable to students enrolled in the master's programme in Communications Technology at the effective date of these Regulations who fall under the provisions of the study and examination regulations for the master's programme in "Communications Technology" of the Faculty of Engineering 23 July 2004. Such students finish their studies under the study and examination regulations of 23 July 2004.

The above regulations have been adopted. They are hereby executed and to be published.

Ulm, this 10 March 2015

signed
Prof. Dr. K. J. Ebeling
- President -