



**Subject-specific study and examination regulations for the English-taught master's programme in Communications Technology offered by the Faculty of Engineering, Computer Science and Psychology at Ulm University of 08 March 2017**

Based on §§ 19 (1) sentence 2 no. 9, in conjunction with § 32 Federal State Higher Education Act Baden-Württemberg (*Landeshochschulgesetz - LHG*) in the version of article 1 of the third law on changes to higher education regulations (*Drittes Hochschulrechtsänderungsgesetz- 3. HRÄG*) of 1 April 2014 (law gazette no. 6, p 99 ff) last amended by article 2 of the law promoting equal opportunities for men and women in the public sector in Baden-Württemberg and amending the *Landeshochschulgesetz* of 23 February 2016 (law gazette no 4, p. 108 ff), the Senate of Ulm University adopted the following subject-specific study and examination regulations for the bachelor's and master's programmes in Electrical Engineering and Communications and Computer Engineering. The President of Ulm University gave his consent on 08 March 2017 in accordance with § 32 (3) sentence 1 *LHG*.

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#### ***Preliminary remark 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) These subject-specific study and examination regulations supplement the general provisions on study and examination regulations for bachelor's and master's programmes at Ulm University (General Framework) as amended. In case of doubt, the General Framework has priority.

#### **§ 2 Study programmes, academic degrees (§ 2 General Framework)**

The Faculty of Engineering, Computer Science and Psychology at Ulm University offers the consecutive master's programme in Communications Technology leading to the degree of "Master of Science" (in short, "MSc") with specialisations in "Communications Engineering" or "Communications Circuits and Systems". The choice of specialisation is determined when the student registers for the first specialisation-specific examination. The specialisation can be changed once.

#### **§ 3 Start of the programme (§ 3 General Framework)**

Studies in the master's programme in Communications Technology begin in the summer semester.

#### **§ 4 Standard period of study (§ 5 General Framework)**

The standard period of study is four semesters.

#### **§ 5 Deadlines (§ 6 (8 and 9) General Framework)**

Students must have taken and passed the modules listed in the study curriculum of the master's programme by the end of the examination period of the fourth semester in the programme. Students failing to obtain a minimum of 30 credit points by the end of the examination period of the second semester in the programme lose their right to examination in this programme unless they are not responsible for exceeding the deadline.

They lose their right to examination if they do not successfully complete the modules indicated in the corresponding study curriculum –thus passing the master's programme– by the end of the examination period of the seventh semester unless they are not responsible for exceeding this deadline.

## **§ 6 Courses and examination in English (§ 7 General Framework)**

- (1) The courses in the compulsory and elective modules (except language courses) are taught in English. It is possible to select modules taught in German.
- (2) As a rule, exams are conducted in the course language.

## **§ 7 Internship (§ 8 General Framework)**

In the master's programme in Communications Technology, students can choose to do a minimum 9-week internship as an ungraded elective module under § 17 (2) no 4. Successful completion of this module requires 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 set out in the instruction sheet "*Industriepraxis*". A successfully completed internship corresponds to 9 CP.

## **§ 8 Subject examination board (§ 10 General Framework)**

- (1) The master's programme in Communications Technology has a subject examination board.
- (2) The subject examination board decides in cases of doubt covered by neither these subject-specific study and examination regulations nor the General Framework.
- (3) The respective subject examination board consists of seven members. It is composed of four full-time university lecturers or assistant professors from the Faculty of Engineering, Computer Science and Psychology at Ulm University, two scientific staff members from the Faculty of Engineering, Computer Science and Psychology at 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 Courses, examination achievements (§ 16 General Framework)**

- (1) The programme's contents will be conveyed, in particular, in the following types of courses:
  - lectures
  - classes
  - tutorials
  - practical courses
  - projects
  - seminars
- (2) The master's examination consists of the master's thesis and a concluding presentation and discussion thereof as well as written and/or oral examinations corresponding to the modules listed in the study curriculum.
- (3) The master's programme may require study achievements in a different written or oral form. These may be, in particular, active participation in classes or accompanying practical courses conducted within the framework of the respective courses of a module (part). Achieving a certain number of points or a certain evaluation, e.g. in classes or accompanying practical courses, may be defined as a requirement for admission to the final examination of a module (part). 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 (§ 13 and 16 General Framework)**

- (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 examinations take place in the three weeks preceding and the first week of the lecture period of the following semester (examination periods). The subject examination board may approve exceptions. The period between the publication of examination results and corresponding repeat examinations may not be less than two weeks.
- (2) Written examinations may not have more than 50% multiple choice questions.
- (3) Admission to final module examinations may, according to § 9 (3), be made subject to certain study achievements to be completed during a course.
- (4) Regarding place and time, oral examinations are organised by the examiners themselves. The duration of oral examinations is between 30 and 50 minutes per student. Dates for oral examinations are offered, as a rule, first in the lecture-free period following the module and then, in the two subsequent semesters, at least once per semester.

#### **§ 11 Related study programmes (§ 12 General Framework)**

Study programmes related to Communications Technology according to § 12 (7) General Framework are, in particular, programmes in electrical engineering, information technology, telecommunications and media technology, information systems engineering and computer engineering.

#### **§ 12 Regulations regarding the module master's thesis (§ 16c General Framework)**

- (1) The master's thesis corresponds to 30 CP. Students have six months to complete the master's thesis.
- (2) The master's thesis comprises a presentation of approx. 45 minutes before the examiners including a discussion of the subject 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, two 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. 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 examination board for approval. The subject examination board must check, in particular, whether the planned external thesis project complies with the scientific principles of the study course in Communications Technology. This approval must be submitted to the *Studiensekretariat* when registering for the master's thesis.

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

- (1) Admission to the module master's thesis is subject to students having earned a minimum of 75 CP. By then, all general and specialisation-specific compulsory modules under the study curriculum must have been passed.
- (2) Should the requirements under paragraph 1 above not be fulfilled, the subject examination board may, at the student's request, authorise admission to the master's thesis.

### **§ 14 Evaluation of module examinations (§ 17 General Framework)**

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 Repetition of module examinations (§ 20 General Framework)**

- (1) Module examinations that were graded as "fail" (5.0) or are deemed not to have been passed may be repeated once.
- (2) Up to two failed module (part) examinations may be repeated a second time.

## **II. Master's programme in Communications Technology**

### **§ 16 Objectives of the programme in Communications Technology**

The objective of the master's programme is to qualify students to work independently as engineers. The master's programme deepens 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 applying scientific principles, relevant methods and the acquired insights.

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

- (1) All modules conclude with a module or module part examination.
- (2) Module and module part examinations under the study curriculum of Communications Technology must be from the following module groups:
1. Compulsory and compulsory elective modules corresponding to a minimum of 39 CP
  2. Compulsory modules language corresponding to 8 CP
  3. Specialisation modules corresponding to a minimum of 18 CP
  4. Practical modules corresponding to a minimum of 10 CP

5. Complementary modules corresponding to a minimum of 3 CP.
  6. One seminar corresponding to 3 CP.
  7. Master's thesis, 30 CP
- (3) The total of the modules completed under paragraph 2 no. 3, 4 and 5 (specialisation, practical and complementary) must correspond to a minimum of 40 CP. Not more than two modules may be taken in the module group "complementary modules".
- (4) The eligible modules in the module groups named in paragraph 2 no. 1 to 6 are listed in the study curriculum; the 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 study and examination regulations take effect from the summer semester 2017. They are published in the Official Bulletin of Ulm University. At the same time, the subject-specific study and examination regulations of Ulm University for the master's programme in Communications Technology offered by the Faculty of Engineering and Computer Science at Ulm University of 10 March 2015, published in the Official Bulletin of Ulm University No. 6 of 16 March 2015, pages 27-32 cease to have effect subject to paragraph 2.
- (2) Paragraph 1 sentence 1 does not apply to students enrolled in the master's programme in Communications Technology when these regulations take effect. These 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 10 March 2015.
- (3) Paragraph 1 sentence 1 does also not apply to students enrolled in the master's programme in Communications Technology when these regulations take effect and who enrolled under the study and examination regulations of Ulm University for the master's programme in Communications Technology offered by the Faculty of Engineering of 23 December 2011. Such students complete their studies under the study and examination regulations of 23 December 2011.

Ulm, this 08 March 2017

signed

Prof. Dr. Michael Weber  
-President-