



**Subject-specific study and examination regulations for the English-taught master's programme in Cognitive Systems offered by the Faculty of Engineering, Computer Science and Psychology at Ulm University of 25 July 2017**

Based on §§ 32 (3), sentence 1 of the 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 99ff) last amended by article 3 of the federal state act on tuition fees (*Landeshochschulgebührengesetz*) and other acts of 9 May 2017 (law gazette no. 10, p. 245 ff), the Senate of Ulm University, on a proposal of the Faculty of Engineering, Computer Science and Psychology, adopted the following Subject-specific study and examination regulations for the English-taught master's programme in Cognitive Systems in its meeting on 12 July 2017. The President of Ulm University gave his consent on 25 July 2017 in accordance with § 32 (3) sentence 1 of the LHG.

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## **Preliminary Remarks on Language Usage**

Under article 3 subsection 2 of the constitution, women and men are treated as equal; all references to person and function in these regulations are equally valid for both men and women.

### **I. General provisions**

#### **§ 1 Scope of application**

- (1) These Subject-specific study and examination regulations contain specific regulations for the English-taught master's programme in Cognitive Systems.
- (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). In cases of doubt, the General Framework has precedence.

#### **§ 2 Academic degrees, degree programmes (§ 2 Framework Regulations)**

(4) The Faculty of Engineering, Computer Science and Psychology at Ulm University offers the consecutive English-taught master's programme in Cognitive Systems leading to the degree of "Master of Science" ("MSc").

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

Studies in the master's programme in Cognitive Systems begin in the winter semester.

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

The standard period of study for the consecutive master's programme is 2 years.

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

By the beginning of the examination period of the 7th semester in the programme, students must have earned 120 CP in the subjects indicated in § 16 (1). Students who have earned fewer than 120 CP by the beginning of the examination period of the 7th semester in the programme lose their right to examination in this programme unless they are not responsible for exceeding the deadline.

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

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

#### **§ 7 Student advisory services (§ 9 General Framework)**

Students who, for the first time, fail to earn 20 credit points in a semester are invited to a student consultation by their course advisor. Students are notified of the date of this consultation in writing.

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

- (1) A subject examination board is formed for the master's programme in Cognitive Systems.
- (2) The subject examination board consists of seven members. It is composed of four full-time university lecturers or habilitated members working full-time at Ulm University, two scientific staff members as well as one student in the master's programme in Cognitive Systems in an advisory capacity. The term of office of the student members is one year; that of the other members is three years. It is possible to re-elect members.

## **§ 9 Courses, examination achievements, module handbook**

- (1) Study objectives and contents are conveyed, in particular, in the following types of courses:
  - lectures
  - classes and tutorials
  - seminars
  - laboratory courses
  - project-related courses
- (2) The master's examination consists of the master's thesis with a concluding presentation and discussion and oral or written module examinations.
- (3) Within a module, in compliance with § 6 (3) General Framework, ungraded coursework (achievement certificates - Scheine) may be required from a previous course within the same module, or admission to certain module examinations may be subject to having completed ungraded coursework. Required coursework is specified in the module handbook. Form and volume of the respective coursework are published in good time before the courses begin.
- (4) Admission to a module examination may be subject to taking and passing one or several other specific module examinations or coursework assignments ensuring that subject-specific requirements are fulfilled. Admission can also be subject to other, additional criteria, in particular in case of limited places in compulsory elective modules. Current admission requirements for the modules are published in the module handbook in good time before the start of the courses.
- (5) Examinations may be conducted –fully or partially– via a computer programme; however, confidentiality of data and integrity of results must be guaranteed.
- (6) The current module handbook states which modules can be taken as compulsory electives.

## **§ 10 Organisation of module examinations (§ 13 General Framework)**

- (1) As a rule, written module examinations follow the recommendations of § 13 (1) General Framework. The period between the publication of examination results and corresponding repeat examinations may not be less than two weeks.

### **§ 11 Related study programmes (§ 14 General Framework)**

Study courses related with the Cognitive Systems programme according to § 14 (3) General Framework are, in particular, psychology, cognitive science and computer science.

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

- (1) The master's thesis corresponds to 30 CP. The time from the admission to the submission of the master's thesis is six months.
- (2) The master's thesis comprises a presentation of the project followed by a discussion. This accounts for one of the credit points corresponding to the master's thesis. Both parts must be passed.
- (3) As a rule, the master's thesis is written in English. § 16c (4) General Framework applies accordingly. (2)The master's thesis must be submitted in due time in two bound copies to the student administration and examinations office (*Studiensekretariat*). Furthermore, an electronic copy in the form of a PDF must be submitted to the examiners and the *Studiensekretariat*.

### **§ 13 Evaluation of module examinations**

- (1) All graded module (part) examinations taken by students in the subjects listed in § 16 (1), weighted according to their corresponding credit points, count towards the overall grade of the master's programme.
- (2) Where more credits points are earned from compulsory elective modules than are required, these count towards the overall grade with their actual weight. If, in a compulsory elective area, the minimum number of credit points has already been earned, no further modules or examinations can count towards this area.
- (2) In cases justified by their subject matter, written exams or parts thereof may also be done by way of multiple choice. In such cases, module examinations are passed if students have earned a minimum of 60% of the total number of points or if the number of points earned by the students does not fall more than 20% short of the average number of points achieved by all examination candidates in this written exam and the candidate has earned a minimum of 50% of the total number of points.
- (4) Each module concludes with a module examination or several module part examinations.
- (5) If a module requires one or several ungraded study achievements without these forming part of the admission requirements for module examinations and if the students fulfil the predefined minimum standards, such study achievements are deemed to have been passed. If a module (part) examination was passed, students may be awarded a bonus for such passed study achievements improving the grade of their module (part) examination by 0.3 or 0.4 respectively to the next best intermediate grade. The module handbook provides which modules include study achievements as described in sentence 1 above. It is not possible to raise a grade from 5.0 to 4.0.

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

Module (part) examinations can be repeated twice.

## II. Master's programme in Cognitive Systems

### § 15 Programme objectives

- (1) The master's examination in the Cognitive Systems programme is a professional academic degree in the fields of psychology and computer science. By passing the master's examination students show that they have in-depth subject knowledge, are able to work independently following scientific principles and contribute to the development of cognitive systems as well as apply scientific methods and findings.
- (2) Successful completion of the master's programme qualifies the graduate
  - a) to design cognitive systems based on theoretical knowledge
  - b) to implement and assess methods and procedures used in the planning, development and implementation of cognitive systems
  - c) to assess fundamental cognitive mechanisms in the subject complementary to the respective bachelor's programme (psychology for computer science bachelors and computer science for psychology bachelors)
  - d) to co-operate in interdisciplinary teams
  - e) to do doctoral studies in psychology or computer science

### § 16 Study contents and modules in the master's programme in Cognitive Systems

- (1) Modules in the following subjects must be completed as part of the master's programme in Cognitive Systems

	Module group	Credit points
1	<b>Basic subject</b> 1a Basic subject for non-psychologists <ul style="list-style-type: none"> <li>• "Introduction to Psychological Methods and Statistics (for non-psychologists)"</li> <li>• "Fundamentals of Human-Machine Interaction"</li> <li>• "Fundamental Approaches to Cognitive Science"</li> <li>• "Foundations and Concepts of Cognitive Systems Modelling"</li> </ul> 1b Basic subject for non-computer scientists <ul style="list-style-type: none"> <li>• "Introduction to Computer Science (for non-computer scientists)"</li> <li>• "Fundamentals of Human-Machine Interaction"</li> <li>• "Fundamental Approaches to Cognitive Science"</li> <li>• "Foundations and Concepts of Cognitive Systems Modelling"</li> </ul>	24
2	<b>Interdisciplinary subject</b> "Cognitive Systems I" "Cognitive Systems II" "Recent Developments in Cognitive Systems Research"	18

3	<b>Special subject</b> Offers from the areas <ul style="list-style-type: none"> <li>• Perception</li> <li>• Learning &amp; Memory</li> <li>• Planning &amp; Reasoning</li> <li>• Interaction</li> <li>• Methods, General Concepts &amp; Tools</li> </ul>	24
4	<b>Applied subject</b> Offers from the areas <ul style="list-style-type: none"> <li>• Perception</li> <li>• Learning &amp; Memory</li> <li>• Planning &amp; Reasoning</li> <li>• Interaction</li> <li>• Applied methods and concepts in Cognitive Systems</li> </ul>	24
5	Master's thesis including colloquium	30

- (2) Computer science bachelors do the Basic subject for non-psychologists according to paragraph 1 no 1a above; psychology bachelors do the Basic subject for non-computer scientists according to paragraph 1 no 1b above. Depending on their subject-specific competence and in consultation with their course advisor, graduates of other bachelor's programmes (e.g. cognitive science) complete either 1a or 1b as defined in paragraph 1 no 1 above. In total, this programme part corresponds to 24 CP.
- (3) In the Interdisciplinary subject, all students must complete the modules listed in paragraph 1 no. 2 corresponding to 18 CP.
- (4) In the Special subject, modules from not less than two of the areas listed in paragraph 1 no. 3 corresponding to a minimum total of 24 CP must be completed.
- (5) In the Applied subject, modules from not less than two of the areas listed in paragraph 1 no. 4 corresponding to a minimum total of 24 CP must be completed.
- (6) The module offer of the subjects listed under paragraph 1 no. 3 and 4 can be expanded or modified by resolution of the Academic Affairs Committee in agreement with the subject examination board.

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

Admission to the master's thesis is subject to having passed the subjects named in § 16 (1) no 1 and 2 and having earned a minimum total of 60 credit points.

### **III. Final provisions**

#### **§ 18 Effective date**

These Study and examination regulations apply with effect from the winter semester 2017/18. 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 Cognitive Systems offered by the Faculty of Engineering and Computer Science at Ulm University of 9 July 2014, published in the Official Bulletin of Ulm University No. 18 of 7 July 2014, pages 211-16 cease to have effect.

Ulm, 25 July 2017

signed

Prof. Dr.-Ing. Michael Weber  
-President-

Courtesy translation