

**Study and Examination Regulations for the
Master's Degree Program *Cognitive Systems:
Language, Learning, and Reasoning* at the
University of Potsdam**

October 16, 2013

The board of the human sciences faculty of the University of Potsdam has on October 16, 2013 approved the following study and examination regulations as statutes, thereby acting on the basis of §§ 18 (1) and (2), 21 (2) and (5) Clause 2 as well as 62 (2) No. 2 of the Brandenburg universities act, in the version as of December 18, 2008 (official gazette I/08 p. 318), last amended by the act of February 11, 2013 (official gazette I/13, No. 04), in combination with § 3 (2) of the ordinance on drafting of examination regulations to ensure the equivalence of courses, examinations and degrees of June 7, 2007 (official gazette II/07 p. 134), last amended by the ordinance of June 15, 2010 (official gazette II/10, [No. 33]), as well as Art. 14 (1) No. 2 of the basic regulations of the University of Potsdam of December 17, 2009 (official notices (*Amtliche Bekanntmachungen*) of the University of Potsdam No. 4/2010, p. 60), in the version included in the first statutes amending the basic regulations (*Grundordnung, GrundO*) of the University of Potsdam of February 27, 2013 (official notices of the University of Potsdam No. 4/2013 p. 116) and § 1 (2) of the new version of the general study and examination regulations for non-teacher training-related Bachelor's and Master's degree programs at the University of Potsdam of January 30, 2013 (*BAMA-O*) (official notices of the University of Potsdam no. 3/2013, pp. 35-55).¹

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§ 1 Scope

(1) These regulations apply for the Master's degree program "*Cognitive Systems: Language, Learning, and Reasoning*" at the University of Potsdam. As regulations for this specific program, they supplement the new version of the general study and examination regulations for non-teacher training-related Bachelor's and Master's degree programs at the University of Potsdam of January 30, 2013 (*BAMA-O*).

(2) In case of any inconsistencies between these regulations and *BAMA-O*, *BAMA-O* shall have priority over these regulations.

(3) This Master's degree program is suitable for part-time study. Students may enroll for part-time study subject to consultation of the student advisory service for this course, with the goal of producing an individual study plan. Proof of this consultation, including an individual examinations plan, must be attached to the application for part-time study, in accordance with § 3 of the regulations on part-time study at the University of Potsdam (part-time study regulations). In addition, the provisions of the part-time study regulations will apply.

§ 2 Degree qualification

Upon gaining the necessary credit points and satisfying the requirements for graduation, through its human sciences faculty the University of Potsdam will confer the degree "Master of Science" ("M.Sc.").

§ 3 Goals of the Master's degree program

Graduates of the Master's degree program *Cognitive Systems: Language, Learning, and Reasoning* are qualified to undertake scientific research and to hold management positions in industry, in the field of computer systems modeling and replicating the cognitive ability of human beings. In particular, graduates have comprehensive and detailed knowledge in the areas of computer linguistics ("language"), machine learning ("learning") and artificial intelligence ("reasoning") as well as the interdisciplinary links between these fields.

¹ Approved by the president of the University of Potsdam on ##### ##, 2013.

Graduates have acquired mastery of both specific and general methods which are necessary to define and to solve problems in the field of cognitive technologies, including problems of a strategic nature. They are able to grasp complex new problems in this field, suitably model the problem in question and apply and develop procedures and technologies for effective resolution of such problems. They are capable of assessing modeling methods and problem-solving procedures and of critically analyzing these methods and procedures.

Graduates are able to plan, organize and manage the work of groups handling complex tasks and to present the results of their work. They are thus particularly qualified for involvement in processes of civic participation. They are able to hold subject-specific and interdisciplinary discussions in English.

§ 4 Duration and structure of the Master's degree program

The consecutive Master's degree program *Cognitive Systems: Language, Learning, and Reasoning* is offered at the University of Potsdam as a single-subject program with a regular duration (full-time study) of four semesters and 120 credit points.

§ 5 Modules and course of studies

(1) The Master's degree program *Cognitive Systems: Language, Learning, and Reasoning* consists of the following components:

Master's degree program		
Module code	Name of module	CP
I compulsory modules (total 27 CP)		
BM1	Advanced Natural Language Processing	9
BM2	Machine Learning and Data Analysis	9
BM3	Advanced Problem Solving Techniques	9
II Optional modules (24 CP)		
Students must successfully complete optional modules with a volume of 24 credit points.		
AM11	Current topics in computational linguistics 1	6

AM12	Current topics in computational linguistics 2	6
AM21	Current topics in machine learning 1	6
AM22	Current topics in machine learning 2	6
AM31	Current topics in computational intelligence 1	6
AM32	Current topics in computational intelligence 2	6
In admitting students to the Master's degree program, instead of one or two optional modules in the list AM 11 to AM 32 the examinations committee may require students to complete one or two of the following modules marked with an asterisk ("*") (bridge modules FM 1 to FM 2) if the subject matter covered by this bridge module was not included in the degree program which the student completed in preparation for this course.		
Candidates may only select modules FM1 to FM3 upon approval by the examinations committee. In this case, the number of optional modules AM11 to AM32 which they are required to complete will be reduced accordingly.		
* FM1	Foundations of mathematics	6
* FM2	Foundations of computer science	6
* FM3	Foundations of linguistics	6
II Project seminars (24 CP)		
Students must successfully complete project seminars with a volume of 24 credit points.		
PM1	Project in computational linguistics	12
PM2	Project in machine learning	12
PM3	Project in computational intelligence	12
IV Scientific research (15 LP)		
IM1	Individual research module	15
Master's thesis (30 LP)		
Total CP for the mandatory and optional modules which must be completed		120

(2) The modules listed in Para. I to IV are described in the list of modules which is attached to these regulations as Annex 1.

(3) Students may only take individual classes which are offered for multiple modules once.

(4) Sample course plans for the Master's degree program are attached to these regulations as Annex 2.

As of: September 24, 2013

(5) English is the language of instruction for this program.

§ 6 Master's thesis

(1) Once the student has gained at least 90 credit points, he or she will be entitled to receive immediate notification of a topic for his or her Master's thesis. In case of delays in the University's award of credit points, in addition to 60 credit points it will be sufficient if the student provides proof of registration for examinations which encompasses a further 30 credit points.

(2) Including the oral defense, the Master's thesis amounts to a total of 30 credit points.

§ 7 Period spent abroad

Students are expressly advised to spend time abroad during the program. The individual module IM1 and the optional modules AM11 to AM32 during the third semester are particularly suitable for this purpose, as is the Master's thesis during the fourth semester.

§ 8 Validity, invalidity and transitional provisions

(1) These regulations will come into force on the next day following publication in the official notices of the University of Potsdam.

(2) These regulations apply for all students enrolling on the Master's degree program *Cognitive Systems: Language, Learning, and Reasoning* at the University of Potsdam following official publication of these regulations.