University of Tübingen exam regulations for the study program in Computational Neuroscience culminating in an examination for a Master of Science (M. Sc.) – Special Provisions –

In accordance with §§ 19 paragraph (1) sentence 2 nos. 7 and 9, 32 paragraph (3) of the law governing institutions of higher education, LHG of 1 January 2005 (GBl. p. 1), in the version published 1 April 2014 (GBl. p. 99) most recently amended by article 7 of the law dated 21 December 2021 (GBl. 2022 p. 1, 2), the University of Tübingen Senate on ... passed the Special Provisions of these exam regulations for the study program in Computational Neuroscience at the University of Tübingen culminating in an examination for a Master of Science (M. Sc.) degree.

Approved by the President on ...

Contents

A. Validity of General Provisions and admission requirements

§ 1 Validity of General Provisions

The MRPO - the General Provisions of the University of Tübingen exam regulations for Master's degree programs culminating in an examination for a Master of Science (M.Sc.) / Master of Arts (M. A.) degree - as amended are part of these exam regulations, insofar as no other special regulations have been made.

§ 2 Requirements for admission to program

(1) [1]A prerequisite for studies in this Master's program is a grade of 2.5 (good) or better in a Bachelor's degree in the subject of Physics, Mathematics or Informatics, in a related program covering basically the same material, or an equivalent degree, particularly in a corresponding mathematical, scientific or engineering discipline. [2]The responsible examination board decides on the equivalency of a degree. [3]The board of examiners may transfer the making of this decision revocably to the head of the board. [4]If there is a restricted number for admission, statutes may specify that the selection committee formed for the relevant selection process decides instead.

(2) To take part in the Master's program, applicants must also document knowledge of English of at least C1/B2 level of the Common European Framework of Reference for Languages (CEFR).

B. Goals, content and structure of the program

§ 3 Goals and contents of program, regular duration of study, scope of program

(1) [1]The Master of Science program (M. Sc) in Computational Neuroscience (hereinafter: the program) enables students to acquire the specific qualifications, competencies, knowledge, skills and abilities required in the subject of Computational Neuroscience under § 7 (1) of the MRPO. [2]The objective of the program is to deepen or expand the knowledge acquired in the Bachelor's degree, thus providing the basis for the development and/or application of the student's own ideas (application or research-oriented); graduates possess a broad, detailed and critical understanding at the cutting edge of knowledge in one or more specialized fields

- and are able to apply their knowledge and understanding as well as their problem-solving skills in new and unfamiliar situations related to their field of study in a wider or multidisciplinary context (instrumental competencies),
- to integrate knowledge and deal with complexity,
- and to make academically sound decisions on the basis of incomplete or limited information, taking into account social, academic and ethical findings resulting from the application of their knowledge and from their decisions,
- to acquire new knowledge and skills independently and to carry out largely self-directed and/or autonomous independent research- or application-oriented projects (systemic competencies)
- to communicate their conclusions and the information and motives underlying them to experts in the subject and laypersons alike, in a clear and unambiguous manner in accordance with the latest research and practice; to exchange information, ideas, problems and solutions with both experts and laypersons on an academic level and to assume prominent responsibility in a team (communicative competencies).

[3]Further details of the course objectives are set out in the module handbook.

(2) [1]The regular duration of study for this degree program is 4 semesters. [2]The program comprises 120 ECTS credit points (CP).

(3) Over and above the number of credit points prescribed for the degree program according to these regulations, students may obtain no more than a 30 additional credit points from the degree program modules specified in § 5, para. (1); in all other respects, § 2, para. (5) of the Master's degree framework exam regulations applies.

§ 4 Academic degree

The academic degree "Master of Science" (abbr. "M.Sc.") is awarded on the basis of a successful completion of the program.

§ 5 Program Structure

Students complete a program to earn credit points as set out in § 3 para. (2); the program consists of the following modules:

Semester no.	Module no.	P/WP	Module title	Work for assessment	CP
1	CN01	P	Neuroanatomy and Neurophysiology	written	6
1	CN02	P	Neural Dynamics	written	6
2	CN03	P	Neural Coding	written	6
1	CN04	P	Neural Modelling	written	6
1	CN05	P	Machine Learning	written	6
2	CN06	P	Neural Data Science	written or oral	6
1-2	CN07	P	Advanced Computational Neuroscience	written or oral	9
1-2	CN08	P	Advanced Neuroscience	written or oral	9
1-2	CN09	P	Electives	depending on choice	6
1-2	CN10	P	Current Research and RCR	-	3
3	CN11	P	Laboratory Rotations	foP	27
4	CN12	P	Master's thesis (final module)	Master's thesis	30

Abbreviations: FS = recommended semester (subject to availability and change, see module handbook); module no. = current module no. or abbreviation (subject to change, see module handbook); P = compulsory; WP = required elective; CP = credit points; o. = or; K = written exam; H = assignment; mP = oral examination; PF = portfolio examination; foP = formative assessment.

Note: The information given in the table as the recommended semester is in reference to a start of full-time studies in the winter semester. If the program may also be started in a different semester, information on the recommended study plan is given in the module handbook or may be obtained from the relevant subject-related counselling service.

§ 6 Module coursework

[1]Details of the module coursework required in each of the modules is set out in the module table in these regulations (§ 5) and in the module handbook. [2]Assessment must be clearly specified as to its type and scope, if this is not set out in the module table.

§ 7 Languages of instruction and examination

[1]English is the language of instruction and examination in this degree program. [2]In accordance with the current state of research and teaching, content from other languages may also be the subject of classes. [3]It is therefore assumed that students have sufficient knowledge of the relevant languages.

C. Assessment in the program

I. General Provisions for assessed coursework

§ 8 Multiple-choice procedures

(1) [1]Written assessment in the form of examinations may, in the following cases, be wholly or partly conducted in such a way that the candidate must indicate which of the answers - presented with the examination questions - he or she considers to be correct (multiple-choice procedure). [2]The conditions for the conducting of examinations including multiple-choice questions are:

- the examination tasks are set by the person or persons acting as the examiner, and
- the examinations, after they have been completed, are corrected in their entirety by the person or persons acting as examiners, and
- the examinations are graded by the person or persons acting as examiners according to their respective individual grading scheme according to § 19 MRPO.

[3]Prior to correction of examinations, no final determination may be made regarding certain assessments, such as the setting of certain grades if a certain proportion of the examination questions are answered correctly or if a certain number of points is achieved.

(2) Regarding assessment conducted via online attendance in accordance with § 12 MRPO, para. (1) applies accordingly.

II. Special provisions for the final module

§ 9 Final module

(1) [1]The student writes the Master's thesis in the final module; this is regulated in § 28 of the MRPO. [2]In the final module, 30 credit points must be obtained.

(2) The time limit for writing a Master's thesis - from the issuing of the topic to submission of the thesis - is six months.

(3) Notwithstanding § 28 (4) sentence 1 MRPO, the Master's thesis is to be written in English; the board of examiners will decide on applications to write the thesis in any other language.

§ 10 Subject-specific provisions for admission to final module

In addition to the prerequisites set out in the MRPO, the subject-related prerequisites for admission to the Master's thesis process are:

- the successful completion of modules worth a total of at least 90 ECTS credits.

D. Deadlines for examinations in the program

§ 11 Deadline for completion of studies

[1]All module coursework required under the exam regulations must be completed by the end of the student's 10th semester in the subject. [2]If this time limit is exceeded, the student's right to be examined is lost, unless the failure to meet the deadline is beyond the control of the student.

E. Master's overall grade

§ 12 Calculation of Overall Grade

[1]The overall grade of the Master's examination is calculated as follows: 25% from the grade for the final module (Master's thesis) and 75% from the average (as weighted by credit points) of the grades of the other graded modules. [2]However, the modules CN09 and CN10 are not included in the calculations of the overall Master's grade.

F. Closing remarks

§ 13 Effective date and transitional arrangements

[1]These exam regulations come into effect on the date of their publication in the University of Tübingen's official bulletin, the Amtliche Bekanntmachungen. [2]Their first semester of validity is the winter semester 2023/2024.

[3]Students who commenced their Master of Science in Neuronale Informationsverarbeitung studies at the University of Tübingen prior to the semester specified in sentence 2 are - subject to the following provisions - entitled to complete their module coursework in this degree program at the University of Tübingen by 30.09.2027 under the previously valid rules; however, regarding the examination board, § 6 MRPO applies. [4]Once the deadline set out in sentence 3 has elapsed, the module coursework in the Master of Science Computational Neuroscience degree program must be completed under these current regulations. [5]Module coursework completed previously will only be accredited according to the new exam regulations and the corresponding module handbook, subject to the following provisions. [6]These exam regulations do not grant any new or additional right to be assessed in an area already assessed; any fails in assessed work under the previous exam regulations will be included. [7]Furthermore the responsible board of examiners may agree suitable transitional arrangements in individual cases, particularly if previous classes are no longer offered as before or if certain classes have been completed, possibly offering partial accreditation and/or requiring certain conditions to be fulfilled, particularly if a "learning agreement" is to be considered.

Tübingen,

Professor Dr. Karla Pollmann
President