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### **University medical center Göttingen:**

According to the decision of the Faculty Council of the Medical Faculty of 22.10.2018, the Executive Board of the University medical center Göttingen has decided on 27.11.2018 the first amendment to the Examination and Study Regulations for the consecutive Master's programme "Cardiovascular Science" in the version of the announcement of 27.03.2015 (Official Notices I No. 20/2015 p. 353), approved (§ 44 Para. 1 sentence 2 NHG in the version published on 26 February 2007 (Nds. GVBl. p. 69), last amended by Article 4 of the Act of 15 June 2017 (Nds. GVBl. p. 172); sections 37(1) sentence 3 no. 5(b), 44(1) sentence 3 NHG in conjunction with § Section 63 b sentence 3 NHG).

### **Article 1**

The examination and study regulations for the consecutive Master's programme "Cardiovascular Science" in the version published on 27.03.2015 (Official Announcements I No. 20/2015 p. 353) are amended as follows.

### **Examination and study regulations for the consecutive Master's programme "Cardiovascular Science" the University of Göttingen**

#### **§ 1 Scope of application**

(1) For the consecutive Master's programme "Cardiovascular Science" the regulations of the "General Examination Regulations for Bachelor's and Master's programmes and other study programmes at the University of Göttingen" (APO) in the currently valid version apply.

(2) These regulations regulate further provisions for the completion of studies in the consecutive Master's programme "Cardiovascular Science".

#### **§ 2 Aims of the programme, academic degree**

(1) <sup>1</sup>The aim of the programme is to provide intensive, research-oriented training in which students deepen and broaden the knowledge, skills and abilities acquired in the field of biological/(bio)medically oriented sciences in a continuing education in the field of cardiovascular research. <sup>2</sup>The imparting of specialist knowledge includes the theoretical, methodological and experimental foundations for scientific work and promotes the ability to work in application-, research- and teaching-related fields. <sup>3</sup>The fundamental goal of the

"Cardiovascular Science" course is to produce graduates who are able to meet the challenges of modern cardiovascular research at various levels, both nationally and internationally. <sup>4</sup>This is ensured by the structured curriculum, which is divided into five theoretical compulsory modules, three practical laboratory units, additional elective modules and the final Master's thesis. <sup>5</sup>An important principle of the programme is to create a common, sound basis for all students by means of the first two basic modules, which deal with the development, structure, function and regulation of the cardiovascular system at organ and molecular level. <sup>6</sup>Based on this, knowledge about the pathophysiology of cardiovascular diseases and their therapies is imparted. <sup>7</sup>In the last module, the knowledge acquired up to this point is integrated into current issues and approaches in cardiovascular research. <sup>8</sup>Not only basic cardiovascular research is taken into account, students are also taught about translational research, clinical studies and the specifics of industrial research. <sup>9</sup>Another important element of the program is the large practical part. <sup>10</sup>In total, students spend 24 weeks of one-to-one supervised practical training in the research laboratories before beginning their Master's thesis, giving them the opportunity not only to acquire a wide variety of methodological skills, but also to gain a first realistic insight into the job description of a scientist. <sup>11</sup>These internships also include intensive training in scientific writing. <sup>12</sup>The knowledge trained and acquired in this practical part of the programme is finally refined in the Master's thesis.

(2) <sup>1</sup>The Master's examination in the research-oriented degree programme is intended to determine whether the candidates to be examined have acquired the in-depth specialist knowledge required for the transition to professional practice, have an overview of the specialist contexts and, as experts, understand how to apply more in-depth scientific methods and findings in order to be able to work as a researcher in a specialised professional field. <sup>2</sup>The graduates of the Master's programme are predominantly active in basic cardiovascular research and translational/clinical research in the Academy, in preclinical and clinical research in the pharmaceutical industry, in research and development in the biotechnology sector, as well as in science management in companies, administration and research institutions. <sup>3</sup>These fields of activity are conceivable both nationally and internationally due to the teaching language English.

(3) <sup>1</sup>By dealing with the fundamentals of cardiovascular research, the development and therapy of cardiovascular diseases and research at university institutions and industry, students of the Master's programme "Cardiovascular Science" not only acquire a broad subject-related knowledge, but are also encouraged to become involved in civil society and to develop their own personality. <sup>2</sup>The students learn the legal principles and the confidential handling of patient-related data. <sup>3</sup>At the same time, they will practice the integration of legal and ethical aspects in scientific decision-making.

(4) After passing the Master's examination, the University of Göttingen awards the degree "Master of Science", abbreviated "M.Sc."

### **§ 3 Start of programme, Duration of Studies, Study Sections**

(1) The course of study begins in the winter semester.

(2) The standard period of study is four semesters.

(3) The course of study is not suitable for part-time students.

(4) Until the successful completion of the Master's examination, the course of study comprises 120 credits (ECTS credits; abbreviated: C), which are distributed as follows:

a. on the course of study 77 C,

b. on the professionalisation area 13 C and

c. on the master thesis 30 C.

(5) <sup>1</sup>The study and examination achievements are to be completed in compulsory and optional modules. <sup>2</sup>These are specified in the module overview (Annex I). <sup>3</sup>The module list shall be published separately; it shall form part of these regulations insofar as the modules are listed in the module overview (Annex I).

(6) The language of instruction and examination shall be English.

### **§ 4 Organisation of Teaching**

(1) The rule group size in the course types used in the course is

a) for lectures and seminars: 25,

b) for tutorials: 25,

c) for traineeships: 15,

d) for laboratory rotations: 1 (individual supervision).

(2) The curriculum is divided into at least nine modules in accordance with the module overview, namely five scientifically-theoretically oriented (theoretical modules; 42 C in total), three scientifically-practically oriented (practical modules; 35 C in total) and at least one module in the area of professionalization (13 C in total) as well as the preparation of the Master's thesis (30 C).

(3) Deviating from the announced period of lecture, times for classroom teaching in the Master's programme "Cardiovascular Science" which exceed the generally fixed lecture times of the University of Göttingen may also be used.

(4) <sup>1</sup>The modules M.CVS.001, M.CVS.002 and M.CVS.003 each contain two-month research projects, which can be freely selected from a broad range of all working groups involved in the programme, but also from working groups from Germany and abroad, and which should cover different fields of work in terms of content and methodology. <sup>2</sup>The independent research projects take place in a research laboratory of the working groups involved in the

programme and are individually supervised. <sup>3</sup>Students are involved in the scientific laboratory operations and spend an average of about 6 hours a day in the laboratory; for individual project supervision, the teaching staff plans to spend an average of one hour per day teaching. <sup>4</sup>Students prepare a scientific report on each of the research projects visited.

### **§ 5 Study and examination guidance**

(1) Academic advising is the responsibility of the teachers involved in the course of study, the student advisors and the program coordinator.

(2) The office of the Dean of Studies has the particular task of supporting individual study planning, providing information and advising students on questions relevant to their studies.

(3) The university's central student advisory office is responsible for general student advisory services, especially in the case of inter-faculty questions.

(4) Students should take advantage of subject-specific study guidance, especially in the following cases:

- for study planning,
- after failing examinations.

### **§ 6 Form of examination papers; registration and deregistration; assessments**

(1) In addition to the examination performances permitted under the provisions of the APO, lab report and portfolio may be provided as subject-specific examination performances:

a) Lab report: A comprehensive written report in English, structured in the form of a scientific publication (short summary, introduction, material and methods, results, discussion, bibliography, and, if applicable, appendices), from which the project carried out together with the results obtained can be clearly traced.

b) 1A portfolio ("document folder") serves to document the course of studies in a reflective and commenting manner. 2 Various shorter tasks are summarized in a portfolio (e.g. lesson plans, reflections on homework, reading summaries; multimedia works can also be included).

(2) Notwithstanding § 15, section 14, letter f) APO, the mark of an individual performance of the candidate in the MC procedure is as follows, provided that the minimum number of correctly answered MC questions or points to be obtained, as required by § 15, section 15, letter e), has been achieved

- "very good" (1.0) if he is at least 90 percent,
- "very good" (1.3) if it is at least 80 but less than 90 percent,
- "good" (1.7), if it is at least 70 but less than 80 percent,
- "good" (2.0) if it is at least 60 but less than 60 percent,
- "good" (2.3) if it is at least 50 but less than 60 percent,

- "satisfactory" (2.7) if it is at least 40 but less than 50 percent,
- "satisfactory" (3.0) if it is at least 30 but less than 40 percent,
- "satisfactory" (3.3) if it is at least 20 but less than 30 percent,
- "sufficient" (3.7) if it is at least 10 but less than 20 percent,
- "sufficient" (4.0), if it has no or less than 10

has answered the MC-tasks that go beyond this correctly or has reached the points that go beyond this.

### **§ 7 Admission to the Master's thesis**

(1) <sup>1</sup>The prerequisite for admission to the Master's thesis is the successful completion of compulsory and optional modules of the course of study totalling at least 67 C. <sup>2</sup>The modules M.CVS.101, M.CVS.102, M.CVS.201 and M.CVS.301 as well as M.CVS.001 and M.CVS.002 must have been successfully completed.

(2) <sup>1</sup>Application for admission to the Master's thesis must be made to the Office of the Dean of Studies. <sup>2</sup>The following documents must be enclosed:

- a) Proof of fulfilment of the requirements specified in paragraph 1,
- b) the proposed topic for the Master's thesis,
- c) a proposal for the primary carer and the secondary carer
- d) a written confirmation from the primary carer and the secondary carer
- e) a statement that it is not the case that the Master's examination in the same or a comparable Master's programme at a higher education institution in Germany or abroad has been definitively failed or is deemed to have been definitively failed

<sup>3</sup>The proposals under letters b) and c) as well as the proof under letter d) are dispensable if the student assures that he or she has not found a supervisor. <sup>4</sup>In this case, the Examination Board will appoint supervisors and determine the topic of the Master's thesis.

(3) <sup>1</sup>The examination board shall decide on admission. <sup>2</sup>Admission shall be refused if the admission requirements are not met or if the Master's examination in the same course of study or in a comparable Master's course of study at a university in Germany or abroad has been definitively failed.

### **§ 8 Master's thesis**

(1) <sup>1</sup>By means of the written Master's thesis, the candidate shall demonstrate that he or she is able to work on a scientific topic within the specified period of time using the methods of his or her field of study, to develop an independent, scientifically sound judgement, to arrive at scientifically sound statements and to present the results appropriately in terms of language and form. <sup>2</sup>Achieving the Master's thesis will earn 30 C.

(2) <sup>1</sup>The provisional topic of the Master's thesis must be agreed with the first supervisor to be proposed and must be submitted to the examination board with a confirmation of the second supervisor to be proposed. <sup>2</sup>If the candidate does not find a tutor, the examination board will determine one and a topic. <sup>3</sup>The candidate must be heard when the topic is chosen. <sup>4</sup>The right to propose a topic does not constitute a legal claim. <sup>5</sup>The topic of the Master's thesis is decided by the examination board. <sup>6</sup>The date of issue must be recorded.

(3) <sup>1</sup>The Master's thesis is completed within 6 months. <sup>2</sup>At the request of the candidate, the Examination Commission may, in agreement with the first supervisor, extend the processing time by a maximum of 8 weeks if there is an important reason for which the candidate is not responsible. <sup>3</sup>An important reason is usually an illness that must be reported immediately and documented by a doctor's certificate.

(4) <sup>1</sup>The topic can only be returned once and only within the first 4 weeks of the processing time. <sup>2</sup>A new topic is to be agreed upon immediately, at the latest however within 4 weeks. <sup>3</sup>In the event of the Master's thesis being repeated, the topic may only be returned in accordance with sentence 1 if the person to be examined has not made use of this option in the first attempt at examination.

(5) <sup>1</sup>The Master's thesis must be submitted in triplicate to the office of the course of study in due time and in electronic form in accordance with the APO. <sup>2</sup>The time of submission shall be recorded. <sup>3</sup>When submitting the thesis, the candidate must confirm in writing that he or she has written the thesis independently and has not used any sources or aids other than those specified.

(6) The Master's thesis must be written in English.

(7) <sup>1</sup>The office will forward the Master's thesis to the first supervisor and the second supervisor as reviewers. <sup>2</sup>Each reviewer shall award a grade. <sup>3</sup>The duration of the assessment procedure should not exceed four weeks.

### **§ 9 Overall result of the Master's examination; repeatability of examinations**

(1) The Master's examination is passed if at least 120 C have been acquired and all required module examinations and the Master's thesis have been passed.

(2) It is not possible to repeat examinations which have been passed for the purpose of improving grades; the provision of § 16 a Paragraph 3 Sentence 2 of the APO remains unaffected.

(3) The Master's thesis which has not been passed may only be repeated once.

(4) In addition to the cases specified in the APO, the right to be examined shall be definitively extinguished if, by the end of the 8th semester, not all of the performances required to pass the Master's examination have been successfully completed.

(5) The overall result "With Distinction" shall be awarded if the Master's thesis has been graded 1.0 and the overall result of the Master's examination is 1.2 or better.

### **§ 10 Examination board**

(1) <sup>1</sup>The Examination Commission shall consist of five members appointed by the group representatives in the Faculty Council of the Faculty of Medicine, namely three members of the university teachers' group, one member of the staff group and one member of the student group. <sup>2</sup>At the same time, a deputy is appointed for each member. <sup>3</sup>If a member or a deputy member retires prematurely, a replacement shall be appointed for the remaining term of office.

(2) <sup>1</sup>The conduct and organisation of the examination procedure is delegated to the office of the Dean of Studies, without prejudice to the powers of the Dean of Studies. <sup>2</sup>The office shall also keep the examination files.

(3) The examination board shall elect a chairperson and a deputy chairperson from the group of university teachers.

(4) Current business may be delegated to the chairperson.

### **§ 11 Entry into force; transitional provisions**

(1) These Regulations shall enter into force on 01.10.2015 following their publication in the Official Notices I of the University of Göttingen.

(2) <sup>1</sup>Students who began their studies before an amendment to these Examination and Programme Regulations came into effect and who were continuously enrolled in this Programme will be examined according to the Examination and Programme Regulations in the version valid before this amendment came into effect. <sup>2</sup>In the case of examinations that are still to be taken, this does not apply to module overviews and lists, unless the protection of the confidence of a student requires a different decision by the examination board. <sup>3</sup>A different decision is possible in particular in cases in which an examination can be repeated or in which a compulsory or required elective module has been significantly changed or cancelled. <sup>4</sup>The examination board may make general regulations in this regard.

<sup>5</sup>Examinations in accordance with these regulations in the version valid prior to the entry into force of an amendment shall be held for the last time in the fourth semester after the entry into force of the amendment. <sup>6</sup>Upon application, students under sentence 1 shall be examined as a whole in accordance with the provisions of the amended regulations.

## **Annex I Module Overview**

### **Master's program "Cardiovascular Science"**

A total of at least 120 C must be successfully completed in accordance with the following provisions.

#### 1. professional studies

The following modules with a total of 77 C must be successfully completed:

M.CVS.001	Lab rotation I	(12 C, 18 SWS)
M.CVS.002	Lab rotation II	(12 C, 18 SWS)
M.CVS.003	Lab rotation III	(11 C, 17 SWS)
M.CVS.004	Modern topics in CVS and clinical research	(6 C, 5 SWS)
M.CVS.101	Cardiovascular basics I	(9 C, 7 SWS)
M.CVS.102	Cardiovascular basics II	(9 C, 7 SWS)
M.CVS.201	Cardiovascular diseases and therapies	(9 C, 7 SWS)
M.CVS.301	Cardiovascular research in academia and industry	(9 C, 7 SWS)

#### 2. area of professionalisation

<sup>1</sup>Modules totalling at least 13 C must be successfully completed. <sup>2</sup>Modules from the modules offered in the University-wide Module Handbook for Key Competences can be taken, including modules in accordance with the "Examination Regulations for Study Programmes of the Central Institution for Languages and Key Competences (ZESS) of the Georg-August University of Göttingen" in the currently valid version.

#### 3. Master's thesis

The successful completion of the Master's thesis results in a grade of 30 C.

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