

## **University of Tübingen exam regulations for the study program in Medizininformatik / Medical Informatics culminating in an examination for a Master of Science (M.Sc.) degree – Special Provisions –**

In accordance with §§ 19 paragraph (1) sentence 2 no. 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 1 of the law dated 24 June 2020 (GBl. p. 426), the University of Tübingen Senate on 11.03.2021 passed the Special Provisions of these exam regulations for the study program in Medizininformatik / Medical Informatics at the University of Tübingen culminating in an examination for a Master of Science (M. Sc.) degree.

Approved by the President and Vice-Chancellor on 25.03.2021.

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### **A. Validity of General Provisions and admission requirements**

#### **§ 1 Validity of General Provisions**

The University of Tübingen exam regulations for Master's degree programs culminating in the academic degree of Master of Science (M.Sc.) / Master of Arts (M.A.) – Master's degree framework exam regulations (MRPO) – as amended represent the General Provisions of these exam regulations and are an integral part of them, insofar as no more specific provisions have been made.

#### **§ 2 Requirements for admission to program**

- (1) <sup>1</sup>A prerequisite for studies in this Master's program is a grade of 2.5 or better in a Bachelor's degree in the subject of Medical Informatics, Bioinformatics, Medical Technologies, Informatics,

in a related program covering basically the same material, or an equivalent degree. <sup>2</sup>The responsible examination board decides on the equivalency of a degree. <sup>3</sup>The board may transfer this decision revocably to the head of the board. <sup>4</sup>If there is a restricted number for admission, the articles may specify that the selection committee formed for the relevant selection process decides instead.

- (2) <sup>1</sup>To take part in the Master's program, applicants must also document knowledge of English at least at the level of C1/B2 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) <sup>1</sup>Studies in the Master of Science program (M. Sc.) in Medical Informatics (hereinafter: the program) enable students to acquire the specific qualifications, competencies, knowledge, abilities and skills required for a Master's degree in the subject of Medical Informatics under § 7 (1) of the Master's degree framework exam regulations. <sup>2</sup>The objective of the degree program is to deepen or expand the knowledge acquired in the Bachelor's degree program, 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 scientifically sound decisions on the basis of incomplete or limited information, taking into account social, scientific 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 expert representatives and laypersons in a clear and unambiguous manner, to exchange information, ideas, problems and solutions with both experts and laypersons on a scientific level and to assume prominent responsibility in a team (communicative competencies).

<sup>3</sup>Further details of the course objectives are set out in the module handbook.

(2) <sup>1</sup>The regular duration of study for this degree program is 4 semesters. <sup>2</sup>The program comprises 120 credit points ( CP).

(3) <sup>1</sup>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, paras. (4) and (5) of the Master's degree framework exam regulations apply.

### **§ 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**

(1) <sup>1</sup>Students complete a program to earn credit points as set out in § 3 para. (2); the program consists of the following modules. <sup>2</sup>Master's studies are carried out in one of three profiles. Students

who have a Bachelor's degree in Medical Informatics or Bioinformatics study according to variant A. Students who have a Bachelor's degree in Medical Technologies, Biology or a related subject study according to variant B. Students who have a Bachelor's degree in Informatics or a related subject study according to variant C. <sup>3</sup>In cases of doubt, the examination board will make the decision.

Se- mes- ter no.	Module	P/WP	Module title	Work for assess- ment	CP
Total					
1-3	MEDZ-4110	P	Advanced Medical Informatics	K / mP	9
1-3	MEDZ-BIOINFO	WP	Advanced Bioinformatics	depending on mod- ule chosen, s. mod- ule handbook	9
1-3	MEDZ-SEM	P	Medical Informatics Seminar	R, H	3
1-3	MEDZ-RES	WP	Research Project in Medical Informatics	depending on mod- ule chosen, s. mod- ule handbook	9
Variant A					
1-3	MEDZ-BIOMED	WP	Biomedical Informatics	depending on mod- ule chosen, s. mod- ule handbook	24
1-3	MEDZ-MEDTECH	WP	Medicine-Medical Technology	depending on mod- ule chosen, s. mod- ule handbook	18
1-3	INFO-INFO	WP	Computer Science	depending on mod- ule chosen, s. mod- ule handbook	18
Variant B					
1-3	MEDZ-INFO	P	Foundations of Biomedical Informatics	depending on mod- ule chosen, s. mod- ule handbook	24
1-3	MEDZ-BIOMED	WP	Biomedical Informatics	depending on mod- ule chosen, s. mod- ule handbook	15
1-3	MEDZ-MEDTECH	WP	Medicine-Medical Technology	depending on mod- ule chosen, s. mod- ule handbook	9
1-3	INFO-INFO	WP	Computer Science	depending on mod- ule chosen, s. mod- ule handbook	12
Variant C					
1-3	MEDZ-BASICME- DINFO	P	Foundations of Medicine and Bioinformatics	depending on mod- ule chosen, s. mod- ule handbook	15
1-3	MEDZ-BIOMED	WP	Biomedical Informatics	depending on mod- ule chosen, s. mod- ule handbook	15
1-3	MEDZ-MEDTECH	WP	Medicine-Medical Technology	depending on mod- ule chosen, s. mod- ule handbook	18
1-3	INFO-INFO	WP	Computer Science	depending on mod- ule chosen, s. mod- ule handbook	12

Final module area					
4	MEDZ-4999	P	Master's thesis (final module)*	Master's thesis, R	30

1) A maximum of three seminars may be selected in the program.

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, K = written exam, H = assignment; mP = oral defense; R = class presentation; \*Master's project (final module): Master's thesis and accompanying final colloquium on the contents of the Master's thesis.

## § 6 Module coursework

<sup>1</sup>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. <sup>2</sup>Assessment must be clearly specified as to its type and scope, if this is not set out in the module table. <sup>3</sup>For the imported modules, students may be directed to the module handbook of the respective department with which the modules originate.

## § 7 Languages of instruction and examination

<sup>1</sup>German and English are the languages of instruction and examination in this degree program. <sup>2</sup>Classes and module coursework may be conducted, promoted and taught in the following languages:

- English;
- German.

<sup>3</sup>Furthermore, teachers and examiners may promote and/or conduct classes and/or module coursework in another language for the purpose of teaching that language. <sup>4</sup>Exams are usually conducted in the language in which the relevant classes were held; other assessment is usually conducted in the language in which the relevant classes were held. <sup>5</sup>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 Related degree programs

(1) Related programs with basically the same content as defined in § 17 paragraph (2) sentence 2 of the MRPO are:

- M.Sc. Bioinformatik / Bioinformatics
- M.Sc. Informatics
- M.Sc. Media Informatics
- M.Sc. Cognition Science

(2) The examination board responsible for the degree program shall decide on other related programs with basically the same content.

#### § 9 Multiple-choice procedure

(1) <sup>1</sup>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). <sup>2</sup>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.

<sup>3</sup>Prior to the correction of the examinations, no 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**

### **§ 10 Final module**

(1) <sup>1</sup>In the final module, 30 credit points must be obtained. <sup>2</sup>Of these, 27 CP are obtained in the Master's thesis and 3 CP in the oral examination in the final module [this takes the form of a final colloquium as part of the Master's thesis process (3 CP)]. <sup>3</sup>The Master's thesis and the oral examination in the final module are regulated by § 28 MRPO.

(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) <sup>2</sup>The oral exam in the final module under para. (1) is assessed by one examiner and takes place without the additional presence of an observer; for grading, § 19 MRPO applies.

### **§ 11 Subject-specific requirements for admission**

In addition to the prerequisites set out in the MRPO, the subject-related prerequisites for admission to the Master's thesis and the oral exam in the final module are:

- the successful completion of modules worth a total of at least 45 ECTS credits.

### **§ 12 Repetition for a better grade**

Assessment resulting in a pass may not be repeated.

## **D. Deadlines for examinations in the program**

### **§ 13 Deadlines for completion of module coursework**

Deadlines for the completion of coursework or module-specific assessment are not currently provided for.

### **§ 14 Deadline for completion of studies**

<sup>1</sup>All coursework and assessment required under the exam regulations for the module coursework must be completed by the end of the student's 7th semester in the subject. <sup>2</sup>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.

## **§ 15 Student counselling**

In order to ensure academic success within the limits of the law, students may be called for an interview by the appropriate academic advisor if the following CP have not been achieved:

- by the end of the 2nd subject-specific semester: 40 CP.

## **E. Master's overall grade**

### **§ 16 Calculation of Overall Grade**

<sup>1</sup>The overall grade for the Master's examination process is calculated from the average of all graded modules, as weighted by credit points. <sup>2</sup>Notwithstanding § 19 (3) sentence 3 MRPO, calculation takes into account whole numbers and the first two decimal places only; all further decimal places are deleted with no rounding.

## **F. Closing remarks**

### **§ 17 Effective date and transitional arrangements**

<sup>1</sup>These exam regulations come into effect on the date of their publication in the University of Tübingen's official bulletin, the Amtliche Bekanntmachungen. <sup>2</sup>Their first semester of validity is the winter semester 2021/22. <sup>3</sup>Students who commenced their studies in this program 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 30.09.2024 under the previously valid rules; however, regarding the examination board, § 6 MRPO applies. <sup>4</sup>Students who commenced their studies in this program at the University of Tübingen prior to the semester specified in sentence 2, are entitled to switch and complete their module coursework in the degree program under these current exam regulations upon written application, which must be submitted to the responsible examination office by 30.09.2022. <sup>5</sup>If no application under sentence 4 above is lodged, then - after the deadline specified in sentence 3 - the module coursework in the degree program must be completed under these current regulations. <sup>6</sup>Module coursework completed previously will only be accredited according to the new exam regulations and the corresponding module handbook, subject to the following provisions. <sup>7</sup>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. <sup>8</sup>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, 25.03.2021

Professor Dr. Bernd Engler  
President