

*Care was taken to ensure the text of these regulations is accurate and up-to-date; the present version may nevertheless contain errors. The official, legally binding version can be viewed in the Examinations Office, the Student Advising Office, or online at <https://www.amtliche-bekanntmachungen.uni-bayreuth.de/de/>. Please note the effective dates of the amendments.*

**Examination and Study Regulations  
for the Master's Programme  
Computer Science  
at the University of Bayreuth  
dated 25 September 2018  
as amended on 09 January 2023**

Article 13 para 1 sentence 2 in conjunction with Article 58 para 1 sentence 1 and Article 61 para 2 sentence 1 of the Bavarian Higher Education Act (*BayHSchG*) forms the framework for the following regulations issued by the University of Bayreuth.

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## **§ 1**

### **Purpose of the master's examination**

<sup>1</sup>The master's examination as the conclusion of university studies in the master's programme *Computer Science* determines whether the candidate has the following skills to solve complex problems in the field of computer science with corresponding methods and systems and has acquired the subject-specific knowledge provided for in the present regulations. <sup>2</sup>At the same time it determines whether the candidate possesses the requisite understanding of subject-related and interdisciplinary connections to pursue further independent academic research. <sup>3</sup>Upon the candidate's passing of the master's master, the University of Bayreuth, by way of the Faculty of Mathematics, Physics & Computer Science, awards the academic degree "Master of Science" (abbreviated as M.Sc.).

## **§ 2**

### **Admission to the programme; qualification**

(1) Admission prerequisites for the master's programme are as follows.

1. a degree from a higher education institution with an examination grade of "good" (2.5) or better in the bachelor's programme *Computer Science* at the University of Bayreuth or in the bachelor's programme *Applied Computer Science* at the University of Bayreuth or an equivalent degree, and
2. evidence of German language skills at level A1 of the Common European Framework of Reference for Languages or higher for applicants who have neither acquired their higher education entrance qualification nor their initial degree in German; the required command of German can also be proved by a final thesis in German in a degree programme. applicants who are unable to provide proof of these skills will be enrolled on the condition that they submit the proof by the end of the second semester of study at the latest; and  
and
3. evidence of English language skills as determined by IELTS Academic with a minimum of 6.5 or TOEFL (IbT) with at least 88 or an equivalent certificate.

- (2) <sup>1</sup>The qualifications may not differ substantially in terms of the earned competences (learning outcomes) from the qualifications referred to in para 1 number 1. <sup>2</sup>If there are substantial compensable differences, applicants may be admitted subject to the proviso that, in addition to the assessment components to be completed in the master's programme, they also successfully complete coursework and examinations in the amount of up to 15 credit points in the bachelor's programme Computer Science by the end of the second semester of study at latest; otherwise, the prerequisites for admission to the programme are deemed not to have been fulfilled. <sup>3</sup>In such cases, the examination and study regulations for the bachelor's programme Computer Science (as amended) shall apply. <sup>4</sup>Art. 86 BayHIG applies to determining the eligibility of domestic and foreign degrees.
- (3) Decisions such as those described in paragraph 2 are to be made by the board of examiners established under the terms of § 4.
- (4) <sup>1</sup>If the degree certificate is not yet available, confirmation containing the individual grades for all examination and study components must be submitted. <sup>2</sup>Such credit for examinations and coursework must amount to a total of at least 150 ECTS points. <sup>3</sup>Applicants who fulfil the requirements of sentence 2 are to be enrolled on the condition that they submit the relevant degree certificate by the end of the second semester of study.

### § 3

#### **Structure of the programme for full-time students; standard period of study**

- (1) The master's degree *Computer Science* is divided into the following areas:
  - a) The area of *computer science* comprises modules with a total of 35 to 45 credit points (LP). The computer science modules originate from at least two different module supervisors. Regularly offered computer science modules are listed in the annex. Upon request, the board of examiners may approve additional computer science modules.
  - b) The area of *Projects* comprises modules with a total of 30 to 31 credit points (LP). When taking more than one project module, they must each be selected on different topics. At least one extended master's project must be chosen and no more than one extended master's seminar may be chosen.
  - c) The area of *Languages* comprises modules with a total of 15 to 24 LP offered by the Language Centre for the acquisition or deepening of the English and/or German language. The selection and combinability of the modules can be found in the current module handbook. If there are no more advanced language modules available for students according to their language competence, then up to 15 LP of German language modules from the field of computer science can be completed instead.
  - d) The *Master's Thesis* area comprises a module worth 30 LP.

- (2) The degree programme, including all examinations, is offered in English.
- (3) <sup>1</sup>Model study plans serve as orientation for the selection of modules. <sup>2</sup>In the case of deviations from the model study plans, prior consultation with the programme coordinator is recommended (§ 26 para 2).
- (4) <sup>1</sup>Successfully completed modules from the Annex to the present regulations shall be taken into account either only in their full LP scope or not at all. <sup>2</sup>The interval limits of the individual areas may not be exceeded, even in the case of crediting of competences according to § 8. <sup>3</sup>If an interval limit is exceeded, the last credit earned in each case shall be disallowed; no pro rata crediting shall take place.
- (5) The standard period of study is four semesters, including the examination periods and the master's thesis.
- (6) A total of 120 credit points must be earned in accordance with the European Credit Transfer System (ECTS).
- (7) New students may begin the programme in the winter semester or the summer semester.

## **§ 4**

### **Board of examiners**

- (1) <sup>1</sup>A board of examiners shall be formed to make the necessary decisions with regard to the admission to the master's programme and the organizational execution of the master's examination. <sup>2</sup>The board of examiners shall administer the examination proceedings in accordance with the present regulations and make all decisions with the exception of the examinations and the assessment thereof. <sup>3</sup>It consists of four voting members from among the professors of the Department of Computer Science (Art. 57 para 1 BayHIG) and one advisory representative each of the students and the research associates <sup>4</sup>The members and representatives of the board of examiners shall be elected by the Faculty Council of the Faculty of Mathematics, Physics & Computer Science for a period of three years. <sup>5</sup>The board of examiners shall elect a chair and deputy chair from among its members who are professors.
- (2) <sup>1</sup>The board of examiners constitutes a quorum if the majority of members are present and entitled to vote after an invitation had been sent to all members at least three days prior to the meeting. <sup>2</sup>The decisions taken by the board of examiners in its meetings are to be made on the basis of majority vote. <sup>3</sup>Vote abstention, secret voting, and proxy voting are prohibited. <sup>4</sup>If votes are equally divided among its members, the chair's vote shall be decisive.
- (3) <sup>1</sup>The chair of examiners shall ensure that the provisions of these regulations are followed. <sup>2</sup>He or she shall convene the meetings of the board of examiners and shall act as chair of its proceedings

and decisions. <sup>3</sup>With regard to matters that cannot be postponed, he or she is authorized to make decisions on behalf of the board of examiners. <sup>4</sup>He or she must promptly inform the other members of any such decision - at the next meeting at latest. <sup>5</sup>In addition, unless otherwise provided by the present regulations, the board of examiners can transfer (until revoked) the right to perform other duties of the board to the chair. <sup>6</sup>The chair can delegate tasks to members of the board of examiners.

- (4) The board of examiners shall regularly report to the faculty council concerning updates to examination schedules and study periods and may make suggestions for reforming the present regulations. <sup>2</sup>The board of examiners is responsible for compiling the module handbook and publishes it university-wide at the beginning of each lecture period.
- (5) <sup>1</sup>Any notices the board of examiners issues under the terms of the present regulations are to be published together with a rationale and information concerning how to appeal. <sup>2</sup>Notices of appeal shall be issued by the president in consultation with the board of examiners.

## **§ 5**

### **Examiners and co-examiners**

- (1) <sup>1</sup>Any person who is authorized to administer examinations at institutions of higher education according to 85 BayHIG or HSchPrüferV, as amended, may serve as examiner. <sup>2</sup>Any member of the University of Bayreuth who is a graduate of an equivalent or comparable programme of study may serve as co-examiner.
- (2) <sup>1</sup>If a member of the University of Bayreuth who is an authorized examiner leaves the University, he or she may remain an examiner for a reasonable period. <sup>2</sup>Authorization to administer examinations shall generally remain valid for up to three years.
- (3) <sup>1</sup>Unless otherwise decided by the chair of examiners, the relevant instructor shall also serve as examiner. <sup>2</sup>If that instructor is not authorized to administer examinations as laid out in sentence 1, the chair of examiners shall appoint an examiner at the beginning of the semester in which the examination is to be held.

## **§ 6**

### **Disqualification due to personal involvement; confidentiality**

- (1) Disqualification from consultation and voting on the board of examiners as well as other activities relating to examinations on the basis of personal involvement is governed by Article 51 para 2 BayHIG.

- (2) The non-disclosure obligation that holds for members of the board of examiners, as well as examiners, co-examiners, and anyone else involved in the examination process is governed by Article 26 para 2 of BayHIG.

## § 7

### Admission to the examinations

Students who are enrolled in the master's programme Computer Science are considered *ipso facto* to be admitted to the examinations.

## § 8

### Credit transfer

- (1) The recognition and crediting of competencies shall be determined in accordance with Art. 86 BayHIG.
- (2) <sup>1</sup>If credits are recognized for competencies, the grades are to be carried over and included when calculating the final grade, as long as the grading systems are analogous. <sup>2</sup>If the grading system for the competencies to be transferred does not correspond to the grading system given in § 16, the grades received at the other higher education institution are to be converted using the Modified Bavarian Formula:  
$$x = 1 + 3 * (N_{\max} - Nd) / (N_{\max} - N_{\min})$$
where x is the grade to be calculated,  $N_{\max}$  is the highest possible grade,  $N_{\min}$  is the highest passing grade, and Nd is the actual grade; in this calculation, the grade to be calculated is only given to one decimal place and is not adjusted to fit the grading scale given in § 16. <sup>3</sup>If a conversion according to sentence 2 is not possible, the board of examiners shall determine a corresponding key for the grade conversion. <sup>4</sup>If a grade is not available and cannot be determined, the remark "passed" will be entered; in this case, it will not be included in the calculation of the final grade. <sup>5</sup>The board of examiners in consultation with the relevant representative from the subject area shall decide whether the requirements have been met for credit transfer. <sup>6</sup>If credit transfer is denied, the person concerned can appeal the decision by submitting a request for the University Governing Board to review the decision within four weeks of notification of denial. <sup>7</sup>The University Governing Board shall provide the board of examiners with a recommendation on how to proceed with the request.
- (3) Credit transfer requests are to be submitted to the board of examiners as soon as possible following enrolment and in any event prior to completing the examination proceedings in the relevant module.
- (4) Paragraphs 2 and 3 shall apply mutatis mutandis to the crediting of competencies, subject to the maximum limit pursuant to Art. 86 para 2 Sentence 2 BayHIG.

## § 9

### **Times for holding examinations; announcing examination times and examiners**

- (1) Examinations will be held once per semester. <sup>2</sup>The examinations are generally held from the last week of lectures to the beginning of the following semester. <sup>3</sup>An additional examination time may be scheduled for the beginning of the following semester.
- (2) <sup>1</sup>If not listed in the annex, the examination times and the form and duration of examinations shall be determined by the relevant examiner and announced university-wide at the start of the course. <sup>2</sup>A change of examiner on short notice shall only take place if there are urgent grounds for doing so.
- (3) Students are to register for examinations by the published deadline, according to the process determined by the board of examiners.

## § 10

### **Elements of the examination**

- (1) The master's examination comprises the module examinations listed in the annex and the master's thesis.
- (2) <sup>1</sup>The examinations serve to demonstrate that the examinee has satisfied the desired learning outcomes of the individual modules. <sup>2</sup>They are based on the desired learning outcomes of the respective courses.

## § 11

### **Forms of examination**

- (1) <sup>1</sup>Examinations are carried out in the form of written examinations, oral examinations, portfolio assessments, tests, presentations, or written assignments. <sup>2</sup>The possible forms of examination in the modules are given in the annex. <sup>3</sup>The examinations are held in the English language. <sup>4</sup>For oral examinations, the examinee may also opt for the German language.
- (2) <sup>1</sup>Assessment of examinations is to be carried out according to the process announced by the board of examiners. <sup>2</sup>Notifications will not be sent individually. <sup>2</sup>Students are required to familiarize themselves independently with the terms of the present regulations pertaining to repeating examinations; they are responsible for informing themselves of examination results.
- (3) <sup>1</sup>If an examination is assessed by more than one examiner, the grade shall be determined by taking the average of the grades assigned and truncating (not rounding) the number to one decimal

- digit.<sup>2</sup>If a written examination is assessed as "failed" or "unsatisfactory", it must be assessed by a second examiner.
- (4) <sup>1</sup>Written examinations are one to two hours for modules with up to six credit points or two to three hours for modules with seven or more credit points over of the examination should be suited to the requirements of the corresponding course. <sup>2</sup>The relevant examiner shall decide which resources may be used during the examination. <sup>3</sup>A written record of the examination is to be made. <sup>4</sup>The invigilator shall confirm the accuracy of the record by providing his or her signature. <sup>5</sup>The examination record sheet is to include all aspects of the examination that are relevant to determining the grade.
- (5) <sup>1</sup>If a candidate arrives to the examination late, he or she shall not be given additional time to finish the examination. <sup>2</sup>Candidates may leave the room during an examination if permission is granted by the invigilator. <sup>3</sup>The time and duration of absence are to be noted on the question paper.
- (6) <sup>1</sup>Written examinations are generally graded by the examiner who was appointed by the chair of examiners. <sup>2</sup>The relevant examiner shall determine the grades for the written examinations under the terms of § 16. <sup>3</sup>An assessment of each written examination shall be provided no later than six weeks after the examination. <sup>4</sup>The graded written examination shall remain in the examination records.
- (7) <sup>1</sup>Oral examinations are to be held over a period of 20 to 50 minutes, depending on the requirements of the particular course. <sup>2</sup>Oral examinations are to be administered by two examiners or one examiner and one co-examiner. <sup>3</sup>One examiner or the co-examiner shall complete an examination record sheet for the oral examination that includes the following: the location, start time, and duration of the examination; examination subject-matter and results (grade); names of the two examiners or of the examiner and co-examiner; and any noteworthy incidents. <sup>4</sup>The record sheet is to be signed by the two examiners or by the examiner and co-examiner. <sup>5</sup>The examiners are to determine the grades for performance in the oral examinations under the terms of § 16.
- (8) <sup>1</sup>If the audience for an oral examination must be limited due to room capacity, those students who wish to take the same examination within the next two semesters are to be given preference. <sup>2</sup>The examination can be conducted without an audience if so requested by the candidate or the examiner. <sup>3</sup>Discussion and announcement of the examination results (grade) shall not be conducted in public.
- (9) <sup>1</sup>In a portfolio assessment for a module, assignments with interdependent content (examination elements) are completed according to the requirements given by the examiner or examiners in order to achieve a greater unified assignment. <sup>2</sup>The individual partial examination performances can be written, oral and/or practical performances (according to par. 4, 7, 10, 11, 12), which in their entirety form the module examination for the module in question. <sup>3</sup>The subject of the assessment of a portfolio examination shall be all partial examination performances in accordance

with § 16 para 2; in deviation from this, the weighting of the partial examination performances may be as specified in the annex.

- (10) <sup>1</sup>Tests involve an oral presentation with, if necessary, written documentation of a programming activity according to specified criteria. <sup>3</sup>The relevant examiner shall communicate the form and scope of the assignment to the students at the beginning of the course. <sup>4</sup>The assignment is to be graded in accordance with § 16.
- (11) <sup>1</sup>Presentations with an accompanying paper, if applicable, are evaluated by one examiner. <sup>2</sup>The relevant examiner shall communicate the form and scope of the assignment to the students at the beginning of the course. <sup>3</sup>The examiners are to determine the grades for performance (presentation and if applicable accompanying paper) under the terms of § 16.
- (12) <sup>1</sup>Written homework (e.g. working on exercise sheets) will be set and completed during the module and assessed with points by the examiner. <sup>2</sup>The requirements (e.g. minimum proportion of points achieved out of the total points achievable) are announced by the examiner at the beginning of the respective course.

## § 12

### Master's thesis

- (1) <sup>1</sup>The master's thesis written by the candidate should demonstrate that he or she is able to utilize relevant resources and adequately address and write about current issues in the field using scientific methods. <sup>2</sup>The topic is to be set to an area of computer science.
- (2) <sup>1</sup>Topics for Master's theses are usually provided and supervised by two examiners or one examiner (according to § 5), with at least one of them belonging to the Department of Computer Science in the Faculty of Mathematics, Physics Computer Science. <sup>2</sup>The topic of a master's thesis must be confirmed by the chair of examiners prior to assignment of the topic. <sup>3</sup>Assigning the topic is to be refused if the requirements specified in para 1 are not fulfilled. <sup>4</sup>Record is to be made of the date on which the topic was assigned.
- (3) <sup>1</sup>The master's thesis is integrated into the programme of study and corresponds to a workload of 900 hours. <sup>2</sup>The master's thesis is to be submitted no later than six months after the topic was assigned. <sup>3</sup>In cases in which the candidate was not at fault for missing a deadline, at the request of the candidate, the chair of examiners may, after having heard the supervisor, extend the deadline by up to two weeks. <sup>4</sup>If the candidate demonstrates via a medical certificate that he or she was unable to work on the thesis, the deadline is to be extended accordingly. <sup>5</sup>Theses that are not submitted by the stated deadline are graded as "*nicht ausreichend*" ["unsatisfactory"].
- (4) <sup>1</sup>The master's thesis is to be submitted in the English language. <sup>2</sup>The master's thesis shall contain a statement at the end in which the author confirms that he or she wrote the thesis independently

and did not make use of any sources or materials that are not cited in the thesis. It shall also be confirmed that the thesis had never before been submitted toward fulfilment of an academic degree. <sup>3</sup>A synopsis of the master's thesis is also to be included. <sup>4</sup>The title and synopsis must be given in both German and English.

- (5) <sup>1</sup>The master's thesis must be submitted in electronic form (printable PDF document) by the deadline. <sup>2</sup>Submission is carried out by uploading the document via the form server. <sup>3</sup>The Examinations Office will make a note of the date on which the thesis was submitted.
- (6) <sup>1</sup>The thesis must contain a table of contents and bibliography. <sup>2</sup>One additional copy of the master's thesis in typewritten form, bound and paginated, must also be submitted to the examiner by the deadline at the latter's request.
- (7) <sup>1</sup>The candidate may return the topic to the board of examiners once within the first four weeks. <sup>2</sup>The supervisor shall submit a statement. <sup>3</sup>Paragraphs 1 to 6 also apply when assigning and working on a new topic.
- (8) <sup>1</sup>The Examinations Office shall pass the thesis on to the examiners or the examiner (in accordance with § 5) for written assessment. <sup>2</sup>Both examiners shall recommend acceptance or rejection of the work to the board of examiners. <sup>3</sup>The assessment should be made available no later than two months after submission of the thesis. <sup>4</sup>In special cases, the board of examiners may call upon an additional examiner, especially if the grades assigned vary considerably.
- (9) <sup>1</sup>The contents of the master's thesis must be presented to the examiners or the examiner in a presentation (viva voce). <sup>2</sup>The talk is followed by a discussion that places the content of the master's thesis in a broader context. <sup>3</sup>The duration of the presentation and discussion is between 30 and 60 minutes. <sup>4</sup>The presentation shall be made before the examiners or the examiner and the public. <sup>5</sup>Upon request, the talk may not be public. <sup>6</sup>For the examination components (thesis and viva voce), each examiner will assign a grade according to § 16. <sup>7</sup>The grade for the master's thesis is determined by taking the average of the grades assigned and truncating (not rounding) the number to one decimal digit. <sup>8</sup>§ 11 para 2 applies *mutatis mutandis*.
- (10) The master's thesis is to remain on record.

## § 13

### Credit point system

- (1) <sup>1</sup>A record of credit points for completed modules is to be kept by the University of Bayreuth's Examinations Office for each student who is enrolled in the programme of study. <sup>2</sup>The credit points that appear on the transcript are identical with credit points as stipulated in the European Credit Transfer System (see annex). <sup>3</sup>One credit point corresponds to a workload of 30 hours.

- (2) The credit points for the modules are given in the annex.

## **§ 14**

### **Consideration of protective provisions**

- (1) <sup>1</sup>The utilization of protection periods of the Maternity Protection Act shall be guaranteed. <sup>2</sup>Upon request, the claiming of parental leave in accordance with the Federal Parental Allowance and Parental Leave Act (Bundeselterngeld- und Elternzeitgesetz), as well as periods for the care of a close relative within the meaning of § 7 para 3 of the Nursing Care Act who is in need of care within the meaning of § 14 and § 15 of the Eleventh Book of the Social Code (Sozialgesetzbuch), shall be guaranteed. <sup>3</sup>The appropriate evidence must be furnished; any changes in status are to be reported immediately.
- (2) <sup>1</sup>If duly requested, periods during which study was impossible or only possible to a limited extent for reasons beyond the student's control shall not be taken into account with regard to the examination schedule. <sup>2</sup>Corresponding evidence must be furnished; medical certificates must be presented in the case of illness. <sup>3</sup>Any changes in status are to be reported immediately.

## **§ 15**

### **Consideration of special needs of students with disabilities or chronic illness and in special life circumstances**

- (1) <sup>1</sup>In order to maintain their equal opportunities, the special needs of students with disabilities or chronic illnesses within the meaning of the Bavarian Equal Opportunities for Persons with Disabilities Act shall be taken into account in an appropriate manner. <sup>2</sup>Upon written request, the board of examiners shall determine on the basis of the degree of disability or chronic illness in what form the examination is to be taken; alternatively, an extension or other reasonable accommodations may be granted. <sup>3</sup>Proof of the examination disability or chronic illness must be furnished in the form of a medical certificate stating that, due to a long-term or permanent disability or chronic illness, the examination cannot be taken in whole or in part in the intended form. <sup>4</sup>The request is to be submitted together with the examination registration. <sup>5</sup>If the request is submitted later, it shall only be valid for subsequent examinations.
- (2) <sup>1</sup>Students in special circumstances may apply to the board of examiners for compensation for disadvantages in examinations in accordance with Paragraph 1. <sup>2</sup>The board of examiners shall decide on the existence of a special life situation and the extent of the compensation for disadvantages.

## § 16

### Grading of examinations

- (1) The following grading scale will be used in the assessment of the individual assignments and examinations; the digit to the right of the comma enables a more differentiated assessment between the whole-number values.

"sehr gut" (excellent)	= 1,0 or 1,3
"gut" (considerably better than average)	= 1,7 or 2,0 or 2,3
"befriedigend" (average)	= 2,7 or 3,0 or 3,3
"ausreichend" (fulfils the minimum requirements despite deficiencies)	= 3,7 or 4,0
"nicht ausreichend" (unsatisfactory due to considerable deficiencies)	= 5,0

- (2) <sup>1</sup>If a greater module examination is made up of multiple examinations, the grade for the module shall be established by calculating the arithmetic mean after weighting the components based on credit points. <sup>2</sup>In this calculation, the grade shall only be given to one decimal place; the remaining digits are to be truncated (not rounded). <sup>3</sup>Module grades are as follows:

an average of 1,5 or better	= sehr gut
an average of 1,6 up to and including 2,5	= gut
an average of 2,6 up to and including 3,5	= befriedigend
an average of 3,6 up to and including 4,0	= ausreichend.

## § 17

### Final grade

- (1) <sup>1</sup>The overall grade of the master's examination is calculated from the weighted average of the grades from the modules passed, weighted by the credit points. <sup>2</sup>The grade of the master's thesis shall be included in the average with 1.5 times the weight. <sup>3</sup>In this calculation, the grade shall only be given to one decimal place; the remaining digits are to be truncated (not rounded).
- (2) Candidates who pass the master's examination are to receive a final grade as follows: an average grade of 1,2 or better is "ausgezeichnet", up to 1,5 is "sehr gut", up to 2,5 is "gut", up to 3,5 is "befriedigend", up to 4,0 "ausreichend".
- (3) Calculation of the final grade is to be carried out by the chair of examiners; the certificate or an attached document shall indicate how the final grade was calculated.

- (4) <sup>1</sup>In addition to the degree certificate, an ECTS grading table will be issued as stipulated in the ECTS guidelines in the version dated 6 February 2009. <sup>2</sup>This table displays what percentage of programme graduates in a given time frame received the same final grade as described in para 2. <sup>3</sup>Those programme graduates who were awarded their diplomas in the previous four semesters shall serve as the reference group as long as it includes at least 30 persons. <sup>4</sup>The date of the last examination shall be decisive in assigning graduates to a particular semester. <sup>5</sup>If the minimum number of graduates is not reached, the number of previous semesters is to be extended until the minimum number is reached. <sup>6</sup>If the programme of study does not yet have as many graduates as the minimum number required of the reference group, an ECTS grading table will be issued as soon as the minimum number is reached. <sup>7</sup>For degrees awarded before the minimum number is reached, an ECTS grading table will be issued at a later date upon request once the minimum number has been reached. <sup>8</sup>The graduate's own graduating class is also to be included in the reference group. <sup>9</sup>The size of the reference group and the time frame is to be included.

## **§ 18**

### **Passing the master's examination**

- (1) Passing the master's examination requires a grade of "sufficient" or better for the master's thesis and each examination; in addition, all 120 credit points (including the master's thesis) must be earned and any requirement in connection with § 2 para 2 must be fulfilled. Failed core elective examinations are not relevant to passing the master's examination as long as the requisite credit points under the terms of sentence 1 were earned.
- (2) <sup>1</sup>If the candidate has not fulfilled the requirements given in para 1 by the end of his or her sixth semester due to reasons under his or her control, then the candidate shall be considered as having failed the master's examination on the first attempt. <sup>2</sup>Examinations that were taken on time and for which the candidate received a passing grade need not be repeated.
- (3) <sup>1</sup>If the missing examinations are not passed by the student within a year of the deadline given in para 2 sentence 1 for reasons under his or her control, or if all possibilities to repeat the examinations have been exhausted, then the candidate shall be considered as having failed the master's examination on the final attempt. <sup>2</sup>The deadline shall not take into account periods of leave and periods during which the candidate withdrew from study. <sup>3</sup>Notice shall be sent to inform the candidate that he or she has failed the examination on the final attempt in accordance with § 4 para 5 in conjunction with Article 41 BayVwVfG as amended. <sup>4</sup>The board of examiners may grant the student an extension of the deadline stated in sentence 1 for circumstances beyond his or her control.

## **§ 19**

### **Repeating examinations**

- (1) Any examination that was failed can be repeated.
- (2) Failed core elective examinations need not be repeated.
- (3) Voluntarily repeating examinations that were already passed or the master's thesis is not permitted.
- (4) <sup>1</sup>The master's thesis can be repeated with a new topic if the student receives a failing grade for the thesis. <sup>2</sup>Repeating the master's thesis for a second time is not permitted. <sup>3</sup>If a master's thesis that has been started is not passed due to the maximum duration of study according to § 18 para 2, the master's thesis can be continued as a repetition until the scheduled deadline; the student must notify the Examinations Office in writing by the end of the maximum duration of study according to § 18 para 2. <sup>4</sup>If the master's thesis is then deemed "unsatisfactory", the candidate is considered to have failed the master's examination on the final attempt.
- (5) Administrative measures shall be taken to ensure that it is possible to repeat the failed examinations or a failed master's thesis within six months.

## **§ 20**

### **Notice of failing the master's examination**

If a candidate has failed the master's examination on the final attempt, then a written notice shall be sent to him or her within two weeks upon request; the notice shall include a list of the grades for the individual examinations.

## **§ 21**

### **Access to examination documents**

- (1) Following the conclusion of the examinations process, the candidate may upon request be granted access to his or her graded examination documents including the assessor's report as well as the record sheets for the examination.
- (2) <sup>1</sup>Such requests are to be made no later than one month after the degree certificate is awarded. <sup>2</sup>If the candidate was prevented from meeting the deadline in sentence 1 due to reasons beyond his or her control, Article 32 BayVwVfG shall apply.

## § 22

### Defects in the examination proceedings

- (1) If it is shown that there were defects in the examination proceedings which influenced the examination results, the candidate or the board on its own initiative shall request that the relevant examinations be repeated.
- (2) Any defects in the examination proceedings or circumstances preventing the candidate from completing the examination are to be reported to the examiner or the chair of examiners without delay, and in general, prior to notice being given of the examination results.
- (3) Claims under the terms of paragraph 1 must be made within six months of the examination's conclusion.

## § 23

### Non-appearance, withdrawal from examinations, cheating, and policy violations

- (1) <sup>1</sup>Candidates who have registered for an examination may withdraw without providing a rationale by withdrawing by the deadline announced by the board of examiners. <sup>2</sup>If the candidate fails to appear for an examination for which he or she was registered for reasons under his or her control or withdraws subsequent to the deadline stated in sentence 1, he or she will be considered to have failed the examination.
- (2) <sup>1</sup>The grounds for failing to appear - or as long as paragraph 1 sentence 1 does not apply, for withdrawal must be submitted to the board of examiners without delay and substantiated by *prima facie* evidence. <sup>2</sup>The same applies to inability to take the examination due to circumstances arising during the examination. <sup>3</sup>Inability to take the examination due to illness must be documented with a medical certificate. <sup>4</sup>If the board of examiners accepts the reasons given, a new examination time is to be offered under the terms of § 9 within six months.
- (3) If withdrawal or failure to appear is caused by reasons beyond the candidate's control, examinations elements completed up to that point are to be recognized.
- (4) <sup>1</sup>If the candidate attempts to influence the result on an examination by cheating or making use of materials that are not permitted, he or she shall be given the grade "*nicht ausreichend*" ["unsatisfactory"]. <sup>2</sup>Any candidate who causes considerable disruption to the course of an examination may be removed by shall be given invigilator and barred from continuing the examination. In this case, he or she shall be given the grade "*nicht ausreichend*" ["unsatisfactory"].
- (5) <sup>1</sup>If cheating in the form of plagiarism is detected, the examination will be graded as "*nicht ausreichend*" ["unsatisfactory"]. <sup>2</sup>The accusation of plagiarism is justified if the examinee has attempted to influence the result of the examination in a way that is favourable to him or her by

failing to specifically mark passages taken verbatim from other authors and also explanations of his or her work that are closely based on the thought processes of other authors.<sup>3</sup>The determination shall be made by the relevant examiner or invigilator and shall be recorded in the files.<sup>4</sup>In serious cases or in the case of repetition, the entire examination can be declared failed and, in particularly serious cases, the right to repeat the examination can also be withdrawn and the entire examination can be declared failed on the final attempt.<sup>5</sup>The decision on this is taken by the board of examiners.<sup>6</sup>In deciding on the imposition of the sanction, both the quantity of the plagiarism and its significance for the work must be assessed in each individual case.

## **§ 24**

### **Invalidating the master's examination**

- (1) If a candidate cheats during an examination and this fact does not come to light until after the degree certificate is issued, the board of examiners may retroactively change the relevant grades accordingly and declare the master's examination to be failed either in part or entirely.
- (2) <sup>1</sup>If the registration requirements for the examinations were not met by the candidate without this having involved any cheating on the part of the candidate, and if this fact does not come to light until after the degree is issued, then this fault shall be considered rectified via the candidate's passing of the master's examination. <sup>2</sup>If the candidate registered by intentionally providing false information, the board of examiners shall decide whether to revoke any unlawful administrative acts on the basis of the general principles of administrative law.
- (3) The candidate shall be permitted to make a statement prior to the decision.
- (4) The inaccurate degree certificate is to be taken away and, if applicable, replaced with a new one.

## **§ 25**

### **Awarding the master's degree; degree certificate**

- (1) <sup>1</sup>A diploma and a certificate for successful completion of the master's examination are to be issued within four weeks of demonstrating completion of the required module credits. <sup>2</sup>The diploma is to include the title of the programme of study. <sup>3</sup>It is to be signed by the Dean of the Faculty of Mathematics, Physics & Computer Science and stamped with the seal of the University. <sup>4</sup>Upon issuance of the diploma, the graduate is given the right to bear the title "Master of Science". <sup>5</sup>This title is to be abbreviated "M.Sc." and placed behind the surname.
- (2) <sup>1</sup>The certificate is to include the title of the programme of study the minor selected, the final grade, all module examinations and module examination elements undertaken (including credit points and grades achieved), as well as the topic of the master's thesis and the grade received for

the thesis. <sup>2</sup>The certificate is to be signed by the chair of examiners. <sup>3</sup>The date to be used is the day of the last examination or the date on which the last graded assignment was submitted. <sup>4</sup>An English translation of the diploma and a Diploma Supplement shall be issued in addition; the Diploma Supplement shall be signed by the chair of examiners. <sup>5</sup>In addition to the certificate, an ECTS grading table is to be issued under the terms of § 17 para 4.

- (3) Revoking the degree "Master of Science" is to be carried out in accordance with the legal regulations (Article 101 BayHIG).

## **§ 26**

### **Academic advising**

- (1) General student advising is offered by the University of Bayreuth's Student Advising Office.
- (2) The programme advisor for the master's programme Computer Science is to be responsible for questions relating to the master's programme Computer Science (i.e. structure of the programme, organization of studies, course selection, and questions concerning examinations).
- (3) <sup>1</sup>In the course of the semester, the programme coordinator shall offer advising for all students enrolled in the master's programme. <sup>2</sup>Advising is recommended especially for the following persons:
  - new students;
  - students who recently failed an examination;
  - students who have considerably less than 30 credit points per semester;
  - students transferring from a different degree programme or university,
  - students planning a semester abroad.

## **§ 27**

### **Entry into effect and termination**

- (1) <sup>1</sup>These regulations go into effect on 26 September 2018. <sup>2</sup>They shall be valid for students enrolling in this programme in Winter Semester 2018/19 or later. All other students are to carry out their studies under the terms of the previous examination regulations for the master's programme Computer Science at the University of Bayreuth, dated 20 June 2012 (AB UBT 2012/022) and last amended on 1 December 2016 (AB UBT 2016/069). <sup>4</sup>Upon written request to the board of examiners, such students may carry out their studies under the terms of the present regulations.

- (2) The examination regulations for the master's programme Computer Science at the University of Bayreuth, published on 20 June 2012 (AB UBT 2012/022), last amended on 1 December 2016 (AB UBT 2016/069), shall expire subject to the provision of paragraph 1 sentence 3.\*)

\*)The set of amendments dated 9 January 2023 contains the following provisions with regard to the effective date:

These examination regulations shall take effect on 2 January 2023.

**Annex: Modules, credit points, and types of examinations**

<b>Abbrevia- tion</b>	<b>Area / Modules</b>	<b>Credit points*</b>	<b>Examination form**</b>
	<b>Area A: Computer Science</b>		
INF 202	Computer Graphics I	5	K or M
INF 209	Animation and Simulation	5	K or M
INF 212	Theoretical Computer Science II	5	K or M
INF 214	Foundations of Modelling	5	K or M
INF 217	Human-Computer-Interaction II	5	K or M
INF 218	Programming, Data Analysis and Deep Learning in Python	5	K or M
INF 219	Intelligent User Interfaces	5	K or M
INF 305	High Performance Computing	8	K or M
INF 307	Data Analytics	8	K or M
INF 315	Robotics II	5	K or M
INF 316	Pattern Recognition	5	K or M
INF 317	Computer Graphics II	5	K or M
INF 318	Computer Graphics III	5	K or M
INF 320	Parallel Algorithms	5	K or M
INF 321	Foundations of Semi-structured Data	5	K or M
INF 324	Software Product Line Engineering	5	K or M
INF 326	Foundations of Data Management	5	K or M
INF 327	Human-Computer-Interaction III	5	K or M
INF 328	Advanced Information Systems	5	K or M
	<i>to be earned:</i>	<i>35 to 45</i>	
	<b>Area B: Projects</b>		
INF 351	Small Master Project	8	P (V and H)
INF 352	Large Master 's Project	15	P (V and H)
INF 353	Large Master 's Seminar	8	L
	<i>to be earned:</i>	<i>30 to 31</i>	
	<b>Area C: Languages:</b>		
	Modules to improve one's English:		
SZ 211	EAP-1 English for Study Abroad	3	K or M
SZ 212	EAP-1 Academic Presentation Skills	3	K or M
SZ 212	EAP-1 Scientific & Technical Presentation	3	K or M
SZ 221	EAP-2 Academic Discourse and Debate	3	K or M
SZ 222	EAP-2 Scientific and Technical Writing	3	K or M
SZ 231	UNlcert-3 advanced course 3	3	K or M

<b>Abbreviation</b>	<b>Area / Modules</b>	<b>Credit points*</b>	<b>Examination form**</b>
SZ 232	UNIcert-3 specialization course, general language skills I	3	K or M
SZ 233	UNIcert-3 specialization course, general language skills II	3	K or M
SZ 234	UNIcert-3 specialization course, general language skills III	3	K or M

	Modules to improve one's German:		
SZ 811	DaF-G1, level A1.1	6	K or M
SZ 812	DaF- G2, level A1.2	6	K or M
SZ 821	DaF-G3, level A2	6	K or M
SZ 822	DaF-G4, level B1	6	K or M
SZ 831	DaF-A1, level B2.1, mid-level grammar 1	3	K or M
SZ 832	DaF-A1, level B2.1, verbal skills 1	3	K or M
SZ 833	DaF-A1, level B2.1, working with texts 1	3	K or M
SZ 834	DaF-A1, level B2.1, listening comprehension 1	3	K or M
SZ 841	DaF-A2, level B2.2, mid-level grammar 2	3	K or M
SZ 842	DaF-A2, level B2.2, verbal skills 2	3	K or M
SZ 843	DaF-A2, level B2.2, working with texts 2	3	K or M
SZ 844	DaF-A2, level B2.2, listening comprehension 2	3	K or M
SZ 851	DaF-SA1, Level C1, Intercultural Cultural Studies	3	K or M
SZ 852	DaF-SA2, level C1, Germany in the current press	3	K or M
SZ 853	DaF-SF1, Level C1, German for Business Students 1	3	K or M
SZ 854	DaF-SF1, Level C1, German for Business Students 2	3	K or M
	<i>to be earned:</i>	<i>15 to 24</i>	
	<b>Area D: Master's thesis</b>		
INF 301	Master's Thesis	30	see § 12
	<i>to be earned:</i>	<i>30</i>	
	<b>Total</b>	<b>120</b>	

(\*) For the credit points (LP) to be earned per area and in total, see § 3.

(\*\*) The forms of examination are according to § 11: Written exam (K), oral exam (M), presentation with elaboration (V), written homework (H) or portfolio exam (P).