

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

<http://www.uni-bayreuth.de/de/universitaet/organisation/abt1/amtliche-bekanntmachungen/index.html>.

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**

amended version of 25 July 2019

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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Annex: Modules, credit points, and types of examinations

§ 1

Purpose of the master's examination

1The 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 expert knowledge provided for in the present regulations. 2At the same time it determines whether the candidate possesses the requisite understanding of subject-related and interdisciplinary connections to pursue further independent academic research. 3Upon the candidate's passing of the master's examination, 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
 3. evidence of English language skills as determined by IELTS Academic with a minimum score of 6.5 or TOEFL (IbT) with at least 88 or an equivalent certificate.

- (2) ¹In cases in which the degree obtained in accordance with Art. 63 para 1 BayHSchG differs significantly from the required achievements in para 1 number 1, applicants may be admitted on condition that, in addition to the assessment components to be completed in the master's programme, they also successfully complete study and examination work amounting to a maximum of 15 credit points from the bachelor's programme Computer Science at the University of Bayreuth within one year; otherwise, the requirements for admission to the programme are deemed not to have been met. ²In such cases, the examination and study regulations for the bachelor's programme Computer Science (as amended) shall apply.
- (3) Decisions such as those described in paragraph 2 are to be made by the board of examiners established under the terms of § 4.

§ 3

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

- (1) The master's programme Computer Science is divided into the following areas:
- a) The area *Computer Science* comprises modules totalling between 35 and 45 credit points. The Computer Science modules are to be offered by at least two different module coordinators. Regularly offered Computer Science modules are listed in the annex. The board of examiners may approve additional Computer Science modules upon request.
 - b) The area *Projects* comprises modules totalling between 30 and 31 credit points. If multiple project modules are selected, they must differ with regard to the topic. At least one big master's project and at most one big master's seminar must be selected.
 - c) The area *Languages* comprises modules totalling 15 to 24 credit points from the Language Centre towards improving one's command of English and/or German. Selection and possible combinations of modules is governed by the module handbook. If there are no further language modules available for students according to their language proficiency, then up to 15 credit points of German language modules from the field of computer science can be applied instead.
 - d) The area *Master's Thesis* comprises one module totalling 30 credit points.
- (2) The degree programme, including all examinations, is offered in the English language.
- (3) ¹Model curricula are provided to serve as a guide when selecting modules. ²Consultation with the programme advisor is recommended (§26 para 2) before deviating from the model course schedules.

- (4) The standard period of study is four semesters, including the examination periods and the master's thesis.
- (5) A total of 120 credit points must be earned in accordance with the European Credit Transfer System (ECTS).
- (6) New students may begin the programme in the winter semester or the summer semester.

§ 4

Board of examiners

- (1) ¹A board of examiners shall be formed to make the necessary decisions with regard to admission to the master's programme and the organizational execution of the master's examination. ²The board of examiners shall carry out the examination procedure in accordance with the present regulations and make all decisions with the exception of the actual examinations and the assessment thereof. ³It consists of four voting members from among the professors of the Computer Science Department (Art. 2 para 1 sentence 1 number 1 BayHSchPG) as well as one advisory representative of the students and one advisory representative of the research associates. ⁴The members of the board of examiners and their substitutes are elected by the faculty council of the Faculty of Mathematics, Physics & Computer Science for a three-year term. ⁵The board of examiners shall elect a chair and deputy chair from among its members who are professors.
- (2) ¹The 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. ²The decisions taken by the board of examiners in its meetings are to be made on the basis of majority vote. ³Vote abstention, secret voting, and proxy voting are prohibited. ⁴If votes are equally divided among its members, the chair shall have the casting vote.
- (3) ¹The chair of examiners shall ensure that the provisions of these regulations are followed. ²He or she shall convene the meetings of the board of examiners and shall act as chair of its proceedings and decisions. ³With regard to matters that cannot be postponed, he or she is authorized to make decisions on behalf of the board of examiners. ⁴He or she must promptly inform the other members of any such decision - at the next meeting at latest. ⁵In 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. 6The chair can delegate tasks to members of the board of examiners.

- (4) 1The 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. 2The board of examiners is responsible for compiling the module handbook and publishes it university-wide at the beginning of each lecture period.
- (5) 1Any notices the board of examiners issues under the terms of the present regulations are to be published together with a rationale and information concerning legal remedies available. 2Notices of appeal shall be issued by the president in consultation with the board of examiners.

§ 5

Examiners and co-examiners

- (1) 1Any person who is authorized to administer examinations at institutions of higher education according to the Bavarian Higher Education Act (*BayHSchG*) and the *HSchPrüferV*, as amended, may serve as examiner. 2Any member of the University of Bayreuth who is a graduate of an equivalent or comparable programme of study may serve as co-examiner.
- (2) 1If 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. 2Authorization to administer examinations shall generally remain valid for up to three years.
- (3) 1Unless otherwise decided by the chair of examiners, the relevant instructor shall also serve as examiner. 2If 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 41 para 2 of the *BayHSchG*.

- (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 18 para 2 of the *BayHSchG*.

§ 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) Awarding credit for competencies (learning outcomes) is governed by Article 63 para 1 and 2 of the Bavarian Higher Education Act (*BayHSchG*).
- (2) 1If credits are awarded for competencies, the grades are to be carried over and included when calculating the final grade, as long as the grading systems are analogous. 2If 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:
$$x = 1 + 3 \cdot (N_{\max} - N_d) / (N_{\max} - N_{\min})$$
where x is the grade to be calculated, N_{\max} is the highest possible grade, N_{\min} is the highest passing grade, and N_d 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. 3If the grading systems are not analogous, the remark "*bestanden*" ["passed"] shall appear in place of a grade; in this case, the course shall not be taken into account when calculating the final grade. 4The board of examiners in consultation with the relevant representative from the subject area shall decide whether the requirements for credit transfer have been met. 5If credit transfer is denied, the person concerned can request a review of the decision by submitting a request to the University Governing Board within four weeks of notification of denial. 6The 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.

§ 9

Times for holding examinations; announcing examination times and examiners

- (1) 1Examinations will be held once per semester. 2The examinations are generally held from the last week of lectures to the beginning of the following semester. 3An additional examination time may be scheduled for the beginning of the following semester.
- (2) 1If 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 the start of the course. 2A 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) 1The examinations serve to demonstrate that the examinee has satisfied the desired learning outcomes of the individual modules. 2They are based on the desired learning outcomes of the relevant courses.

§ 11

Forms of examination

- (1) 1Examinations are carried out in the form of written examinations, oral examinations, portfolio assessments, tests, presentations, or written assignments. 2The examinations are held in the English language. 3For oral examinations, the examinee may also opt for the German language.
- (2) 1Assessment of examinations is to be carried out according to the process determined by the board of examiners. 2Notifications are not sent individually. 3Students 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) 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.
- (4) ¹Written 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; the duration of the examination should be suited to the requirements of the corresponding course. ²The relevant examiner shall decide which resources may be used during the examination. ³A written record of the examination is to be made. ⁴The invigilator shall confirm the accuracy of the record by providing his or her signature. ⁵The examination record sheet is to include all aspects of the examination that could be relevant to determining the grade.
- (5) ¹If a candidate arrives to the examination late, he or she shall not be given additional time to finish the examination. ²Candidates may leave the room during an examination if permission is granted by the invigilator. ³The time and duration of absence are to be noted on the question paper.
- (6) ¹Written examinations are generally graded by the examiner who was appointed by the chair of examiners. ²The relevant examiner shall determine the grades for the written examinations under the terms of § 16. ³An assessment of each written examination shall be provided no later than four weeks after the examination. ⁴If an examinee receives the grade "*nicht ausreichend*" ["unsatisfactory"] on a written examination, a second examiner shall also provide an assessment. ⁵The graded written examination shall remain in the examination records.
- (7) ¹Oral examinations are to be held over a period of 20 to 50 minutes, depending on the requirements of the particular courses. ²Oral examinations are to be administered by two examiners or one examiner and one co-examiner. ³One examiner or the co-examiner shall complete an examination record sheet for the oral examination that includes the following: 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. ⁴The record sheet is to be signed by the two examiners or by the examiner and co-examiner. ⁵The examiners are to determine the grades for performance in the oral examinations under the terms of § 16.

- (8) ¹If 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. ²The examination can be conducted without an audience if so requested by the candidate or the examiner. ³Discussion and announcement of the examination results (grade) shall not be conducted in public.
- (9) ¹In 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. ²These individual examination elements may be written, oral, and/or practical assignments (under paras 4, 7, 10, 11, and 12) which taken as a whole constitute the module examination for the relevant module. ³The subject of the assessment of a portfolio assessment shall be all the student's examination elements pursuant to § 16 para 2; in deviation from this, the examination elements may be weighted as indicated in the annex.
- (10) ¹A test is an oral presentation with written documentation (if applicable) of a programming activity according to predefined criteria. ³The examiner shall communicate the form and scope of the assignment to the students at the beginning of the course. ⁴The assessment component is to be graded under the terms of § 16.
- (11) ¹Presentations with any accompanying paper will be evaluated by one examiner. ²The examiner shall communicate the form and scope of the assignment to the students at the beginning of the course. ³The overall grade (presentation and any accompanying paper) is determined under the terms of § 16.
- (12) ¹Written homework assignments (e.g. completing worksheets) are assigned and completed over the course of the module and assessed by the examiner using a point system. ²The requirements (e.g. minimum percentage of the achieved points compared to the total number of points) will be announced by the examiner at the beginning of the relevant course.

§ 12

Master's thesis

- (1) The candidate's master's thesis should demonstrate that he or she is able to utilize relevant resources and adequately address and write about a current issue in the field using scientific methods. ²The topic is to be chosen from a field of computer science.
- (2) ¹Topics for master's theses are generally assigned and supervised by two examiners (according to § 5), whereby at least one of them belongs to the Department of Computer Science within the Faculty of Mathematics, Physics & Computer Science. ²The topic of a master's thesis must be confirmed by the chair of examiners prior to assignment of the topic. ³The topic is to be rejected if the criteria listed in para 1 are not met. ⁴Record is to be made of the date on which the topic was assigned.
- (3) ¹The master's thesis is to be integrated into the programme of study and shall correspond to a workload of 900 hours. ²The master's thesis is to be submitted no later than six months after the topic was assigned. ³In cases in which the candidate was not at fault for missing a deadline, at the request of the candidate the chair of examiners, after having heard the supervisor, can extend the deadline by up to eight weeks. ⁴If 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. ⁵Theses that are not submitted by the stated deadline are to be graded as "*nicht ausreichend*" ["unsatisfactory"].
- (4) ¹The master's thesis is to be submitted in the English language. ²The 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. ³A synopsis of the master's thesis is also to be included. ⁴The title and synopsis must be given in both German and English.
- (5) ¹The thesis is to be submitted to the Examinations Office by the deadline given. ²Record is to be made of the date on which the thesis was submitted.
- (6) ¹Three typewritten, paginated, and bound copies of the master's thesis are to be submitted. ²The thesis must contain a table of contents and bibliography. ³An additional copy is to be submitted electronically.

- (7) ¹The candidate may return the topic to the board of examiners once within the first four weeks. ²The supervisor should submit a corresponding statement. ³Paragraphs 1 to 6 also apply when assigning and working on a new topic.
- (8) ¹The Examinations Office forwards the thesis to the examiners (under the terms of § 5) for written assessment. ²The examiners make a recommendation to the board of examiners to accept or reject the thesis. ³The assessment is to be made available no later than two months after submission of the thesis. ⁴In special cases, the board of examiners may call upon an additional examiner, especially if the grades assigned vary significantly.
- (9) ¹The content of the master's thesis is to be described to the examiners in a presentation (viva voce). ²The presentation is followed by a discussion that places the content of the master's thesis in a broader context. ³The duration of the presentation and discussion should be between 30 and 60 minutes. ⁴The presentation takes place before the examiners and the public. ⁵Upon request, the presentation may not be public. ⁶For the assessment components (thesis and viva voce), each examiner will award a grade in accordance with § 16. ⁷The grade for the master's thesis shall be determined by taking the average of the grades assigned and truncating (not rounding) the number to one decimal digit.
- (10) If the master's thesis is deemed "*nicht ausreichend*" ["unsatisfactory"], the chair of examiners or his or her deputy shall inform the candidate of the decision.
- (11) One copy of the master's thesis is to remain on record.

§ 13

Credit point system

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

§ 14

Consideration of extenuating life circumstances

- (1) ¹The utilization of protection periods of the Maternity Protection Act (MuSchG) must be guaranteed. ²Upon request, it must be ensured that parental leave can be taken in accordance with the Federal Parental Benefits and Parental Leave Act (BEEG) as well as the times for care of a close relative within the meaning of § 7 para 3 of the Care Time Act (PflegeZG) who is in need of care within the meaning of §§ 14, 15 of Book XI of the Eleventh Book of the Social Code (SGB XI). ³The appropriate evidence must be furnished; any changes in status are to be reported immediately.
- (2) ¹If 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. ²Corresponding evidence must be furnished; medical certificates must be presented in the case of illness. ³Any changes in status are to be reported immediately.

§ 15

Consideration of the special needs of disabled persons

¹For the sake of ensuring equal opportunities, the particular needs of disabled examinees are to be appropriately accommodated. ²Upon written request, the board of examiners shall determine on the basis of the degree of disability in what form a disabled examinee is to take the examination; alternatively, an extension may be granted. ³Evidence of disability is to be provided by way of a medical certificate which confirms that the candidate is unable (entirely or in part) to take the examination in its usual form due to a lasting or permanent disability. ⁴The request is to be submitted together with the examination registration. ⁵If the request is submitted later, it shall only be valid for subsequent examinations.

§ 16

Examination grades

- (1) (1) The following grading scale will be used in the assessment of the individual 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 performance) | = 2,7 or 3,0 or 3,3 |
| "ausreichend" (performance that meets the minimum requirements despite deficiencies) | = 3,7 or 4,0 |
| "nicht ausreichend" (performance that does not meet the minimum requirements due to considerable deficiencies) | = 5,0 |

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

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

§ 17

Final grade

- (1) ¹The overall grade of the master's examination is calculated from the average of the grades from passed modules weighted with the credit points. ²The grade of the master thesis is included in the average with 1.5 times the weight. ³In this calculation, the grade shall only be given to one decimal place; the remaining digits are to be truncated (not rounded).
- (2) Candidates with a grade average of up to 1,2 the grade "excellent" as the overall grade for the master's examination, up to 1,5 the grades "very good", up to 2,5 "good", up to 3,5 "satisfactory", up to 4,0 "sufficient".
- (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) ¹In 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. ²This table displays what percentage of programme graduates in a given time frame received the same final grade as described in para 2. ³Those 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. ⁴The date of the last examination shall be decisive in assigning graduates to a particular semester. ⁵If the minimum number of graduates is not reached, the number of previous semesters is to be extended until the minimum number is reached. ⁶If the programme of study does not 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. ⁷For 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. ⁸The graduate's own graduating class is also to be included in the reference group. ⁹The size of the reference group and the time frame is to be included.

§ 18

Passing the master's examination

- (1) ¹Passing the master's examination requires a grade of "sufficient" or better for the master's thesis and each module; 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) ¹If the candidate has not fulfilled the requirements given in para 1 by the end of his or her sixth semester as a full-time student 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. ²Examinations that were taken on time and for which the candidate received a passing grade need not be repeated.
- (3) ¹If 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. ²The deadline shall not take into account periods of leave and periods during which the candidate withdrew from study. ³A notice of having failed on the final attempt will be sent under the terms of § 4 para 5 in conjunction with Article 41 BayVwVfG (as amended). ⁴The 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) ¹The master's thesis can be repeated with a new topic if the student receives a failing grade for the thesis. ²Repeating the master's thesis for a second time is not permitted. ³If the commenced master's thesis 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 end of the designated deadline; the student must inform the Examinations Office in writing by the end of the maximum duration of study according to § 18 para 2. ⁴If the master's thesis is deemed "*nicht ausreichend*" ["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 in the individual subject areas.

§ 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) ¹Such requests are to be made no later than one month after the degree certificate is awarded. ²If the candidate was prevented from meeting the deadline in sentence 1 due to reasons beyond his or her control, Article 32 of the Bavarian Administrative Process Act (*Bayerisches Verwaltungsverfahrensgesetz*) 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 (whether before or during 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) ¹Candidates who have registered for an examination may withdraw without providing a rationale by withdrawing by the deadline announced by the board of examiners. ²If 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) ¹The grounds for failing to appear - or as long as paragraph 1 sentence 1 do not apply - for withdrawal must be submitted to the board of examiners without delay and substantiated by *prima facie* evidence. ²The same applies to inability to take the examination due to circumstances arising during the examination. ³Inability to take the examination due to illness must be documented with a medical certificate. ⁴If 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) ¹If 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"]. ²A candidate who causes considerable disruption to the course of an examination may be removed by the invigilator and barred from continuing the examination. In this case, he or she shall be given the grade "*nicht ausreichend*" ["unsatisfactory"] for the examination.
- (5) ¹If a candidate plagiarizes, the relevant examination is to be graded as "*nicht ausreichend*" ["unsatisfactory"]. ²The accusation of plagiarism is justified if the candidate has attempted to influence the result of the examination in a way that is favourable to him or her by failing to specify passages that were borrowed verbatim from other authors, and also by failing to make special mention of explanations of his or her work that are closely based on the thought processes of other authors.

³The determination is made and recorded by the relevant examiner or invigilator. ⁴In 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 be revoked and the entire examination can be declared failed on the final attempt. ⁵Such decisions are made by the board of examiners. ⁶When making decisions with regard to imposing sanctions, 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) ¹If 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. ²If 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; diploma

- (1) ¹A diploma and a degree certificate for successful completion of the master's examination are to be issued within four weeks of demonstrating completion of the required module credits. ²The diploma is to include the title of the programme of study. ³It is to be signed by the Dean of the Faculty of Mathematics, Physics & Computer Science and stamped with the seal of the University. ⁴Upon issuance of the diploma, the graduate is given the right to bear the title "Master of Science". ⁵This title is to be abbreviated "M.Sc." and placed behind the surname.

- (2) ¹The certificate is to include the title of the programme of study and 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. ²The certificate is to be signed by the chair of examiners. ³The date to be used is the day of the last examination or the date on which the last assessment component was completed. ⁴An 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. ⁵In 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 governed by Article 69 *BayHSchG*.

§ 26

Academic advising

- (1) General student advising is offered by the 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) ¹In the course of the semester, the programme advisor shall offer advising for all students enrolled in the master's programme. ²Programme-specific 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, termination

- (1) ¹These regulations go into effect on 26 September 2018. ²They shall be valid for students enrolling in this programme in the winter semester of 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 2012/022) and last amended on 1 December 2016 (AB UBT 2016/069). ⁴Upon 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 contains the following provisions with regard to the effective date:

¹These regulations go into effect on 26 July 2019. ²They shall be valid for all students enrolling in this programme for the first time in the winter semester of 2019/2020 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 25 September 2018 (AB UBT 2018/051). ⁴Notwithstanding sentence 3, they may organize their studies in accordance with the present regulations upon written request to the board of examiners.

Annex: Modules, credit points, and types of examinations

| <i>Abbreviation</i> | <i>Area Modules</i> | <i>Credit points*</i> | <i>Form of examination **</i> |
|---------------------|--------------------------------------------------------------|-----------------------|-----------------------------------|
| | Area A: Computer Science | | |
| 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 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 | Theoretical Computer Science III | 5 | K or M |
| INF 324 | Software Product Line Engineering | 5 | K or M |
| INF 326 | Foundations of Data Science | 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> | 35 to 45 | |
| | Area B: Projects | | |
| INF 351 | Small Master Project | 8 | P (V and H) |
| INF 352 | Big Master Project | 15 | P (V and H) |
| INF 353 | Big Master Seminar | 8 | V |
| | <i>to be earned:</i> | 30 to 31 | |
| | Area C: Languages | | |
| | 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 | UNIcert-3 advanced course 3 | 3 | K or M |
| 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 social studies | 3 | K or M |
| SZ 852 | DaF-SA2, level C1, Germany in the press | 3 | K or M |
| SZ 853 | DaF-SF1, level C1, German for business students 1 | 3 | K or M |
| SZ 854 | DaF-SF2, level C1, German for business students 2 | 3 | K or M |
| | | | |
| | <i>to be earned:</i> | 15 to 24 | |
| | Area D: Master's Thesis | | |
| INF 301 | Master's Thesis | 30 | see § 12 |
| | <i>to be earned:</i> | 30 | |
| | Total | 120 | |

(*) For the total credit points to be earned in each area, see § 3.

(**) Forms of examination under the terms of § 11:

K = "Klausur" = "written examination";

M = "mündliche Prüfung" = "oral examination";

V = "Vortrag mit Ausarbeitung" = "presentation and accompanying paper";

H = "schriftliche Hausaufgaben" = "written homework assignment";

P = "Portfolioprüfung" = "portfolio assessment".