These degree programme and examination regulations have been worded carefully to be up to date; however, errors cannot be completely excluded. The official German text available from L1 - Legal Affairs and Academic Quality Management is the version that is legally binding.

**Note**: Students who started their studies before the latest amendment came into effect are requested to also comply with previous amendments and the respective transitory provisions.

# General Examination Regulations for the Bachelor's degree programmes in Data Science, Mathematics, Industrial Mathematics and Economics and Mathematics and the Master's degree programmes in Data Science, Mathematics, Computational and Applied Mathematics and Economics and Mathematics at the Faculty of Sciences of Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU) – ABMPOMathe/NatFak – Dated 11 March 2015

amended by statutes of 02 March 2017 15 July 2019 20 August 2020 11 March 2021 05 August 2021

Based on Section 13 (1)(2), Section 43 (5), Section 58 (1) and Section 61 (2)(1) of the Bavarian Higher Education Act (Bayerisches Hochschulgesetz, **BayHSchG**), FAU enacts the following degree programme and examination regulations:

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# **Part I: General Provisions**

Section 1 Scope, Purpose of the Bachelor's and Master's Examination (1) <sup>1</sup>These degree programme and examination regulations govern the examinations for the Bachelor's degree programmes in Data Science, Mathematics, Industrial Mathematics and Economics and Mathematics and the Master's degree programmes in Data Science, Mathematics, Computational and Applied Mathematics and Economics and Mathematics leading to a Bachelor of Science or Master of Science degree. <sup>2</sup>They are supplemented by the respective **degree programme and examination regulations**.

(2) <sup>1</sup>The Bachelor of Science is an undergraduate degree that qualifies graduates for professional work. <sup>2</sup>The purpose of the Bachelor's examination is to assess whether students:

- have acquired fundamental knowledge as well as methodological understanding of the examined subjects
- have the ability to employ scientific methods and knowledge independently
- are prepared for the transition to professional practice.

(3) <sup>1</sup>The Master of Science is a postgraduate degree that qualifies graduates for further research as well as professional work. <sup>2</sup>The Master's examination serves to determine whether students:

- have acquired in-depth knowledge of fundamental concepts and research findings in the subjects of their Master's degree programme

- are capable of working independently according to scientific methods and of developing these further
- are prepared for professional practice.

#### Section 2 Degrees

(1) Passing the examinations results in the following degrees, depending on the type of degree programme:

- 1. The degree of Bachelor of Science (abbreviation: BSc) for passing the Bachelor's examination
- 2. The degree of Master of Science (abbreviation: MSc) for passing the Master's examination.
- (2) The degree may also be used with the addition '(FAU Erlangen-Nürnberg)'.

# Section 3 Structure of the Bachelor's Degree Programme, Standard Duration of Study, Teaching and Examination Language, Starting Date

(1) <sup>1</sup>Students must complete the Grundlagen- und Orientierungsprüfung (**GOP**) covering the foundations of the Bachelor's degree programme by the end of the second semester. <sup>2</sup>The Bachelor's degree programme includes a four-semester foundation phase worth 120 ECTS credits. <sup>3</sup>The subsequent part of the Bachelor's degree programme until the end of the standard duration of study consists of the specialisation phase lasting two semesters and including examinations worth 60 ECTS credits. <sup>4</sup>To complete the programme successfully, students shall achieve 180 ECTS credits, which include all required module examinations and the Bachelor's thesis module.

(2) The standard duration of a Bachelor's degree programme including all examinations is six semesters.

(3) <sup>1</sup>The teaching and examination language in the Bachelor's degree programme is German. <sup>2</sup>Individual modules may be taught and assessed in English. <sup>3</sup>Further details are stipulated in the **degree programme and examination regulations** and the module handbook. <sup>4</sup>In any case of uncertainty, the examination language shall be the same as the teaching language. <sup>5</sup>The **degree programme and examination regulations** regulations can stipulate provisions deviating from sentences 1 and 2 and allow for other teaching and examination languages.

(4) The degree programme shall begin in the winter semester.

# Section 4 Structure of the Master's Degree Programme, Standard Duration of Study, Teaching and Examination Language, Starting Date

(1) The Master's degree programme builds on the contents of the Bachelor's programme; it is more research-oriented.

(2) <sup>1</sup>The Master's degree programme shall have a duration of three semesters plus one semester for working on the Master's thesis. <sup>2</sup>To complete the programme successfully, students shall achieve 120 ECTS credits, which include all required module examinations and the Master's thesis module.

(3) The standard duration of the Master's degree programme is four semesters.

(4) If students have the choice between several modules, they shall choose modules that may be studied without overlap within the context of an individual study agreement after consulting a study or subject advisor.

(5) <sup>1</sup>The teaching and examination language in the Master's degree programme is German. <sup>2</sup>Individual modules may be taught and assessed in English. Further details are stipulated in the **degree programme and examination regulations** and the module handbook. <sup>3</sup>In any case of uncertainty, the examination language shall be the same as the teaching language. <sup>4</sup>The **degree programme and examination regulations** can stipulate provisions deviating from sentences 1 and 2 and allow for other teaching and examination languages.

(6) The Master's degree programme may be started in the winter semester or in the summer semester, unless stipulated otherwise in the applicable **degree programme and examinations regulations**.

#### Section 5 ECTS Credits

(1) <sup>1</sup>The degree program and examinations are based on the European Credit Transfer and Accumulation System (ECTS). <sup>2</sup>30 ECTS credits are allocated per semester. <sup>3</sup>One ECTS credit corresponds to 30 hours of work.

(2) <sup>1</sup>ECTS credits serve as a system to categorize, calculate and confirm the amount of work a student has invested. <sup>2</sup>They are a quantitative indicator of a student's workload.

**Section 6 Modules and Credits, Voluntary Intermediate Examinations** (1) <sup>1</sup>The degree programme consists of modules for which students are awarded ECTS credits. <sup>2</sup>One module is a chronologically connected and self-contained teaching and learning unit, the content of which can be tested in an examination.

(2) <sup>1</sup>The modules shall be completed with a module examination. <sup>2</sup>This examination shall as a rule consist of one examination achievement or one course achievement. <sup>3</sup>In exceptional cases, this examination can also consist of several partial examinations or parts of examinations or a combination of examination and course achievements if the subject warrants it. <sup>4</sup>Ungraded course achievements consisting of several parts and/or course achievements which can be repeated an unlimited number of times shall not count as examinations consisting of several parts as defined in sentence 3. <sup>5</sup>ECTS credits shall only be awarded for successful participation in modules that can be verified in an individual, separately identifiable performance in a module examination. <sup>6</sup>Module examinations are conducted during the lecture period or following the last lecture/seminar of a module before the start of the next semester's lecture period.

(3) <sup>1</sup>Examinations (examination achievements and course achievements) measure the student's performance. <sup>2</sup>They may be in writing, oral, electronic or in a different form specific to the subject (e.g. tutorial achievements, practical achievements, seminar achievements). <sup>3</sup>In the event of invigilated remote electronic examinations, the Bavarian regulation for testing remote examinations (**BayFEV**) and the FAU regulations on remote examinations on the basis of the Bavarian regulations for testing remote examinations (**BayFEV**) and the FAU regulations on remote examinations on the basis of the Bavarian regulations for testing remote examinations (**BayFEV**) – **EFernPO** – shall be complied with. <sup>4</sup>Examination achievements are graded. <sup>5</sup>The assessment of course achievements may be limited to determining whether the student has passed or not.

(4) <sup>1</sup>Tutorial achievements (TA) generally involve independently solving exercises each week (e.g. exercises in programming or calculations, or e-learning units, which are assessed on the basis of an exercise log, compilation or electronic record). <sup>2</sup>Practical achievements (PA) generally involve completing practical tasks, documenting them in a series of reports and completing oral or written tests on the practical task at hand. <sup>3</sup>Students may also be required to complete seminar achievements (SEA) (generally a presentation and handout). <sup>4</sup>The specific form and scope of the examinations stated in sentences 1 to 3 depend on the specific manner in which the respective module or teaching unit is taught. Details are stipulated in (5), the applicable **degree programme and examination regulations** and/or the module handbook.

(5) <sup>1</sup>The scope of a seminar achievement pursuant to (4)(3) depends on the specific topic which has been allocated and shall be agreed with the module coordinator. <sup>2</sup>Unless stipulated otherwise in the relevant **degree programme and examination regulations**, the presentation shall generally last approximately 30 to 80 minutes and the handout shall be approximately 5 to 25 pages long.

(6) <sup>1</sup>In addition to the module examinations, voluntary intermediate examinations (e.g. tutorial achievements, short tests or homework assignments) may be offered during teaching units as a way of measuring the standard of performance. <sup>2</sup>More detailed information, including the number, type and scope of these examinations, is given in the module handbook. <sup>3</sup>An intermediate examination achievement may improve the grade for a passed module examination or partial examination by a maximum of 0.7; a grade may not be made worse. <sup>4</sup>If a student chooses to use the option detailed in sentence 1, these results shall be taken into account when determining the grade for the module.

(7) Enrolment in the relevant degree programme at FAU is a requirement for participation in module examinations according to (2)(1). This shall not apply to resit examinations within the meaning of Sections 30 and 35.

#### Section 7 Compulsory Attendance

(1) <sup>1</sup>For teaching units, which are marked accordingly in the respective module description, in which the qualification goal can only be achieved by regular attendance, compulsory attendance can be made a requirement for admission to the module examination or for obtaining the course achievement. <sup>2</sup>If attendance of the individual student is required for all participants to obtain the subject-specific skills, if the individual student obtaining such skills depends on the attendance of the other participants, or if subject-specific skills can only be obtained by being present at a particular place, or if participation is required for safety reasons, it is permissible to introduce an obligation to attend.

(2) <sup>1</sup>Regular attendance is defined as missing no more than 15% of instruction time in any given teaching unit. <sup>2</sup>If between 15% and 30% of instruction time has been missed, the lecturer can offer the student the option to obtain a skills-orientated substitute achievement fulfilling the requirement of regular attendance. If no such substitute achievements are offered or the substitute achievements offered are not obtained by the student, attendance is not considered to have been regular. <sup>3</sup>If more than 30% of all instruction time has been missed, the teaching unit must be taken again. <sup>4</sup>Any

positions after the decimal point in the percentage of instruction time missed shall be rounded for the benefit of the student.

(3) <sup>1</sup>Notwithstanding paragraph 2, in the context of excursions, placements and block seminars, attendance is only considered to have been regular if all teaching units have been attended. <sup>2</sup>Appropriate substitute achievements fulfilling the requirement of regular attendance shall be offered in the case of credibly shown periods of absence due to reasons beyond the student's control of up to and including 15% of instruction time. <sup>3</sup>If more than 15% of instruction time has been missed, the teaching unit must be taken again. <sup>4</sup>Any positions after the decimal point in the percentage of instruction time missed shall be rounded for the benefit of the student.

(4) Attendance is checked in the individual teaching units by means of an attendance list in which students must enter their name and signature.

# Section 8 Examination Deadlines, Failure to Observe Deadlines

(1) <sup>1</sup>Examinations shall be sat in such a timely manner as to allow the student to obtain the ECTS credits specified in the **degree programme and examination regulations** for the **GOP** and the Bachelor's or Master's examination by the scheduled deadline. <sup>2</sup>Deadlines shall be the second semester of the Bachelor's degree programme for the **GOP** and the last semester of the respective standard duration of study for the Bachelor's or Master's examination. <sup>3</sup>The deadlines according to sentence 2 may be exceeded by the following periods (extended deadline):

- 1. GOP by one semester
- 2. Bachelor's examination by two semesters
- 3. Master's examination by two semesters

<sup>4</sup>An examination shall be considered to have been sat and failed at the final attempt if the required number of ECTS credits stipulated in the **degree programme and examination regulations** was not obtained within the extended deadline according to sentence 3, unless the reasons for this are beyond the student's control.

(2) The deadline set forth in paragraph (1) shall be extended by claiming the legal periods of protection stipulated in the law protecting mothers at work, in education and whilst studying, the Maternity Protection Act (Mutterschutzgesetz – **MuSchG**) in the version published on 23 May 2017 (**BGBI** I S. 1228 [German Federal Law Gazette I p.2318]), according to the periods set forth in the current version of the Parental Allowance and Parental Leave Act (Bundeselterngeld- und Elternzeitgesetz – **BEEG**) of December 5, 2006 (**BGBI** I S. 2748 [German Federal Law Gazette I p. 2748]), and according to periods of time spent providing care in the sense of Section 7 (3) of the current version of the Caregiver Leave Act (Pflegezeitgesetz - **PflegeZG**) of 28 May 2008 (**BGBI** I S. 874, 896 [German Federal Law Gazette I p. 874, 896]) for a close family member who requires care in the sense of the current version of **SGB XI** (German Social Security Code XI) of May 26, 1994 (**BGBI** I S. 1014, 1015 [German Federal Law Gazette I p. 1014, 1015]).

(3) <sup>1</sup>The reasons according to (1)(4) and (2) shall be explained in writing and shown credibly to the Examinations Office without delay. <sup>2</sup>If the reasons are acknowledged, the examination shall be sat at the soonest possible time; previous examination and course achievements shall be accredited. <sup>3</sup>In case of an incapability to sit the examination occurring before or during the examination, the examiner shall be notified immediately; in cases where the student is unable to sit an examination due to illness,

an official doctor's certificate shall be submitted at the same time. <sup>4</sup>The Examinations Committee may require the student to submit a certificate from an official medical examiner (vertrauensärztliches Attest).

#### **Section 9 Examinations Committee**

(1) <sup>1</sup>An Examinations Committee shall be appointed to organise the examinations. <sup>2</sup>An Examinations Committee consisting of five members of the Department of Mathematics or the Department of Data Science shall be appointed for the Bachelor's degree programmes in Mathematics, Industrial Mathematics, and Economics and Mathematics as well as for the Master's degree programmes in Mathematics, Computational and Applied Mathematics and Economics and Mathematics. <sup>3</sup>The chairperson, their deputy and the further members of the Examinations Committee shall be professors at the Department of Mathematics or the Department of Data Science appointed by the Faculty Council of the Faculty of Sciences based on the recommendation of the Department of Mathematics or the Department of Data Science. <sup>4</sup>An Examinations Committee consisting of two members of the Department of Mathematics or the Department of Data Science at the Faculty of Sciences and one member of the Department of Computer Science at the Faculty of Engineering shall be appointed for the Bachelor's and Master's degree programmes in Data Science. <sup>5</sup>The chairperson and one other member of the Examinations Committee shall be professors of the Department of Mathematics or the Department of Data Science, the deputy of the Examinations Committee shall be a professor of the Department of Computer Science and all members shall be appointed by the Faculty Council of the Faculty of Sciences based on each department's recommendation. <sup>6</sup>The term of office of the members of each Examinations Committee shall be two years. <sup>7</sup>Re-election shall be permitted.

(2) The chairperson may transfer tasks within their responsibility to a member of the Examinations Committee.

(3) <sup>1</sup>The Examinations Committee shall be tasked with carrying out the examination procedures, especially the planning and organisation of the examinations. <sup>2</sup>Its duties include ensuring that the provisions of these examination regulations are observed. <sup>3</sup>With the exception of the examinations themselves and their assessment, which the examiners are responsible for, all decisions shall be taken by the Degree Programme Committee. <sup>4</sup>The Degree Programme Committee shall check delegated decisions if requested to do so and shall verify that examinations have been legitimately assessed. <sup>5</sup>It shall regularly report to the Department Councils on the development of examinations and study periods. <sup>6</sup>The members of the Examinations Committee shall have the right to be present during examinations.

(4) <sup>1</sup>The Examinations Committee shall have a quorum when all members are summoned in writing observing a notice period of at least one week and the majority of members are present and eligible to vote. <sup>2</sup>Decisions shall be taken with the majority of votes cast in meetings. <sup>3</sup>Abstentions, ballot votes and delegation of votes shall not be permitted. <sup>4</sup>In case of a tie of votes, the vote of the chairperson shall be decisive.

(5) <sup>1</sup>The chairperson shall call the meetings of the Examinations Committee. <sup>2</sup>The chairperson shall be entitled to take decisions that cannot be delayed on behalf of the Examinations Committee. <sup>3</sup>The Examinations Committee shall be informed of such cases without delay. <sup>4</sup>Furthermore, unless these examination regulations state

otherwise, the Examinations Committee shall have the right to transfer individual tasks to the chairperson as well as revoke these.

(6) <sup>1</sup>Official notifications in legal matters pertaining to examinations shall be made in writing; reasons shall be given and information on legal remedies available to the person shall be included. <sup>2</sup>Students shall be given the opportunity to make a statement before negative decisions are finalised. <sup>3</sup>The Examinations Committee shall have the right to rule that grade notifications may be sent out in electronic form to the individual students. <sup>4</sup>The President shall issue any notification of objection in questions of examination legislation following consultation with the Examinations Committee and after hearing the examiners.

#### Section 10 Examiners, Observers, Exclusion Due to Personal Involvement, Obligation to Confidentiality

(1) <sup>1</sup>The Examinations Committee shall appoint examiners and reviewers. <sup>2</sup>All persons eligible to administer examinations according to the current version of the Bavarian Higher Education Act **(BayHSchG)** and the Bavarian Higher Education Examiners Act (BayHSchPrüferV) shall be eligible for appointment. <sup>3</sup>If an eligible examiner leaves the University, they shall usually remain eligible to act as an examiner for up to one year. <sup>4</sup>Eligible examiners who only have a temporary contract shall only remain eligible to act as an examiner for the contractually agreed duration of employment. <sup>5</sup>The Examinations Committee shall have the right to extend this period upon request.

(2) A change of examiners shortly before the start of an examination shall be permissible on urgent grounds.

(3) <sup>1</sup>Persons who have completed the degree programme in question or a degree programme related to it shall be eligible for appointment as observers. <sup>2</sup>Observers shall be research associates in principal employment at the University.

(4) Exclusion from the deliberation and voting process of the Examinations Committee as well as from the positions of examiner and observer due to personal involvement shall be governed by Section 41 (2) **BayHSchG**.

(5) The obligation to confidentiality of the Examinations Committee and other persons involved in matters pertaining to examinations shall be governed by Section 18 (2)(3) **BayHSchG**.

#### Section 11 Announcement of Examination Dates and Examiners, Registration, Withdrawal

(1) The dates of the examinations and the examiners shall be announced by the Examinations Office in good time and according to local practice.

(2) <sup>1</sup>Students shall register for the individual module examinations by the deadlines specified by the examiners. <sup>2</sup>The registration dates and formalities shall be announced in good time before registration and according to local practice.

(3) <sup>1</sup>Notwithstanding the deadlines set forth in Sections 8, 30 and 35, withdrawal from the first attempt at an examination for which students have registered pursuant to (2) shall be permitted without stating reasons up until the end of the third working day before the examination date; withdrawals are to be submitted to the examiner. The

days between and including Monday and Friday shall be considered as working days. <sup>2</sup>In cases where the student is unable to sit an examination due to illness, a certificate from an official medical examiner (vertrauensärztliches Attest) may be required by the Examinations Committee. The certificate must be submitted to the Examinations Office. <sup>3</sup>In case of withdrawal from an examination due to illness after the examination has started, the student must submit a certificate from an official medical examiner to the Examinations Office without delay. <sup>4</sup>Once a student has declared that they wish to withdraw they may not revoke this declaration; registration to the examination shall be cancelled once the declaration is submitted and the student shall no longer be entitled to take the examination. <sup>5</sup>The consequences of a delayed or invalid withdrawal shall be governed by Section 14 (1).

**Section 12 Admissions Committee for the Master's Degree Programme** (1) <sup>1</sup>With the exception of the Master's degree programme in Data Science, the evaluation of the qualification and admission requirements for the Master's degree programme shall be the responsibility of a joint admissions committee appointed in accordance with (2) for the Master's degree programmes at the Department of Mathematics or the Department of Data Science. <sup>2</sup>The admissions committee for the Master's degree programme in Data Science shall be appointed separately according to (3).

(2) <sup>1</sup>The admissions committee pursuant to (1)(1) shall consist of the chairperson and two other professors from the Department of Mathematics or the Department of Data Science as well as a research associate in principal employment at the University. <sup>2</sup>The members shall be appointed on the basis of a unanimous decision by the Department Council for Mathematics and the Department Council for Data Science for a term of office of three years; re-election shall be permitted. <sup>3</sup>Section 9 (4) and (5) shall apply accordingly.

(3) <sup>1</sup>The admissions committee for the Master's degree programme in Data Science shall consist of three full members and one non-voting member. <sup>2</sup>The chairperson shall be a professor at the Department of Mathematics or the Department of Data Science at the Faculty of Sciences. <sup>3</sup>One other full member shall be a professor at the Department of Computer Science at the Faculty of Engineering. <sup>4</sup>The third full member and the non-voting member shall be research associates from two of the three departments mentioned above.

#### Section 13 Accreditation of Skills

(1)<sup>1</sup>Study periods, modules, course and examination achievements achieved in other degree programmes at FAU or at other public or state-approved universities in the Federal Republic of Germany, through successful participation in a distance course as part of a degree programme at a public or state-approved university in the Federal Republic of Germany, or in degree programmes at foreign universities shall be accredited according to these examination regulations unless there are significant differences in the skills acquired. <sup>2</sup>The same shall apply to study periods, course and examination achievements achieved at a public or state-approved university in Bavaria in the course of other study programmes within the meaning of Section 56 (6)(1) and (2) **BayHSchG**, in special study programmes within the meaning of Section 47 (3)(1) **BayHSchG**, or at the Virtual University of Bavaria.

(2) <sup>1</sup>Skills acquired in programmes for professional development as defined by Section 56 (6)(3) **BayHSchG**, or outside of higher education shall be accredited if they are equivalent to skills acquired through university studies. <sup>2</sup>Skills acquired outside the university sector shall replace no more than half of the required skills of which students must provide proof.

(3) <sup>1</sup>The grades achieved in approved modules, examinations and course achievements shall be transferred if they were awarded according to Section 20 and are recognised as equivalent according to the recommendations in the anabin database (information portal for the recognition of foreign qualifications offered by the Standing Conference of the Ministers of Education and Cultural Affairs (KMK)). <sup>2</sup>If the grading system which is applied to examinations sat at a university or equivalent institution of higher education and accredited by FAU is deemed to be equivalent according to sentence 1 but is not identical to the grading system set forth in Section 20, the grades achieved at other universities are usually converted according to the following formula:

 $x= 1 + 3 (N_{max} - N_d)/(N_{max} - N_{min})$  with x = converted grade  $N_{max} = best grade attainable$   $N_{min} = lowest grade for passing$   $N_d = grade attained$ umgerechnet. <sup>3</sup>Only one decimal place is shown for t

<sup>3</sup>Only one decimal place is shown for the grades thus calculated. <sup>4</sup>If conversion is not possible, the Examinations Committee usually determines a system by which to calculate the grades.

(4) <sup>1</sup>The documents needed for this accreditation shall be submitted to the chairperson of the Examinations Committee. <sup>2</sup>Subject to the provisions in sentence 3, the student shall have a legal claim to accreditation if the conditions stipulated in (1) and (2) are met. <sup>3</sup>Accreditation is only possible if the student has not already lost the right to be examined in that subject at FAU by passing or failing to pass the relevant examination at the final attempt. <sup>4</sup>If a student requests accreditation, the decision shall rest with the chairperson of the Examinations Committee after consultation with the subject representative appointed by the department; the decision shall be issued in writing.

#### Section 14 Consequences of Delayed Withdrawal, Breach of Regulations, Fraud, Exclusion from Further Participation

(1) <sup>1</sup>An examination achievement shall be graded as 'nicht ausreichend' (unsatisfactory; 5.0) if the student withdraws from the examination after the withdrawal period (cf. Section 11 (3)) without good reasons. Section 8 (3) shall not be affected. <sup>2</sup>Section 11 (3) sentences 2 to 5 shall apply accordingly. <sup>3</sup>If the Examinations Committee accepts the reasons, the examination must be sat on the next possible date.

(2) In case of an attempt to commit fraud or to influence the result of an examination through the use of unauthorised materials, the examination in question shall be graded 'nicht ausreichend' (unsatisfactory, 5.0).

(3) Persons who disturb the orderly examination process may be excluded from continuing the examination by the authorised examiner or the supervising person; in this case the examination achievement in question shall be graded 'nicht ausreichend' (unsatisfactory, 5.0).

(4) In case of a repeated or severe breach of regulations in the sense of (1) or (2), the Examinations Committee may exclude students from further participation in the examination.

#### Section 15 Revocation of Degrees

The revocation of Bachelor's and Master's degrees shall be governed by Section 69 **BayHSchG**.

#### Section 16 Faults in the Examination Process

(1) Should it turn out that the examination process was faulty in a manner that influenced the result of the examination, it shall be ordered upon a student's request that a certain student or all students shall resit the examination or parts of the same.

(2) Faults in the examination process shall be reported to the chairperson of the Examinations Committee or the examiner without delay.

(3) Six months after completion of the examination, resit examinations may no longer be ordered as stipulated in paragraph (1).

# Section 17 Written Examination, Change in Examination Form, Multiple Choice Examinations

(1) <sup>1</sup>In written examinations students are required to prove that they are capable of identifying a problem within a limited period and with limited materials, using the conventional methods employed in their field, and to find a solution to this problem. <sup>2</sup>Written examination achievements may take the form of written examinations, multiple choice examinations, written assignments, seminar papers or electronic examinations. <sup>3</sup>Written examinations may also be held as open book examinations during which students have to complete one or several tasks in a certain time without supervision using either a wide range of aids or whichever aids they like, but without the assistance of third parties. Further details are stipulated in the module description. <sup>4</sup>In the case of examinations as defined in sentence 2, tasks shall as far as possible be tailored to test higher-level skills such as understanding, analysis, transfer and application.

(2) <sup>1</sup>Changing the examination form from an (electronic) written examination to an oral examination may be possible in exceptional circumstances after the semester has started if the respective **degree programme and examination regulations** allow for both forms of examinations and the teaching concept of a module has been changed accordingly at short notice. <sup>2</sup>The decision shall be taken by the module coordinator. <sup>3</sup>They shall inform students at the latest two weeks after lectures begin if the examination is to be an oral examination instead of an (electronic) written examination. <sup>4</sup>The form of the resit examination in semesters in which the teaching unit is not held shall follow the form taken by the examination in the semester in which the teaching unit is held shall follow the examination form chosen for the semester in question. <sup>6</sup>Students who are unable to attend a written examination on the regular date as they are completing a semester abroad may, in consultation with the respective examiner, apply for an

alternative date for an oral examination, provided the change of examination form is compatible with the learning outcome of the module. <sup>7</sup>The decision shall be taken by the Examinations Committee. <sup>8</sup>Proof of the intended study stay abroad must be submitted together with the application.

(3) The duration of the written examination shall be governed by the relevant **degree programme and examination regulations.** 

(4) <sup>1</sup>Written examinations shall be graded by the author of the examination questions unless stipulated otherwise in the **degree programme and examination regulations**. <sup>2</sup>If a written examination achievement is graded as 'nicht ausreichend' (unsatisfactory) it shall be presented to a second examiner for evaluation. <sup>3</sup>The examiner's evaluation must be documented in writing and reasons for the final grade must be made clear. <sup>4</sup>Evaluations shall usually be presented within six weeks.

(5) <sup>1</sup>Written examinations may take the form of multiple-choice examinations (with one or more possible correct answers), either in full or in part. <sup>2</sup>Detailed information on the modules with multiple choice examinations is given in the module handbook. <sup>3</sup>The examinee shall state which of the answers to the questions they deem to be correct. <sup>4</sup>Examination questions must allow for reliable examination results. <sup>5</sup>When drawing up the examination questions, it shall be specified which of the answers shall be accepted as correct. <sup>6</sup>If the question does not allow multiple answers, multiple answers shall be inadmissible and disregarded. <sup>7</sup>Before the evaluation of the examination results, at least two of the authors of the examination shall assess whether the examination questions meet the requirement set out in sentence 4. <sup>8</sup>Should they determine that individual examination questions are faulty, these shall not be taken into account in the evaluation of the examination questions shall be considered to have been reduced. <sup>9</sup>This reduction of the number of examination questions must not result in disadvantages for any of the examinees. <sup>10</sup>No minus points may be awarded outside of individual examination questions.

(6) <sup>1</sup>The examinations according to (4)(1) shall be considered to have been passed if:

- 1. the examinee answered at least 60 percent of the examination questions correctly/achieved at least 60 percent of the attainable points, or
- 2. the examinee answered at least 50 percent of the examination questions correctly/achieved at least 50 percent of the attainable points and the number of correct answers/points obtained is no more than 17 percent below the average number of correct answers/points obtained by all examinees sitting the examination for the first time.

<sup>2</sup>If sentence 1(2) is applied, the Dean of Studies shall be notified.

(7) In case of written examinations that are not entirely composed of multiple choice questions, (4) and (5) shall only apply to the respective part.

# Section 18 Oral Examination, Change in Examination Form

(1) <sup>1</sup>In oral examinations students must demonstrate both general and specific knowledge of the subject being tested. <sup>2</sup>Oral examinations shall be conducted in the presence of an observer appointed by the examiner.

(2) The duration of oral examinations shall be governed by the relevant **degree programme and examination regulations**.

(3) <sup>1</sup>Changing the examination form from an oral examination to an (electronic) written examination may be possible in exceptional circumstances after the semester has started if the respective **degree programme and examination regulations** allow for both forms of examinations and the teaching concept of a module has been changed accordingly at short notice. <sup>2</sup>The decision shall be taken by the module coordinator. <sup>3</sup>They shall inform students at the latest two weeks after lectures begin if the examination is to be an (electronic) written examination instead of an oral examination. <sup>4</sup>The form of the resit examination in semesters in which the teaching unit is not held shall follow the form taken by the examination in the semester in which the teaching unit is held shall follow the examination form chosen for the semester in question.

(4) In oral examinations in the presence of several authorised examiners, each examiner shall determine the grade according to Section 20.

(5) <sup>1</sup>A record shall be kept of the oral examination; this shall include the following: Place, date and duration of the examination; name of the module to which the examination belongs and number of ECTS credits allocated to the module; subject and result of the examination; the names of the examiners, the observer and the student; and any special occurrences. <sup>2</sup>The record shall be signed by the authorised examiners and the observer. <sup>3</sup>It shall not be necessary to record the questions asked in the examination or the answers given. <sup>4</sup>The record shall be stored for at least two years.

#### **Section 18a Talks and Presentations**

(1) <sup>1</sup>In presentations and talks, students should prove that they are capable of working independently on a scientific topic, presenting it clearly for a particular audience and defending their point of view in expert discussions. <sup>2</sup>Presentations and talks are assessed on the basis of content, verbal presentation, conduct during the discussion and, if applicable, performance during the preparation of the presentation. <sup>3</sup>The supervisor for the presentation/talk should as a rule be appointed as an examiner. <sup>4</sup>If several authorised examiners pursuant to Section 10 (1) attend a presentation/talk, there shall be no need to include an observer.

(2) Section 18 (2) (4) and (5) shall apply accordingly.

(3) Presentations may be declared as public in the **degree programme and examination regulations** or in the module handbook; in this case listeners shall be permitted without the restriction stipulated in Section 18 (5).

#### **Section 19 Electronic Examinations**

<sup>1</sup>Examinations may be administered in electronic form. <sup>2</sup>Detailed information on the modules in which examinations are in electronic form is given in the module handbook. <sup>3</sup>Electronic examinations (e-examinations) are examinations which are administered and evaluated via computer or using digital technology. <sup>4</sup>The authenticity and integrity of the examination results shall be verified. <sup>5</sup>Automatically calculated evaluations of examination achievements shall be verified by one examiner at the request of the examinee or two examiners in case of a failed examination.

#### Section 20 Evaluation of Examinations, Grades, Final Grade

(1) <sup>1</sup>The evaluation of individual examinations shall be expressed by the examiners with the following grades:

| Grade (in words)                      | Grade                 | Explanation   |
|---------------------------------------|-----------------------|---|
| sehr gut (very good)                  | = (1.0 or 1.3)        | an outstanding achievement  |
| gut (good)                            | = (1.7 or 2.0 or 2.3) | an achievement that exceeds the requirements considerably                     |
| befriedigend<br>(satisfactory)        | = (2.7 or 3.0 or 3.3) | an achievement that fulfils average requirements;                             |
| ausreichend<br>(sufficient)           | = (3.7 or 4.0)        | an achievement that fulfils the requirements despite flaws                    |
| nicht ausreichend<br>(unsatisfactory) | = (4.3 or 4.7 or 5.0) | an achievement that no longer fulfils requirements due to considerable flaws. |

<sup>2</sup>An examination (Section 6 (2)) has been passed if it has received at least the grade 'ausreichend' (sufficient). <sup>3</sup>For ungraded examinations (Section 6 (3)(4)) the result shall be either 'bestanden' (pass) or 'nicht bestanden' (fail). <sup>4</sup>Except when otherwise stipulated in the **degree programme and examination regulations**, a module examination shall have been passed when all parts of the examination or partial achievements (Section 6 (2)(3)) have been passed). Sentence 2 is not affected. <sup>5</sup>If an examination has several examiners or consists of several parts or partial achievements, the total grade is calculated from the weighted average of the individual grades; the grading system described in sentence 1 shall not be used. <sup>6</sup>One decimal place shall count towards the module grade; further decimal places shall be omitted without being rounded.

(2) <sup>1</sup>Multiple choice examinations (single and/or multiple correct answers) shall be evaluated as follows: <sup>2</sup>Students who answer the required minimum of examination questions correctly or attain the minimum number of attainable points according to Section 17 (5)(1) shall receive the grade:

1.0 (sehr gut/very good) if at least 75 percent of the remaining questions were answered correctly or remaining points were achieved,

2.0 (gut/good) if at least 50 percent but less than 75 percent of the remaining questions were answered correctly or remaining points were achieved,

3.0 (befriedigend/satisfactory) if at least 25 percent but less than 50 percent of the remaining questions were answered correctly or remaining points were achieved,

4.0 (ausreichend/sufficient) if none or less than 25 percent of the remaining questions were answered correctly or remaining points were achieved. <sup>3</sup>The grades can be increased or decreased by increments of 0.3 according to the percentage; the grades 0.7, 4.3 and 4.7 shall not be awarded. <sup>4</sup>Students who do not achieve the required minimum shall receive the grade 5.0. <sup>5</sup>Notwithstanding Sentence 4, in addition to the grade 5.0, the grades 4.3 and 4.7 may also be awarded in cases in which examinations according to Section 17 (6) partly take the form of a multiple choice examination.

(3) The Grundlagen und Orientierungsprüfung (**GOP**) shall have been passed if the requirements stipulated in Section 27 of these examination regulations and in the relevant **degree programme and examination regulations** have been fulfilled.

(4) The overall grade of the Bachelor's examination, the Master's examination and the modules shall be as follows:

at an average of up to 1.5 = sehr gut (very good)

at an average of over 1.5 and up to 2.5 = gut (good)

at an average of over 2.5 and up to 3.5 = befriedigend (satisfactory)

at an average of over 3.5 and up to 4.0 = ausreichend (sufficient)

at an average of over 4.0 = nicht ausreichend (unsatisfactory).

(5) <sup>1</sup>Unless stipulated otherwise in the relevant **degree programme and examination regulations**, the module grades shall be calculated from the arithmetic average of the individual grades achieved in the examinations as defined in Section 6(2)(3); paragraph (1)(5)(2) and sentence 6 shall apply accordingly. <sup>2</sup>If there is only one graded examination in a module, this grade shall be the grade for the module. <sup>3</sup>If the examination is not graded, the successfully completed module shall have the result 'bestanden' (pass).

(6) <sup>1</sup>Unless otherwise stipulated in the relevant **degree programme and examination regulations**, all module grades of the Bachelor's or Master's degree programme shall be included in the calculation of the final grade of the Bachelor's or Master's examination, weighted according to their ECTS credits. <sup>2</sup>Paragraph 1 sentence 5(2) and sentence 6 shall apply accordingly.

# Section 21 Invalidity of Examinations

(1) If fraudulent methods were used during the examination and if this only becomes known after the certificate has been awarded, the Examinations Committee may correct the grade retrospectively and declare the examination as having been failed in part or in full.

(2) If the requirements for admission to the examination were not fulfilled while no fraudulent acts were committed wilfully, these circumstances shall be considered remedied by the passing of the examination.

(3) Students shall be given the opportunity to make a statement before a decision is taken.

(4) <sup>1</sup>The incorrect certificate shall be withdrawn; a new certificate shall be issued if applicable. <sup>2</sup>A decision according to paragraph (1) and paragraph (2) shall be excluded after a period of five years starting with the certificate's date of issue.

# Section 22 Inspection of Examination Records

(1) After the completion of the individual examination procedures, students shall on request be entitled to inspect their written examination papers, the corresponding reviews by the examiners, and the examination records.

(2) <sup>1</sup>Students shall submit the request to the examination body responsible within one month of being notified of their grades. <sup>2</sup>Unless the Examinations Office is responsible, the examiner shall allow the inspection; further details shall be decided by the Examinations Committee. <sup>3</sup>Students prevented from observing the deadline according to (1) through no fault of their own shall be granted full restitution according to Section 32 of the **Bavarian Administrative Procedures Act (BayVwVfG)**.

#### Section 23 Final Academic Record, Transcript of Records, Diploma Supplement, Grade Distribution Table, Degree Certificate

(1) <sup>1</sup>Students who have successfully completed a degree programme shall receive a final academic record, a transcript of records, a diploma supplement, a grade distribution table and a degree certificate, generally within four weeks. <sup>2</sup>The certificate shall be signed by the chairperson of the Examinations Committee.

(2) <sup>1</sup>The final academic record shall contain the modules and module grades and the final grade of the Bachelor's or Master's examination; it shall also cite the topic of the Bachelor's or Master's thesis. <sup>2</sup>The transcript of records lists all modules attended; the final academic record and the transcript of records may be combined into one document. <sup>3</sup>The transcript of records and the diploma supplement shall be issued in English and German. <sup>4</sup>Information not yet available to the Examinations Office must be submitted together with the required proof by the time of the degree programme's completion at the latest; otherwise this information may no longer be taken into consideration for the documents listed in paragraph (1).

#### Section 24 Notification of Failed Examinations

<sup>1</sup>Students who fail the Bachelor's or Master's examination at the final attempt shall receive notification that the examination has been failed at the final attempt, including information on legal remedies available. <sup>2</sup>Students can also print off an overview of their grades achieved in the individual modules in the examination administration system.

#### Section 25 Adjustments to Examination Arrangements

(1) <sup>1</sup>The examination procedure shall be adjusted to take into account the nature and extent of a student's disability. <sup>2</sup>Students with a doctor's certificate showing credibly that they are either partially or fully incapable of sitting the examination in the intended manner due to long-term or permanent disabilities which do not affect the performance which is being tested shall be entitled to be granted permission by the chairperson of the Examinations Committee to have this disadvantage offset by working time being extended accordingly or the examination process being structured differently. However, care must be taken to ensure that the examination is still suitable to provide evidence of skills which are being assessed by the examination.

(2) Adjustments to examination arrangements may be made for pregnant students if the student submits a medical certificate confirming that she will be at least 30 weeks pregnant by the examination date to the Examinations Committee responsible at least four weeks before the examination date.

(3) <sup>1</sup>Decisions according to paragraphs (1) and (2) shall only be taken by the chairperson of the Examinations Committee upon written request. <sup>2</sup>The student may be required to submit an official certificate from a medical examiner (vertrauensärztliches Attest) proving the fulfillment of the conditions in paragraph (1). <sup>3</sup>Applications for adjustments to examination arrangements shall be made to the Examinations Committee if possible at the latest four weeks before the examination, but certainly before the examination.

# Part II: Bachelor's Examination

#### Section 26 Admission Requirements for Examinations

(1) <sup>1</sup>Students enrolled in a Bachelor's degree programme shall be deemed as admitted to the Bachelor's examination and the module examinations of which the Bachelor's examination consists, unless admission is to be refused. <sup>2</sup>Admission shall be refused if:

- 1. Requirements are not met or certificates are not submitted at all or not in due time as stipulated in the special provisions of these examination regulations and in the degree programme and examination regulations
- 2. the **GOP**, the Bachelor's examination, the Diplom intermediary examination, the Diplom examination, the intermediary examination or the Magister examination in the same subject or in a similar subject or in one of the subjects of the teaching degree programmes for Gymnasium that correspond to the degree programme subject according to these examination regulations has been failed at the final attempt
- 3. It has been ordered that the student is to be de-registered, resulting in the revocation of the student's right to sit the examination.

(2) If admission to the examinations is to be refused, the decision shall be taken without delay, furnished with reasons and information on legal remedies available, and announced to the student.

# Section 27 Grundlagen- und Orientierungsprüfung (GOP)

(1) In the Grundlagen- und Orientierungsprüfung (**GOP**), students should prove that they:

- can fulfil the requirements of an academic course of study in the chosen subjects
- have acquired the methodological skills required to continue their studies successfully.

(2)<sup>1</sup>The **GOP** shall have been passed when at least 30 ECTS credits have been earned from the modules designated as part of the **GOP** in the relevant **degree programme and examination regulations** and all requirements stipulated in the relevant **degree programme and examination regulations** have been fulfilled. <sup>2</sup>The relevant **degree programme and examination regulations** shall specify the subject, type and scope of the **GOP**.

# Section 28 Bachelor's Examination

<sup>1</sup>The **degree programme and examination regulations** shall specify the subjects, type and scope of the Bachelor's examination. <sup>2</sup>The Bachelor's examination shall have been passed if all subject modules required according to the relevant **degree programme and examination regulations** have been passed achieving 180 ECTS credits.

#### Section 29 Bachelor's Thesis

(1) <sup>1</sup>The Bachelor's thesis is intended to show that the student is capable of dealing with a problem from their field independently according to academic methods within a set period and presenting the results in an appropriate form. <sup>2</sup>Students are awarded 10 ECTS credits for the Bachelor's thesis.

(2) <sup>1</sup>Unless the relevant **degree programme and examination regulations** state otherwise, university lecturers in principal employment at the Department of Mathematics or the Department of Data Science for the degree programme in question shall be entitled to assign Bachelor's theses (supervisors). <sup>2</sup>The Examinations Committee shall have the right to grant exceptions.

(3) <sup>1</sup>Students shall ensure that they are allocated a subject for their Bachelor's thesis in time to observe the deadlines set forth in Section 8, usually at the start of the last semester in the regular duration of studies. <sup>2</sup>The relevant **degree programme and examination regulations** govern the requirements for admission to the Bachelor's thesis. <sup>3</sup>The Examinations Office shall be notified of the subject and the date of allocation. <sup>4</sup>Should a student, despite a genuine effort to that end, not be allocated a subject, the chairperson of the Examinations Committee shall, in consultation with a representative of the student's department, allocate a subject and a supervisor to the student.

(4) <sup>1</sup>The period between being allocated the subject and submitting the Bachelor's thesis (standard thesis work period) shall be two months. <sup>2</sup>The scope of the subject must be such that it can be completed within the standard thesis work period. <sup>3</sup>The Examinations Committee shall have the right to extend the period for the thesis by a maximum of one month upon receiving a justified request (in particular if the student has experienced technical problems). <sup>4</sup>If a student submits a doctor's certificate proving that they are incapable of working on the thesis due to illness, the period for thesis work shall be suspended temporarily.

(5) <sup>1</sup>The subject of the Bachelor's thesis may only be returned once and within the first three weeks of the thesis work period; returning the subject shall not be permitted for repetitions of the Bachelor's thesis. <sup>2</sup>If the subject is returned where it is not admissible, the Bachelor's thesis shall receive the evaluation 'nicht ausreichend' (unsatisfactory; 5.0).

(6) <sup>1</sup>Unless otherwise stipulated in the **degree programme and examination regulations**, the thesis shall be written in German, or in English with the permission of the supervisor. <sup>2</sup>With the supervisor's agreement, the chairperson of the Examinations Committee may permit students to write the thesis in a different language upon request.

(7) <sup>1</sup>The thesis shall be submitted to the Examinations Office and the supervisor in a machine-readable, electronic version. At least one printed copy shall also be submitted to the supervisor. <sup>2</sup>The Bachelor's thesis shall include a declaration by the student confirming that the thesis is an original work and that no other sources or materials than the ones listed were used.

(8) <sup>1</sup>The Bachelor's thesis is usually graded by the supervisor. <sup>2</sup>The thesis shall be evaluated in writing and a grade given pursuant to Section 20 (1). <sup>3</sup>The chairperson of the Examinations Committee shall usually work towards the thesis being graded within one month.

(9) <sup>1</sup>If a Bachelor's thesis is given the grade 'nicht ausreichend/unsatisfactory, it may be repeated once; a second repetition or revision shall not be permitted. <sup>2</sup>The student shall ensure that they receive a new subject for the repetition of the thesis within two months following the announcement that the original thesis was graded unsatisfactory; otherwise the thesis shall be regarded as having been failed at the final attempt. <sup>3</sup>Paragraphs 1 and 2, paragraph 3 sentence 4 and paragraphs 4 to 8 shall apply accordingly in the case of a repetition.

#### Section 30 Resitting Examinations, Changing Modules

(1)<sup>1</sup>With the exception of the **GOP** and the Bachelor's thesis, every module examination or partial module examination may be resat twice; course achievements may be repeated without restriction.<sup>2</sup>The resit examination shall be limited to the failed examination or course achievement. <sup>3</sup>Examinations that are part of the GOP according to the respective degree programme and examination regulations may only be resat once; Section 29 (9) shall apply to repetition of the Bachelor's thesis. <sup>4</sup>The resit examination must be sat on the next possible date, which shall generally be in the semester following the first examination. <sup>5</sup>The student shall be considered as registered for the next resit examination. <sup>6</sup>Students shall be obliged to check the status of their registration in the examination administration system regularly and inform the Examinations Office immediately of any discrepancies. <sup>7</sup>The resit period shall not be interrupted by de-registration or leave of absence. 8If a student misses the resit examination or the resit period is not observed, the examination shall be deemed to have been failed unless the Examinations Committee grants the student a respite due to special reasons beyond the student's control. The standard deadlines according to Section 8 shall not be interrupted. <sup>9</sup>The provisions regarding maternity protection, parental leave and caregiver leave (Section 8(2)) shall apply.

(2) <sup>1</sup>Voluntarily resitting a passed examination of the same module shall not be permitted. <sup>2</sup>Unless the **degree programme and examination regulations** state otherwise, alternative modules may be completed to replace failed modules; the failed attempts in the previous alternative module shall not be counted.

#### Section 30a Additional Modules

(1) <sup>1</sup>Additional modules are modules included in the degree programme (e.g. elective modules, key qualifications) that are attended within the examination periods as stipulated in Section 8 in addition to successfully completed modules. <sup>2</sup>If a student completes additional modules of the degree programme at FAU, the student shall decide which of the modules shall go into the calculation of the final grade. <sup>3</sup>Students shall notify the Examinations Office of their decision at the latest eight weeks before the degree certificate is issued. <sup>4</sup>This decision is binding. <sup>5</sup>If no choice is made and if there are different modules from which to choose, the Examinations Office shall use the module with the better grade for the calculation.

(2) <sup>1</sup>Modules from other degree programs offered as partial qualifications for this degree program are also classed as additional modules. <sup>2</sup>Examination procedures for such modules are governed by the regulations stipulated in the **examination regulations** for the degree programme containing the additional module. <sup>3</sup>Additional modules pursuant to (2) are not included in the final grade, but are shown in a separate section of the transcript of records. <sup>4</sup>If the student files a request with the Examinations Office at the latest eight weeks before certificates are issued, individual additional modules may be omitted from the final certificate.

# Part III: Master's Examination

# Section 31 Qualification for a Master's Degree Programme

(1) <sup>1</sup> In order to qualify for admission to a Master's degree programme, students must have:

- 1. An undergraduate degree from a university that is subject-specific, subject-related or relevant to the specific Master's degree programme or another equivalent German or non-German qualification with equivalent content.
- 2. Passed the qualification assessment process according to the Appendix.

<sup>2</sup>The relevant **degree programme and examination regulations** for the Master's degree programmes stipulate which qualifications are considered subject-specific, subject-related or equivalent pursuant to sentence 1 item 1.

(2) <sup>1</sup>Degrees according to (1)(1)(1) and (1)(2) must be equivalent to the subject-specific Bachelor's examination according to these examination regulations and the **relevant degree programme and examination regulations** with regard to the expertise gained. <sup>2</sup>If there are significant differences which can be compensated for, the Admissions Committee may grant admission under the condition that proof of further achievements worth up to a maximum of 20 ECTS credits and to be determined by the Admissions Committee be submitted within one year of taking up studies for a Master's degree. <sup>3</sup>Admission in this case shall be granted conditionally.

(3) <sup>1</sup>Paragraph 1(1) notwithstanding, students enrolled in a Bachelor's degree programme may be admitted to a Master's degree programme if they have achieved at least 140 ECTS credits. <sup>2</sup>Proof of the successfully completed Bachelor's degree must be submitted at the latest within one year of taking up the Master's degree programme; completing the Bachelor's degree programme is a prerequisite for formally starting the Master's degree programme. <sup>3</sup>Admission to the Master's degree program shall be granted conditionally.

# Section 32 Admission to Examinations

<sup>1</sup>Students enrolled in the Master's degree programme shall be considered admitted to the Master's examination and the module examinations of which the Master's examination consists, unless admission is to be refused. <sup>2</sup>Admission shall be refused if:

- 1. Requirements are not met or certificates are not submitted at all or not in due time as stipulated in the special provisions of these examination regulations and in the degree programme and examination regulations
- 2. The Diplom, Magister or Master's examination in a degree programme classed according to the **degree programme and examination regulations** as being in a related subject has been failed at the final attempt
- 3. It has been ordered that the student is to be de-registered, resulting in the revocation of the student's right to sit the examination.

<sup>3</sup>Section 26 (2) shall apply accordingly.

#### Section 33 Master's Examination

(1) <sup>1</sup>The Master's examination shall consist of all module examinations throughout the degree programme including the Master's thesis module. <sup>2</sup>The relevant **degree programme and examination regulations** may stipulate that the Master's thesis is to be complemented by a final oral examination in the same module (Master's colloquium). <sup>3</sup>The Master's examination shall have been passed if all required module

examinations and the Master's thesis module have been passed. <sup>4</sup>Modules which have already been the subject of a Bachelor's examination cannot usually be accredited as part of the Master's examination due to the specific subject skills that must be gained as part of the qualification goals of the Master's degree programme.

(2) The relevant **degree programme and examination regulations** shall specify the subjects, type and scope of the Master's examination.

#### Section 34 Master's Thesis

(1) <sup>1</sup>The Master's thesis is a graded written assignment that concludes the Master's degree. <sup>2</sup>It is intended to show that the student is capable of dealing with a problem from their field independently and according to scientific methods within a set period. <sup>3</sup>The Master's thesis may not to any significant degree be identical to a previously submitted Diplom, Bachelor's, Master's or doctoral thesis (prevention of plagiarism). <sup>4</sup>According to the provisions set forth in the respective **degree programme and examination regulations**, 25 or 30 ECTS credits are awarded for the Master's thesis module.

(2) <sup>1</sup>Students shall ensure that they are allocated a subject for their Master's thesis in time to observe the deadlines set forth in Section 8, usually at the start of the last semester in the regular duration of studies. <sup>2</sup>The subject and the date of its allocation shall be confirmed by the supervisor and presented to the Examinations Office. <sup>3</sup>Should a student not be allocated a subject, despite a genuine effort to that end, the chairperson of the Examinations Committee shall, in consultation with a representative of the student's department, allocate a subject and a supervisor to the student. <sup>4</sup>The **degree programme and examination regulations** may stipulate conditions for allocating a Master's thesis.

(3) <sup>1</sup>Unless the relevant **degree programme and examination regulations** state otherwise, university lecturers in principal employment at the Department of Mathematics or the Department of Data Science for the degree programme in question shall be entitled to assign Master's theses. <sup>2</sup>The Examinations Committee shall have the right to grant exceptions. <sup>3</sup>The Examinations Committee may permit students to write their Master's thesis at an institution outside the University if supervision there is ensured.

(4) <sup>1</sup>The time between the selection of a subject and the submission of the Master's thesis shall be six months; the scope of the subject must be such that it can be dealt with within this period. <sup>2</sup>The Examinations Committee shall have the right to extend the period for the Master's thesis by a maximum of three months upon receiving a justified request (in particular if the student has experienced technical problems). <sup>3</sup>If a student submits a doctor's certificate proving that they are incapable of working on the Master's thesis, the period for thesis work shall be suspended temporarily.

(5) <sup>1</sup>The subject may only be returned once with good reason and with the approval of the chairperson of the Examinations Committee within the first third of the period for thesis work. <sup>2</sup>Otherwise the Master's thesis shall be graded 'nicht ausreichend' (unsatisfactory; 5.0) if the subject is returned; it shall be regarded as rejected.

(6) <sup>1</sup>The Master's thesis shall be written in German or English. <sup>2</sup>Sentence one notwithstanding, students in the Master's degree programme in Computational and Applied Mathematics taught in English must write their Master's thesis in English. <sup>3</sup>In exceptional cases, the Examinations Committee may allow exceptions from the provisions set forth in sentences 1 and 2. <sup>4</sup>The Master's thesis shall contain a summary of results at the end. <sup>5</sup>The design of the title page shall follow the template provided by the Examinations Committee. <sup>6</sup>The Master's thesis shall include a declaration by the student confirming that the thesis is an original work and that no other sources or materials than the ones listed were used. <sup>7</sup>The Master's thesis shall be submitted at the same time to the Examinations Office and the supervisor in a machine-readable, electronic version. At least one printed copy shall also be submitted to the supervisor and one to the second reviewer. <sup>8</sup>If the Master's thesis is not submitted in time, it shall be graded 'nicht ausreichend' (unsatisfactory; 5.0); it shall be regarded as rejected.

(7) The Master's thesis is usually graded by the supervisor and a further authorised examiner as a second reviewer; Section 29 (8) sentences 2 and 3 shall apply accordingly.

(8) <sup>1</sup>The Master's thesis shall be accepted if it receives at least the grade 'ausreichend' (sufficient). <sup>2</sup>It shall be rejected if it receives the grade 'nicht ausreichend'' (unsatisfactory).

(9) <sup>1</sup>If the Master's thesis is rejected or if it is regarded as rejected, it may be repeated once; a second repetition shall not be permitted. <sup>2</sup>The student shall ensure that they receive a new subject for the repetition of the Master's thesis within the semester following the announcement of the rejection at the latest; otherwise the Master's thesis shall be regarded as having been failed at the final attempt. <sup>3</sup>Paragraphs 1 and 2 sentences 2 and 3 and paragraphs 3 to 8 shall apply accordingly for the repetition of the Examinations Committee may permit the student to submit a revised version of the Master's thesis within two months of the announcement of its rejection provided the student agrees and this has not been ruled out after the review. A revised version may not under any circumstances be submitted if the Master's thesis was rejected on grounds of fraud and plagiarism. <sup>5</sup>If revision of the thesis is permitted, paragraph 1, paragraph 2 sentences 2 and 3 and paragraphs 3 to 8 shall apply accordingly.

(10) Provisions that deviate from paragraphs 1–9 may be agreed upon within the framework of dual degree agreements or degree programme co-operations.

Section 35 Resitting Examinations, Changing Modules, Additional Modules Unless stipulated otherwise in the degree programme and examination regulations, Sections 30 and 30a shall apply accordingly for resitting examinations, changing modules and taking additional modules.

#### Part IV: Final Provisions

#### Section 36 Legal Validity, Transitory Provisions

(1)<sup>1</sup>These examination regulations shall come into effect on the day after their publication. <sup>2</sup>They shall apply to students starting a degree programme from the winter semester 2015/2016 onwards. <sup>3</sup>Notwithstanding sentence 2, Sections 7, 8 (2), 13, 17, 19, 20, 25 and 25 of these examination regulations shall also apply to students who are already studying the Bachelor's and Master's degree programmes in Mathematics, Industrial Mathematics and Economics and Mathematics in accordance with the previously valid examination regulations of 07 September 2007 as amended on 30 July 2010. With the exception of the provisions listed above, these students shall sit their examinations in accordance with the previously valid examination regulations. <sup>4</sup>Students who are already studying the Bachelor's and Master's degree programmes in Mathematics, Industrial Mathematics and Economics and Mathematics in accordance with the previously valid examination regulations of 7 September 2007 as amended on 30 July 2010 and who entered the Bachelor's degree programme in the winter semester 2014/2015 or later are given the option of accepting these examination regulations in their entirety by filing an application to this effect with the Examinations Office on or before 30 November 2015. By agreeing to these examination regulations, students automatically agree to the relevant degree programme and examination regulations.

(2) The examination regulations for the Bachelor's and Master's degree programmes in Mathematics, Industrial Mathematics and Economics and Mathematics at FAU dated 7 September 2007 as amended on 30 July 2010 shall cease to apply as of 30 September 2023.

(3) <sup>1</sup>The second amendment statute shall come into effect on the day after its publication. <sup>2</sup>It shall apply to all examinations which students are entitled to sit for the for the first time from winter semester 2019/2020 (first attempt).

(4) <sup>1</sup>The third amendment statute shall come into effect on the day after its publication. <sup>2</sup>It shall apply to all examinations which students are entitled to sit for the for the first time from winter semester 2020/2021 (first attempt). <sup>3</sup>Notwithstanding sentences 1 and 2, the amendments regarding the Bachelor's degree programme in Data Science shall apply only to all students starting a degree programme in Data Science from winter semester 2020/2021 onwards. <sup>4</sup>Notwithstanding sentences 1 to 3, the amendments regarding the Master's degree programme in Data Science shall apply to all students starting a Master's degree programme in Data Science from winter semester 2021/2022 onwards.

(5) The fourth amendment statute shall come into effect on the day after its publication.

(6) <sup>1</sup>The fifth amendment statute shall come into effect on the day after its publication. <sup>2</sup>Sentence 1 notwithstanding, the changes in Section 20 (5)(1) shall come into effect on 1 October 2023 and shall apply to all students who have not yet completed all modules at that time (grades for modules not yet decided).

# Appendix

# Qualification assessment process for the Master's degree programmes in Data Science, Mathematics, Computational and Applied Mathematics and Economics and Mathematics at the Faculty of Sciences at FAU.

(1) The qualification assessment process for the relevant Master's degree programme shall be carried out once before the start of the lecture period of the semester preceding the regular start of a degree programme.

(2) <sup>1</sup>Applications for the qualification assessment process must be submitted to the Master's Office by 15 July for the winter semester and 15 January for the summer semester. <sup>2</sup>The application shall include:

- A certificate proving that the applicant holds a university degree according to Section 31 (1)(1)(1) (final academic record, transcript of records, diploma supplement or comparable documents)
- 2. For applicants who have not yet obtained their Bachelor's degree (Section 31(3)): a transcript of records demonstrating that at least 140 ECTS credits have been obtained
- 3. Where applicable, further documents as proof of fulfilment of the requirements set forth in the relevant **degree programme and examination regulations**.

(3) <sup>1</sup>In accordance with Section 12, qualification assessment shall be the responsibility of the Admissions Committee. <sup>2</sup>The Admissions Committee may transfer the task of coordinating and carrying out the process to individual members unless otherwise stated. <sup>3</sup>The Admissions Committee shall fulfil its obligations in cooperation with the Master's Office.

(4) <sup>1</sup>Admission to the qualification assessment process shall be subject to the timely and complete submission of the documents listed in paragraph (2). <sup>2</sup>The qualification assessment process shall be carried out with those applicants who fulfil the requirements according to the provisions in paragraph (5). <sup>3</sup>Applicants who are rejected shall receive a rejection notification including reasons and information on legal remedies available.

(5) <sup>1</sup>Unless stipulated otherwise in the degree programme and examination regulations, the gualification assessment process shall be conducted in accordance with the following provisions. <sup>2</sup>The Admissions Committee shall select applicants based on the submitted documents as part of the qualification assessment process to assess whether they are qualified for a Master's degree programme. <sup>3</sup>The Admissions Committee shall deem the applicant gualified based on submitted documents if the final grade of the subject-specific or subject-related/equivalent degree fulfils the provisions under Section 31 (1)(1)(1), sentence 2 or in the case of Section 31 (3) if the student has achieved an average of 3.0 (satisfactory) or better in their previous achievements; for degrees graded on the basis of a different grading system Section 13 (3) sentences 1 to 3 shall apply accordingly. <sup>4</sup>Applicants who cannot be admitted to the Master's degree programme on the basis of their submitted qualifications alone shall be invited to a selection interview. <sup>5</sup>Sentence 2 notwithstanding, individual degree programme and examination regulations can specify whether candidates with a degree from a related subject or an equivalent degree shall have to pass an oral admission examination before they can be admitted to the Master's degree

programme. <sup>6</sup>The date of the selection interview shall be announced at least one week in advance. <sup>7</sup>If an applicant should be unable to attend due to reasons beyond their control, a second date may be set upon justified request up until two weeks before the start of the lecture period. <sup>8</sup>The oral admission examination is an individual interview which lasts approximately 20 minutes. <sup>9</sup>With the applicant's approval, the oral admission examination may be conducted as a video conference. <sup>10</sup>It shall be conducted by two university lecturers from the Department of Mathematics or the Department of Data Science appointed by the Admissions Committee. Section 18 (4) shall apply accordingly. <sup>11</sup>The oral admission examination is intended to demonstrate in particular that the applicant possesses the required technical and methodological expertise and can be expected to carry out independent academic work in a more research-oriented degree programme; the individual degree programme and examination regulations shall specify the criteria of the examination. <sup>12</sup>The result of the oral admission examination and the gualification assessment process will be given as 'bestanden' (pass) or 'nicht bestanden' (fail). <sup>13</sup>Applicants will be notified of the result in writing. <sup>14</sup>A rejection notification shall include reasons and information on the legal remedies available. <sup>15</sup>It will not be possible to repeat the qualification assessment process on the basis of the documentation submitted with the first application.

(6) Applicants shall bear their own costs of the qualification assessment process.

(7) Confirmation of passing the qualification assessment process shall remain valid indefinitely, provided that the Master's degree programme has not been changed significantly.