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The Faculty Council of the Faculty of Mathematics and Physics of Gottfried Wilhelm Leibniz Universität Hannover resolved the following revised examination regulations on 27.06.2018 for the master's degree programme Mathematics. The revision was approved by the Presidential Board on 05.09.2018 in accordance with section 37 paragraph 1 subparagraph 5. b) of the Lower Saxony Higher Education Act (NHG). These regulations shall take effect following publication in the official bulletin of Gottfried Wilhelm Leibniz Universität Hannover on 01.10.2018.

### **Examination Regulations of Gottfried Wilhelm Leibniz Universität Hannover for the Master's Degree Programme Mathematics**

The Faculty of Mathematics and Physics of Gottfried Wilhelm Leibniz Universität Hannover has issued the following revised examination regulations as per section 7 paragraph 3 and section 44 paragraph 1 of the Lower Saxony Higher Education Act (NHG):

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## Part One: General

### Section 1 - Examination Purpose and Academic Degree

- (1) <sup>1</sup>The master's degree constitutes further academic qualification in a professional field. <sup>2</sup>The master's examination aims to establish whether the examinee is capable of working independently at an advanced level according to scientific or scientific-artistic principles and is capable of applying academic knowledge. Furthermore, it serves to determine whether the examinee has gained an overview of the professional contexts of the academic field and has acquired the specialist knowledge and competence necessary for the transition to professional practice.
- (2) Upon successful completion of the master's examination, Gottfried Wilhelm Leibniz Universität Hannover will confer the academic degree "Master of Science" (MSc).

### Section 2 - Duration and Structure of the Degree Programme

<sup>1</sup>The standard period of study is two years. <sup>2</sup>The time required for class attendance and independent study is 120 ECTS credits (credit points) at 30 hours respectively. <sup>3</sup>The degree programme is organised into four semesters.

### Section 3 - Responsibility (Dean of Studies, Examination Board)

- (1) <sup>1</sup>The dean of studies is responsible for carrying out the duties set out in these examination regulations. <sup>2</sup>In agreement with the dean of studies, the faculty council can assign an examination board to perform such duties.
- (2) <sup>1</sup>The examination board comprises five members, three of which are members of lecturing staff, one is a member of teaching staff and one is a student. <sup>2</sup>The members of the examination board and their deputies are appointed by the respective group representatives. <sup>3</sup>The chairperson and deputy chairperson are appointed by the examination board and must be members of lecturing staff or members that have completed habilitation. <sup>4</sup>The student member may only adopt an advisory role with regard to assessment matters or decisions concerning recognition of assessment credits. <sup>5</sup>If not appointed as a member of the examination board, the dean of studies may participate in meetings of the examination board in an advisory role.
- (3) <sup>1</sup>The members of the examination board and their deputies are subject to official secrecy. <sup>2</sup>Unless they are employed in public service, they must be sworn to secrecy by the chairperson.
- (4) <sup>1</sup>The examination board may pass a resolution provided that the majority of the members eligible to vote are present. <sup>2</sup>Resolutions shall be passed by a majority of the valid votes submitted; abstention from voting does not count as a submitted vote.
- (5) <sup>1</sup>The meetings of the examination board are not open to the public. <sup>2</sup>Minutes will be taken of the meetings of the examination board. <sup>3</sup>The minutes will document the significant matters discussed and the decisions made.
- (6) Members of the examination board are entitled to observe examinations.
- (7) <sup>1</sup>The examination board may delegate authority to the chairperson and deputy chairperson (subject to revocation). <sup>2</sup>The examination board may appoint a body to perform its duties. <sup>3</sup>The chairperson will prepare and implement the resolutions of the examination board and report to the examination board on a regular basis regarding these activities. <sup>4</sup>Delegation of authority to the chairperson or deputy chairperson is excluded for the cases specified in section 18 paragraph 1.
- (8) The examination board may establish its own procedural rules.

## Part Two: Master's Examination

### Section 4 - Structure and Content of the Examination

- (1) <sup>1</sup>The master's examination is conducted during the course of study. <sup>2</sup>It comprises assessments and, where applicable, coursework as part of compulsory modules as set out in appendix 1.1, the compulsory module "Master's thesis" as set out in appendix 1.4, required elective modules (if applicable) as set out in appendix 1.2 and elective modules as set out in appendix 1.3.
- (2) The corresponding lectures can be found in the module handbook or in the course catalogue.

- (3)<sup>1</sup>In general, lectures and examinations are conducted in German or English. <sup>2</sup>Students without sufficient knowledge of German can complete the degree programme – including examinations – in English. <sup>3</sup>For this, an individual, binding study plan is determined, after the student has been advised by representatives of the responsible body specified in section 3. <sup>4</sup>This study plan may include a module to develop German language skills (10 CP), which shall occur within the scope of "Key Skills" (appendix 1.2.c); accordingly, less credit points must be attained in the selected application subject (appendix 1.3.a-f). <sup>5</sup>Not all lectures in the degree programme can be completed in English; in particular, this applies to the application subject modules (appendix 1.3.a-f).

### Section 5 - Examiners and Observers

<sup>1</sup>The responsible body, as specified in section 3, will appoint members of the lecturing staff from the Faculty of Mathematics and Physics of Gottfried Wilhelm Leibniz Universität Hannover as authorised examiners for the modules of the master's degree programme Mathematics. <sup>2</sup>The responsible body, as specified in section 3, may appoint further examiners, provided they hold at least the qualification that will be ascertained through the said examination or an equivalent qualification. <sup>3</sup>Provided that they meet the requirements set out in sentence 2, examiners may also be appointed who are not members or affiliates of Gottfried Wilhelm Leibniz Universität Hannover. <sup>4</sup>Observers must hold at least the qualification that will be ascertained through the said examination or an equivalent qualification in order to be appointed. <sup>5</sup>The responsible body, as specified in section 3, may also delegate the appointment of observers to the examiners.

### Section 6 - Coursework and Assessments

- (1)<sup>1</sup>Coursework particularly includes ungraded independent assignments, laboratory exercises, in-class assignments, placement reports, written examinations, presentations and term papers. <sup>2</sup>The required coursework is explained in more detail in the respective module description and is determined by the teaching staff by the beginning of the course at the latest. <sup>3</sup>As a rule, coursework must be completed within one year from the end of the respective course.
- (2)<sup>1</sup>Assessments in particular include the master's thesis, written examinations, oral examinations, term papers and seminar papers. <sup>2</sup>Further details on assessment types are specified in appendix 2.1.
- (3)<sup>1</sup>If alternative assessment types are specified for a module in appendices 1.1, 1.2 or 1.3, or if one assessment type can be replaced by another, notification of the assessment type must be given at the beginning of the semester at the latest. <sup>2</sup>The same applies for the weighting of individual components, if combined assessments are specified in appendices 1.1, 1.2 or 1.3.
- (4) Coursework and assessments may be conducted as group work, provided that individual contributions can be clearly defined and evaluated separately according to objective criteria.
- (5) When submitting written term papers, it must be declared in writing that
- a) the work was completed independently,
  - b) no sources or means other than those indicated were used,
  - c) all passages of the work that make reference to other sources, whether through direct quotation or paraphrasing, have been indicated accordingly, and
  - d) the paper has not previously been submitted to an examining authority in the same or a similar form.
- (6)<sup>1</sup>During the semester, in addition to the respective compulsory assessments, up to five minor assessments may be offered in the form of presentations or short written examinations. <sup>2</sup>Student participation is voluntary. <sup>3</sup>If a student has successfully completed one or more minor assessments during the semester, the achieved result shall be taken into account as a bonus when evaluating the compulsory assessment. <sup>4</sup>Minor assessments may not account for more than 20 per cent of the exam mark. <sup>5</sup>The number and evaluation of minor assessments must be indicated by the examiner at the beginning of the semester. <sup>6</sup>The best mark for a compulsory assessment may likewise be achieved without participating in minor assessments. <sup>7</sup>If a student does not participate in individual minor assessments or does not pass, this shall not result in poorer overall evaluation of a compulsory assessment. <sup>8</sup>The additional assessments shall be organised to ensure that the time allocated for class attendance and independent study (credit points) within the respective modules specified in the appendices are observed.

### **Section 7 - Master's Thesis**

- (1) <sup>1</sup>The master's thesis module comprises the master's thesis and, if applicable, an oral examination and/or coursework as defined in appendix 1.4. <sup>2</sup>The master's thesis aims to illustrate that the examinee is able to apply academic methods to independently address an issue in the field within a specified deadline. <sup>3</sup>30 credit points will be awarded for the successfully completed master's thesis module.
- (2) <sup>1</sup>The subject of the master's thesis must be proportionate to the examination purpose (section 1 paragraph 1) and the period of time provided for its completion according to paragraph 4. <sup>2</sup>The thesis topic may not be assigned until successful admission to the master's thesis module as per section 12 paragraph 3.
- (3) <sup>1</sup>The topic may be returned once within the first third of the completion period. <sup>2</sup>Renewed registration for the master's thesis module must occur within six months of returning the topic. <sup>3</sup>If registration does not occur within this period, a topic will be determined by the first examiner with a deadline specified according to paragraph 4 sentence 1. <sup>4</sup>Section 15 paragraph 2 sentences 1 to 4 shall apply accordingly.
- (4) <sup>1</sup>The master's thesis must be submitted both in printed and electronic form within 6 months from the date of assignment. <sup>2</sup>The master's thesis should be marked by both examiners within six weeks - within ten weeks at the latest.
- (5) When submitting the master's thesis, it must be declared in writing that
  - a) the work was completed independently,
  - b) no sources or means other than those indicated were used,
  - c) all passages of the work that make reference to other sources, whether through direct quotation or paraphrasing, have been indicated accordingly, and
  - d) the paper has not previously been submitted to an examining authority in the same or a similar form.
- (6) <sup>1</sup>The assessment process for the master's thesis module can be found in the module description in the module handbook. <sup>2</sup>If the master's thesis module comprises more than one assessment, the mark shall be composed according to appendix 1.4.
- (7) <sup>1</sup>The master's thesis must be written in German; in agreement with the examiners it may be written in English. <sup>2</sup>In addition, in justified individual cases it may be permitted to write the thesis in a different language. <sup>3</sup>The responsible body, as specified in section 3, shall decide upon applications specified in sentence 2, at the latest when deciding on admission (section 12).

### **Section 8 - Passing and Failing the Master's Examination**

- (1) The master's examination has been passed if the modules specified in section 4 in conjunction with appendices 1.1, 1.2, 1.3 and 1.4 have been passed and a minimum of 120 ECTS credit points have been attained.
- (2) <sup>1</sup>Failure of the master's examination is considered final, when repetition of a failed assessment that is required according to section 4 is no longer possible according to section 14. <sup>2</sup>Written notification will be issued in the case of final failure of the master's examination.

### **Section 9 - Additional Modules and Examinations**

- (1) <sup>1</sup>Students may take further examinations in addition to those specified in appendices 1.2 and 1.3 as necessary for attaining the minimum required credit points for the degree programme (additional examinations). <sup>2</sup>The same applies for completion of additional modules for the degree programme (additional modules). <sup>3</sup>Upon application to the responsible body specified in section 3, examinations and modules outside of the degree programme may also be taken.
- (2) Upon application to the responsible body specified in section 3, results from additional examinations and modules that are passed in accordance with section 19 paragraph 2 sentence 1 will be recorded in the certificate of official results ("Zeugnis") and further documents as set out in section 21; however, results from additional examinations and modules will not contribute to the overall mark.

### **Section 10 - Recognition of Previous Coursework and Assessments**

- (1) <sup>1</sup>Previous coursework and assessments can be recognised under the conditions below. <sup>2</sup>Applications for recognition should be submitted at the beginning of the course. <sup>3</sup>Once the examination process has begun, recognition of this assessment is no longer possible. <sup>4</sup>Applications should be submitted to the responsible body specified in section 3. <sup>5</sup>As a rule, the outcome of the application should be decided within six weeks. <sup>6</sup>The deadline period shall begin once all required documents for the decision have

been received. <sup>7</sup>Coursework and assessments completed whilst studying at Gottfried Wilhelm Leibniz Universität shall be officially recognised (ex officio).

- (2) <sup>1</sup>Coursework and assessments that were completed at a university in Germany or abroad shall be recognised in accordance with the Convention on the Recognition of Qualifications concerning Higher Education in the European Region dated 11 April 1997 (Lisbon Recognition Convention), provided that there are no substantial differences to the coursework and assessments required under these examination regulations. <sup>2</sup>In case of doubt, statements must be obtained from the examiner, from a member of Gottfried Wilhelm Leibniz Universität Hannover authorised according to section 5 to examine the module, for which recognition has been applied for, or from the Central Office for Foreign Education (ZAB). <sup>3</sup>In the case of lack of equivalence or substantial differences, the burden of proof lies with Gottfried Wilhelm Leibniz Universität Hannover. <sup>4</sup>The process shall be governed by the orientation framework of Gottfried Wilhelm Leibniz Universität Hannover for the recognition of coursework and assessments.
- (3) <sup>1</sup>Professional competence acquired outside of the degree will be recognised to an extent of up to 50 per cent of the required credit points as per section 2, provided that they are equivalent. <sup>2</sup>In the case of lack of equivalence or substantial differences, the burden of proof lies with Gottfried Wilhelm Leibniz Universität Hannover. <sup>3</sup>The process shall be governed by the orientation framework of Gottfried Wilhelm Leibniz Universität Hannover for the recognition of acquired professional competence.
- (4) <sup>1</sup>In the case of recognition of completed assessments, the marks will be adopted, or converted if the marking scale differs; the allocated period of study will be recognised and credit points will be awarded as per appendices 1.1, 1.2 or 1.3. <sup>2</sup>Assessments completed abroad shall remain ungraded upon request; in particular this shall apply to the case specified in paragraph 3 sentence 1. <sup>3</sup>Recognised performance will be indicated in the certificate of official results ("Zeugnis").
- (5) The applicant shall be informed in writing regarding the decision whether recognition is granted or not; section 23 paragraph 1 must be observed.

### **Section 10a - Placement Examinations for Refugees**

Persons, who have demonstrated that they cannot provide evidence of previously completed academic study and examinations due to fleeing, may take a special placement examination to prove that they have the knowledge and skills required by the examination regulations to complete a degree course, credits for which will be allocated to the respective modules.

### **Section 11 - Distance Learning**

Selected modules may also be offered as distance learning modules by resolution of the responsible body specified in section 3.

## **Part Three: Examination Procedure**

### **Section 12 - Admission to Examinations**

- (1) <sup>1</sup>Those enrolled in a master's degree programme at Gottfried Wilhelm Leibniz Universität Hannover are eligible to take examinations in the relevant degree programme - taking into account paragraph 2. <sup>2</sup>Further requirements for individual assessments can be found in appendices 1.1, 1.2, 1.3 or 1.4.
- (2) <sup>1</sup>Admission to examinations in master's degree programmes will be denied if an assessment in a module that is equivalent to a compulsory module in this programme has been failed indefinitely in a previous degree programme. <sup>2</sup>Final failure of assessments in a module equivalent to a required elective module in the programme, for which admission is sought, cannot be repeated under this degree programme.
- (3) <sup>1</sup>An application must be submitted in order to commence writing the master's thesis. <sup>2</sup>As a prerequisite to commence the master's thesis, at least 75 credit points must have been acquired within the scope of the master's degree and (if applicable) further requirements specified in appendix 1.4 must have been fulfilled. <sup>3</sup> If valid reason is given, exceptions shall be decided by the responsible body specified in section 3.
- (4) <sup>1</sup>Admission will be denied as defined in paragraph 3 if admission requirements have not been fulfilled. <sup>2</sup>The examinee shall be notified if admission is denied.

### Section 13 - Registration

<sup>1</sup>Registration is necessary for each individual examination and resit, within the deadline set by the responsible body specified in section 3. <sup>2</sup>The responsible body, as specified in section 3, may require that registration is also necessary to complete individual academic components. <sup>3</sup>The regulations issued at the time of introduction of the integrated campus management system shall apply as set out in appendix 3.1.

### Section 14 - Repetition

- (1) <sup>1</sup>Passed examinations cannot be repeated. <sup>2</sup>A failed examination may be repeated twice. <sup>3</sup>The master's thesis as well as projects and academic research papers may however only be repeated once. <sup>4</sup>Assessments from compulsory modules and required elective modules that have already been started must be repeated until passed or until repetition is no longer possible, as set out in sentence 2 or sentence 3; section 19 paragraph 2 sentence 3 and section 19 paragraph 3 sentence 3 shall remain unaffected. <sup>5</sup>Initial participation in an assessment or assignment of the topic shall be deemed as commencement of the assessment. <sup>6</sup>Repetition of failed assessments for elective modules is not required; they may be substituted by other elective modules.
- (2) <sup>1</sup>Repetition of assessments may, at the option of the examiner, be taken as a different assessment type as specified in section 6 paragraph 2. <sup>2</sup>The assessment type must be announced by the start of the registration period (section 13 sentence 1).
- (3) <sup>1</sup>In the final repetition of an assessment, the mark "insufficient" ("nicht ausreichend") for an actually completed written examination, or "failed" ("nicht bestanden") in the case of ungraded examinations, may only be awarded after a supplementary assessment. <sup>2</sup>As a rule, the supplementary assessment, which must be based on the content of the previous written examination, shall be conducted within six weeks after results have been announced. <sup>3</sup>If the supplementary assessment is conducted as an oral examination, an observer must be present at the examination in addition to the examiner. <sup>4</sup>As a rule, an oral supplementary assessment should not exceed a maximum duration of 20 minutes. <sup>5</sup>With the exception of written examinations, the supplementary assessment may be taken as another assessment type, as specified in section 6 paragraph 2. <sup>6</sup>If the supplementary assessment is passed, only the mark "sufficient" ("ausreichend"; 4.0) may be awarded or "passed" ("bestanden") in the case of ungraded assessments. <sup>7</sup>A supplementary assessment shall be excluded if section 18 has been applied with regard to evaluation of the written assessment. <sup>8</sup>Once results for the final resit have been announced, students must be invited by the Examination Office at least three weeks in advance to take the supplementary assessment. <sup>9</sup>Section 15 paragraph 2 shall apply accordingly.

### Section 15 - Late Submission, Withdrawal, Deadline Extension

- (1) <sup>1</sup>Withdrawal of registration for an examination or resit is permitted until commencement of the examination. <sup>2</sup>Non-attendance of an examination will be deemed as withdrawal. <sup>3</sup>For assessments with a submission deadline, assignment of the topic shall be determined as commencement of the assessment. <sup>4</sup>Withdrawal as per sentence 1 is permitted without given reason.
- (2) <sup>1</sup>If a student fails to observe the fixed submission deadline or withdraws from an examination after it has commenced, the assessment will be evaluated as "failed" ("nicht bestanden"). <sup>2</sup>However, if valid reason for late submission or withdrawal is promptly provided and substantiated in writing, the assessment shall be deemed as not taken. <sup>3</sup>In the event of illness, a doctor's certificate must be provided; at the request of the responsible body specified in section 3, a medical certificate issued by a medical specialist or medical officer must be provided. <sup>4</sup>The decision regarding recognition of valid reason shall be made by the responsible body specified in section 3. <sup>5</sup>In the cases specified in sentence 2, the responsible body specified in section 3 may extend the completion period by a maximum of a third of the original completion period. <sup>6</sup>A further extension is only permitted in justified individual cases.

### Section 16 - Examination Procedure in Cases of Hardship

<sup>1</sup>The responsible body, as specified in section 3, shall enable students, who have suffered serious long-term impairment, to take examinations in an equivalent alternative form on other dates or within other deadlines. Proof must be provided in the form of a certificate issued by a medical specialist or medical officer. <sup>2</sup>Other substantiated important reasons - in particular maternity rights and parental leave - shall be dealt with accordingly.

### Section 17 - Evaluation of Assessments

(1) <sup>1</sup>Assessments are normally evaluated by the examiners within one month. <sup>2</sup>Assessments are usually graded. <sup>3</sup>The regulations issued at the time of introduction of the integrated campus management system shall apply as set out in appendix 3.2. <sup>4</sup>Coursework and ungraded assessments are evaluated as "passed" ("bestanden") or "failed" ("nicht bestanden"). <sup>5</sup>The following classifications should be used for evaluation of assessments:

- 1.0; 1.3 = "very good" ("sehr gut") = a particularly outstanding performance,
- 1.7; 2.0; 2.3 = "good" ("gut") = a performance well above average,
- 2.7; 3.0; 3.3 = "satisfactory" ("befriedigend") = an average performance in every respect,
- 3.7; 4.0 = "sufficient" ("ausreichend") = fulfils the basic requirements despite shortcomings,
- 5.0 = "insufficient" ("nicht ausreichend") = does not fulfil the basic requirements due to shortcomings.

<sup>6</sup>An assessment evaluated as "insufficient" ("nicht ausreichend") has been failed.

(2) <sup>1</sup>If an assessment is evaluated by two examiners, it is only deemed as passed if both examiners evaluate it as "passed" ("bestanden"), "sufficient" ("ausreichend") or better. <sup>2</sup>In this case, the mark is calculated from the average of the individual marks determined by the examiners. <sup>3</sup>Section 20 paragraph 3 sentence 4 shall apply accordingly.

(3) *(no longer applicable)*

(4) <sup>1</sup>An examination conducted in choice format (e.g. single choice or multiple choice) is deemed passed if the exam candidate has correctly answered at least 50 out of one hundred questions (absolute pass mark). <sup>2</sup>In cases however, where the average of all examinations is worse than the absolute pass mark minus 18 per cent, the resulting value shall thus be deemed the relative pass mark. <sup>3</sup>The difference between the relative and absolute pass mark shall be calculated for each examinee to determine the individual examination results. <sup>4</sup>In the case of repeated assessments, the average performance of the examinees from the first possible examination date shall apply.

(5) <sup>1</sup>If the examinee has achieved the minimum points required for passing an examination conducted in choice format as specified in paragraph 4, the following marks shall be awarded

- 1.0 = "very good" ("sehr gut"), if at least 95 per cent,
- 1.3 = "very good" ("sehr gut"), if at least 90 per cent,
- 1.7 = "good" ("gut"), if at least 85 per cent,
- 2.0 = "good" ("gut"), if at least 80 per cent,
- 2.3 = "good" ("gut"), if at least 75 per cent,
- 2.7 = "satisfactory" ("befriedigend"), if at least 70 per cent,
- 3.0 = "satisfactory" ("befriedigend"), if at least 65 per cent,
- 3.3 = "satisfactory" ("befriedigend"), if at least 60 per cent,
- 3.7 = "sufficient" ("ausreichend"), if at least 55 per cent, and
- 4.0 = "sufficient" ("ausreichend") (4.0), if the minimum available points

have been attained. <sup>2</sup>Should the examinee fail to achieve the minimum points required for passing, the examination shall be deemed "failed" ("nicht bestanden").

### Section 18 - Deception, Breach of Regulations

(1) <sup>1</sup>Attempts to influence the outcome of an assessment or coursework through deception shall result in evaluation of the concerned assessment as "failed" ("nicht bestanden"). <sup>2</sup>Carrying unauthorised means after commencing an examination shall always be considered a deception attempt. <sup>3</sup>Unauthorised means also include electronic communication devices. <sup>4</sup>In particularly serious cases – especially repeated breach of regulations as per sentence 2 or plagiarism – the responsible body, as specified in section 3, may exclude the examinee from completing further assessments or coursework, or deem final failure of the entire course. <sup>5</sup>Sentence 4 shall also apply for breach of regulations in other degree programmes at Gottfried Wilhelm Leibniz Universität Hannover.

(2) <sup>1</sup>Examinees, who breach regulations may be excluded from continuing the examination concerned; in this case, the examination concerned shall be evaluated as "failed" ("nicht bestanden"). <sup>2</sup>Section 14 shall remain unaffected, except in the cases specified in section 18 paragraph 1 sentence 4.

### Section 19 - Credit Points for Modules

- (1) <sup>1</sup>The credit points listed in appendices 1.1, 1.2, 1.3 or 1.4 are awarded for a module when the respective coursework has been completed and the required examinations have been passed or evaluated as “sufficient” (“ausreichend”) or better. <sup>2</sup>For modules assessed in the form of an examination covering multiple modules (module group) as per appendices 1.1, 1.2 or 1.3, credit points are not awarded until the examination covering multiple modules has been passed.
- (2) <sup>1</sup>A module has been passed once all of the credit points stipulated in appendices 1.1, 1.2, 1.3 or 1.4 have been acquired. <sup>2</sup>The mark from a passed module or module group examination shall form the mark for the module or module group as specified in section 20 paragraph 3. <sup>3</sup>A module group is considered passed when all examinations relating to the module and the examination covering multiple modules have been passed.
- (3) <sup>1</sup>In areas other than the compulsory modules specified in appendix 1.1, more modules can be selected and completed than is necessary to achieve the required credit points. <sup>2</sup>Calculation of the overall mark is regulated by section 20 paragraphs 1 to 3. <sup>3</sup>If the credit points required for the module have been attained and the prescribed number of required elective modules or elective modules have been passed, the examination process for the remaining required elective modules or elective modules that were started but not yet passed may be discontinued upon request.

### Section 20 - Calculation of Overall Mark

- (1) <sup>1</sup>To calculate the overall mark as set out in paragraph 3, the best marks from passed compulsory modules, required elective modules and elective modules will be used, unless otherwise requested by the student. <sup>2</sup>The remaining passed required elective modules and elective modules shall be treated as additional examinations as defined in section 9.
- (2) <sup>1</sup>To calculate the overall mark as per paragraph 3, only the marks from modules required to achieve the credit points specified in section 4 may be taken into account. <sup>2</sup>If selection of the final module results in slightly exceeding the points required to achieve the credit points specified in section 4, the modules will be taken into account to calculate the overall mark as per paragraph 3.
- (3) <sup>1</sup>The overall mark for the master’s examination is the arithmetic mean of the marks of all graded modules according to section 17 paragraphs 1 and 2. <sup>2</sup>Unless particular weightings are specified in appendices 1.1, 1.2, 1.3 or 1.4, the credit points listed there shall be used for weighting. <sup>3</sup>The overall mark
- for an average of up to 1.5: “very good” (“sehr gut”),
  - for an average of more than 1.5 up to 2.5: “good” (“gut”),
  - for an average of more than 2.5 up to 3.5: “satisfactory” (“befriedigend”),
  - for an average of more than 3.5 up to 4.0: “sufficient” (“ausreichend”),
  - for an average of more than 4.0: “failed” (“nicht bestanden”).
- <sup>4</sup>To form the overall mark as per sentence 3, only the first decimal place will be taken into account; all further decimal places will be omitted without rounding up or down.
- (4) If the overall mark is 1.1 or better and the master's thesis achieves a mark of 1.0, the classification “with distinction” will be awarded and indicated on the degree documents as per section 21.
- (5) <sup>1</sup>Unless otherwise regulated in appendices 1.1 – 1.4, the module mark is the arithmetic mean of all graded assessments assigned to the module. <sup>2</sup>The particular weightings or partial credit points specified in the appendices shall be used for weighting. <sup>3</sup>If no particular weighting is specified for modules with multiple graded assessments or if credit points are not allocated proportionately to assessments, the assessments shall hold equal weighting to form the module mark. <sup>4</sup>In accordance with paragraph 3 sentence 4, only the first decimal place will be taken into account to form the module mark. <sup>5</sup>All further decimal places will be omitted without rounding up or down.

## Section 21 - Certificates and Confirmations

- (1) <sup>1</sup>A degree certificate ("Urkunde") of the awarded academic degree and a certificate of results ("Zeugnis") showing individual completed academic components will be issued for the successfully completed master's degree. <sup>2</sup>Furthermore, students are provided with a diploma supplement and a grading table confirming the relative ECTS grade distribution. Upon request, confirmation of the overall degree mark as a Grade Point Average (GPA) is also available from the Examination Office.
- (2) <sup>1</sup>The certificate of official results ("Zeugnis") shows the modules and their marks, the title of the master's thesis and its mark, as well as the attained credit points and the overall mark and, if applicable, the classification "with distinction" (section 20 paragraph 4). <sup>2</sup>The certificate of official results ("Zeugnis") is accompanied by a list of passed modules (including the master's thesis module), which indicates the respective courses and credit points as well as grading or evaluation of assessments. <sup>3</sup>All marks are shown as decimal numbers. <sup>4</sup>The date upon which the final module relevant for calculation of the overall mark as per section 20 paragraph 1 is passed, shall be the date of completion of the master's degree indicated on all documentation. <sup>5</sup>The issue date of the certificate of official results ("Zeugnis") and documentation shall be the date of printing.
- (3) <sup>1</sup>The diploma supplement contains a description of the qualifications achieved through the degree programme, as well as the overall mark attained as per section 20 paragraph 3. <sup>2</sup>Paragraph 2 sentences 3 to 5 shall apply accordingly.
- (4) <sup>1</sup>Confirmation of the relative ECTS grade distribution is issued in the form of a grading table. <sup>2</sup>The calculation is based on the ECTS Users' Guide of the European Commission in the relevant applicable version. <sup>3</sup>The responsible body, as specified in section 3, shall determine the parameters for cohort formation within the framework specifications of the Presidential Board and shall make them available to the Examination Office.
- (5) <sup>1</sup>The document displaying the overall degree mark as a Grade Point Average (GPA) additionally shows the assessments indicated in the certificate of official results ("Zeugnis") as per paragraph 2 as the following equivalent GPA grades:

Mark	Grade Value Equivalent
1.0	= 4.0
1.3	= 3.7
1.7	= 3.3
2.0	= 3.0
2.3	= 2.7
2.7	= 2.3
3.0	= 2.0
3.3	= 1.7
3.7	= 1.3
4.0	= 1.0

<sup>2</sup>The grade value equivalent of these assessments are used to form the grade value equivalents for the module marks, as specified in section 19 paragraph 2 sentence 2. <sup>3</sup>Using the grade value equivalents of these modules, the GPA is calculated as the average of the grade value equivalents according to section 20 paragraphs 1 and 2. <sup>4</sup>When calculating the overall mark as per sentence 3, the first decimal place will be rounded up.

- (6) <sup>1</sup>In the case of section 8 paragraph 2 or when otherwise withdrawing from the respective degree programme at Gottfried Wilhelm Leibniz Universität Hannover, written confirmation can be issued upon request, specifying passed assessments and modules and their marks and respective credit points. <sup>2</sup>All marks are shown as decimal numbers. <sup>3</sup>If applicable, the written confirmation shall indicate final failure of the degree programme.
- (7) <sup>1</sup>All certificates and confirmations specified in paragraph 1 shall be issued in German. <sup>2</sup>Additionally, English versions of the documents shall be provided by the Examination Office.

## Section 22 - Access to Examination Records

<sup>1</sup>After completing a module examination, upon request students are granted access by the Examination Office to the complete examination records. <sup>2</sup>The application must be filed at the latest within one year of announcement of results or issuance of the certificate of official results ("Zeugnis").

**Section 23 Procedural Provisions**

- (1) Non-beneficial administrative acts must be justified in writing, accompanied by information on legal remedies and delivered to the person concerned.
- (2) <sup>1</sup>The person concerned may submit a written objection to a decision, which is based on the evaluation of an assessment, to the responsible body specified in section 3 within one month of receipt of the notification. <sup>2</sup>The responsible body, as specified in section 3, shall decide upon the objection.
- (3) <sup>1</sup>Should the examinee raise concrete and substantiated objections against the evaluation of an examiner, the responsible body specified in section 3 shall forward the objection to the examiner concerned or – in the case of a first and second examiner – both examiners to give their opinion. <sup>2</sup>If the evaluation is changed by the examiner(s) in accordance with the request, the responsible body specified in section 3 shall remedy the objection. <sup>3</sup>Otherwise, the responsible body specified in section 3 shall review the evaluation on the basis of the opinion(s), paying particular attention to whether
  1. the examination process has been duly carried out,
  2. the evaluation has been based on incorrect facts,
  3. generally applicable evaluation principles have not been observed,
  4. a reasonable and logically justified solution has been evaluated as incorrect, or whether
  5. the examiner has been guided by irrelevant considerations.
- (4) A decision must be made within three months of the objection.
- (5) The proceedings shall not result in a worse examination mark for the exam candidate.

**Part Four: Final Provisions****Section 24 - Entry into Force and Interim Provisions**

- (1) The changes to these examination regulations shall enter into force after approval by the Presidential Board, on the day after publication in the official bulletin of Gottfried Wilhelm Leibniz Universität Hannover on 1 October 2018.
- (2) Students, who are enrolled in the master's degree programme Mathematics at Gottfried Wilhelm Leibniz Universität Hannover shall be subject to these examination regulations from the point of entry into force.

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## Appendix 1: Modules of the Master's Degree Programme

The master's degree programme in Mathematics is divided into:

- compulsory modules comprising specialisation fields (appendix 1.1a)
- required elective modules comprising a seminar (appendix 1.2a), key skills (appendix 1.2b) and a supplementary language course (if applicable), as well as
- elective modules with application subjects to choose from (appendix 1.3.a-f), and
- the master's thesis (appendix 1.4).

Unless otherwise indicated in the examination regulations or in the module catalogue, the following criteria shall apply for the duration of examinations. Written examinations ("Klausuren") shall take at least 45 minutes, but not exceed 180 minutes. Within this period, 5 - 15 minutes should be allocated per credit point in written examinations. Oral examinations shall take at least 15 minutes, but not exceed 60 minutes. Within this period, 1 - 4 minutes should be allocated per credit point in oral examinations. These criteria do not apply for elective modules (appendix 1.3) in other faculties.

The semester information in the tables below serves only as recommendation and are not binding for students.

### Appendix 1.1: Compulsory Modules

#### 1.1.a Field of Specialisation

Lectures are allocated for Pure or Applied Mathematics in the module handbook. If lectures are not indicated in the module handbook, alternatively this can be found in the course catalogue.

Modules amounting to 10 CP may be replaced by two modules each amounting to 5 CP. These may be examined separately; the average of both marks will form the overall mark for the relevant module.

Courses for which credit points were already attained during the bachelor's degree programme are excluded. Recognition of a lecture can only be granted for one module.

Module	Corresponding lectures	Semester	Prerequisites (if applicable)	Coursework	Assessment	Credit points	Weighting
Reine Mathematik 1	Lecture from the subject area pure mathematics			Coursework determined by teaching staff	K or MP	10	10
Reine Mathematik 2	Lecture from the subject area pure mathematics			Coursework determined by teaching staff	K or MP	10	10
Angewandte Mathematik 1	Lecture from the subject area applied mathematics			Coursework determined by teaching staff	K or MP	10	10
Angewandte Mathematik 2	Lecture from the subject area applied mathematics			Coursework determined by teaching staff	K or MP	10	10
Elective Module 1	Lecture from the subject area pure or applied mathematics			Coursework determined by teaching staff	K or MP	10	10
Elective Module 2	Lecture from the subject area pure or applied mathematics			Coursework determined by teaching staff	K or MP	10	10

Appendix 1.2: Required Elective Modules1.2.a Seminar

In general, the seminar should be taken in the subject area, in which the master's thesis will be completed.

Module	Corresponding lectures	Semester	Prerequisites (if applicable)	Coursework	Assessment	Credit points	Weighting
Seminar	Seminar I	2, 3			SM	5	5

1.2.b Key Skills

A total of 5 CP must be attained. Courses can be selected from:

- courses offered by the Centre for Applied Linguistics and Special Languages (FSZ), the Department for Key Competences or lectures indicated as such by the faculties; or
- upon request, computer courses offered as part of the course Computer Science or by IT Services, or alternative computer courses.

Different courses must be selected than those completed during the bachelor's degree.

Module	Corresponding lectures	Semester	Prerequisites (if applicable)	Coursework	Assessment	Credit points	Weighting
Key Skills	Seminar II	2, 3			SM	5	5
	Lecture	2, 3		1; If no coursework is available, an ungraded assessment must be completed.	-	5	0
Total						5	

1.2.c Supplementary Language Course

For students that do not speak German, an individual, binding study plan can be established, after prior consultation with a representative of the responsible body specified in section 3. This study plan may include the German Language proficiency module, amounting to up to 10 CP; accordingly, less credit points must be attained in the selected application subject (appendix 1.3.a-f).

Module	Corresponding lectures	Semester	Prerequisites (if applicable)	Coursework	Assessment	Credit points	Weighting
German Language proficiency	Courses offered by the Centre for Applied Linguistics and Special Languages (FSZ)	1 to 4		In accordance with the guidelines of the course coordinator	In accordance with the guidelines of the course coordinator	0 - 10	0

Appendix 1.3: Elective Modules

The elective area comprises the following application subjects:

- 1.3.a Application Subject: Business Administration
- 1.3.b Application Subject: Geodesy and Geoinformatics
- 1.3.c Application Subject: Computer Science
- 1.3.d Application Subject: Philosophy
- 1.3.e Application Subject: Physics
- 1.3.f Application Subject: Economics

Further application subjects can be selected in agreement with the responsible body specified in section 3. One application subject must be selected, in which at least 20 credit points must be attained. In exception to this, modules amounting to 10–20 CP must be taken as per the binding study plan (section 4 paragraph 3 sentence 4), in which case the weighting shall correspond to the reduced amount of credit points.

1.3.a Application Subject: Business Administration

Provided that 8 semester hours per week/16 credit points were successfully completed in business administration during the bachelor's degree, the elective business administration course enables students to specialise in a specific subject. Credit points are attained in two specialised subject areas within the field of business administration. Available options:

- Banking and Finance (Bank und Finanzwirtschaft)
- Business Taxation (Betriebswirtschaftliche Steuerlehre)
- Controlling
- Financial Markets (Finanzmärkte)
- Information Systems Research (Wirtschaftsinformatik)
- Marketing
- Non Profit und Public Management
- Human Resources Management (Personal und Arbeit)
- Operations Management (Produktionswirtschaft)
- Accounting and Auditing (Rechnungslegung und Wirtschaftsprüfung)
- Organisational Behaviour and Management (Unternehmensführung und Organisation)
- Risk and Insurance (Versicherungsbetriebslehre)

For the master's degree, an individual study plan will established by the academic advisors for the elective course of the Faculty of Economics and Management. The entire field is included in the mark, with a weighting of 20.

**or: application subject modules from the field of business administration selected during the master's degree, if this was not completed during the bachelor's degree.**

Module	Corresponding lectures	Semester	Prerequisites (if applicable)	Coursework	Assessment	Credit points	Weighting
BWL I	BWL I	1 or 3			K	4	4
BWL II	BWL II	1 or 3			K	4	4
BWL III	BWL III	2 or 4			K	4	4
BWL IV	BWL IV	2 or 4			K	4	4
Rechnungswesen I	Rechnungswesen I	1 or 3			K	4	4
Rechnungswesen II	Rechnungswesen II	2 or 4			K	4	4

**1.3.b): Application Subject: Geodesy and Geoinformatics**

Different lectures must be selected to those completed during the bachelor's degree.

Module	Corresponding lectures	Semester	Prerequisites (if applicable)	Coursework	Assessment	Credit points	Weighting
Positioning und Navigation II	Positioning und Navigation II	1		Ü	MP	5	5
Methods and Applications of Physical Geodesy	Methods and Applications of Physical Geodesy	1		Ü	MP	5	5
SLAM und Routenplanung	SLAM und Routenplanung	3		Ü	MP	4	4
Elective Module*		1 – 4				6	6

\*In addition to the elective module from the bachelor's degree programme, the following elective modules can be selected from the module handbook for the bachelor's/master's degree programme Geodesy and Geoinformatics: Photogrammetrische Computer Vision, Radarfernerkundung, Internet GIS, Geosensornetze, Geodatenvisualisierung II, Filterung im Zustandsraum, Signalverarbeitung in der Erdmessung, Satellitenbahnberechnung, Relativistische Modellierung in der Geodäsie, Dynamik von Raumfahrzeugen, Navigation (selected chapters), Inertialnavigation, Vertiefung GNSS: spezielle Anwendungen und Modelle, Bild-analyse I und II, GIS für die Fahrzeugnavigation, Laserscanning – Modellierung und Interpretation, Schwerefeldmodellierung (selected methods of physical geodesy), Research project: Analysis of gravity field satellite data.

**1.3.c Application Subject: Computer Science**

Module	Corresponding lectures	Semester	Prerequisites (if applicable)	Coursework	Assessment	Credit points	Weighting
Softwaretechnik	Grundlagen der Softwaretechnik (2+1 SWS)	WS		-	K	5	10
	Programmieren I (2+2 SWS) or II <sup>1</sup> (2+1 SWS)	WS or SoSe		LÜ	K	5	
Logik und formale Systeme	Logik und formale Systeme (2+2 SWS)	SoSe		-	K	5	5
Grundlagen Informatik (elective module)	Grundlagen der Datenbanksysteme (2+2 SWS) or Grundlagen der Rechner-architektur (2+2 SWS) or Grundlagen der Betriebssysteme (2+2 SWS) or Komplexität von Algorithmen (2+2 SWS) or Grundlagen digitaler Systeme (2+2 SWS)	Softwaretechnik			K or MP	5	5

or, if Computer Science has already been taken as an elective subject during the bachelor's degree:

<sup>1</sup> "Programmieren II" is only recommended for students with prior knowledge.

Module	Corresponding lectures	Semester	Prerequisites (if applicable)	Coursework	Assessment	Credit points	Weighting
Informatik (required elective module)	Can be selected from the special skills areas of the bachelor's and master's degree programmes for Computer Science following consultation and establishment of a study plan by the degree programme					11	20
Software Project	Software Project (6 Ü/LÜ)	1 or 3		LÜ		9	0

1.3.d Application Subject: Philosophy

Module	Programme instruction	Semester	Prerequisites (if applicable)	Coursework	Assessment	Credit points
one of the following three modules:						
Geschichte der Philosophie	Geschichte der Philosophie (lecture, 2 semesters)			SM	MP 20 or HA 10-12	10
	1 Seminar			SM		
Grundlagen der theoretischen Philosophie	Einführung in die theoretische Philosophie (lecture)			SM	MP 20 or HA 10-12	10
	1 Seminar			SM		
Grundlagen der praktischen Philosophie	Einführung in die praktische Philosophie (lecture)			SM	MP 20 or HA 10-12	10
	1 Seminar			SM		
and one of the following two modules:						
Vertiefungsmodul zu einem systematischen Schwerpunkt	2 seminars			1 per seminar	MP 20 or HA 10-12	10
Vertiefungsmodul zu einem historischen Schwerpunkt	2 seminars			1 per seminar	MP 20 or HA 10-12	10

or, if Philosophy has already been taken as an elective subject during the bachelor's degree:

Module	Programme instruction	Semester	Prerequisites (if applicable)	Coursework	Assessment	Credit points
Advanced lectures	2 lectures			1 per lecture	MP 20 or HA 10-12	10
and one of the following six modules:						
Vertiefung theoretische Philosophie	2 seminars			1 per seminar	MP 20 or HA 10-12	10
Vertiefung praktische Philosophie	2 seminars			1 per seminar	MP 20 or HA 10-12	10
Philosophie und Geschichte der Naturwissenschaften	2 seminars			1 per seminar	MP 20 or HA 10-12	10
Philosophie und Geschichte der Geistes- und Sozialwissenschaften	2 seminars			1 per seminar	MP 20 or HA 10-12	10
Theoretische Philosophie der Lebenswissenschaften	2 seminars			1 per seminar	MP 20 or HA 10-12	10
Praktische Philosophie der Lebenswissenschaften	2 seminars			1 per seminar	MP 20 or HA 10-12	10

**1.3.e Application Subject: Physics**

Different lectures must be selected to those completed during the bachelor's degree.

Module	Corresponding lectures	Semester	Prerequisites (if applicable)	Coursework	Assessment	Credit points	Weighting
Experimentalphysik	One of the following lectures: "Mechanik und Wärme", "Elektrizität und Relativität" or "Optik, Atome, Moleküle, Quantenphänomene" (each with exercise, but without a placement)	1 – 4		Ü	MP or K	8	8
Quantentheorie	Einführung in die Quantentheorie (lecture) Einführung in die	2 or 4		Ü	MP or K	8	8
Elective module*		1 – 4			MP or K	5	5

\*The following elective modules can be selected from the module handbook for the bachelor's/master's degree programme Physics: Computational Physics; Ergänzungen zur Klassischen Physik; Statistische Physik; Fortgeschrittene Quantenmechanik; Einführung in die Festkörperphysik (without placement); Atom- und Molekülphysik (without placement); Mechanik und Wärme; Elektrizität und Relativität (without placement); Optik, Atome, Moleküle, Quantenphänomene (without placement), Analytische Mechanik und Spezielle Relativitätstheorie.

or: application subject modules from the field of physics selected during the master's degree, if this was not completed during the bachelor's degree.

Module	Corresponding lectures	Semester	Prerequisites (if applicable)	Coursework	Assessment	Credit points	Weighting
Einführung in die Physik	Mathematische Methoden der Physik	3 (or 1)			K or MP	10	10
	Mechanik und Wärme + exercises	3 (or 1)		Ü	K or MP		
Analytische Mechanik und Spezielle Relativitätstheorie	Analytische Mechanik und Spezielle Relativitätstheorie + exercises	3		Ü	K or MP	10	10

**1.3.f Application Subject: Economics**

Provided that 8 semester hours per week/16 credit points were successfully completed in economics during the bachelor's degree, the elective economics course enables students to specialise in a specific subject. Credit points are attained in two specialised subject areas within the field of economics. Available options:

- Labour Economics (Arbeitsökonomik)
- Development and Environmental Economics (Entwicklungs- und Umweltökonomik)
- Financial Markets (Finanzmärkte)
- Money and International Finance (Geld und internationale Finanzwirtschaft)
- Public Finance (Öffentliche Finanzen)
- Econometrics and Statistics (Ökonometrie und Statistik)
- Economic Theory (Wirtschaftstheorie)

These fields of specialisation include modules from the compulsory and optional areas, which are examined during studies (written examination, 60 minutes; oral examination) and amount to 16 credit points.

For the master's degree, an individual study plan will be established by the academic advisors for the elective course of the Faculty of Economics and Management. The entire field is included in the mark, with a weighting of 20.

**or: application subject modules from the field of economics selected during the master's degree, if this was not completed during the bachelor's degree.**

Module	Corresponding sub-modules/lectures	Semester	Coursework	Assessment	Credit points	Weighting
Grundlagen der Volkswirtschaftslehre I (Introduction)	lecture (2 SWS)	1 - 4		K	4	4
Grundlagen der Volkswirtschaftslehre II (Economic Policy)	lecture (2 SWS)	2 or 4		K	4	4
Grundlagen der Volkswirtschaftslehre III (Microeconomic Theory)	lecture (2 SWS) + exercises (2 SWS)	1 or 3		K	8	8
Grundlagen der Volkswirtschaftslehre IV (Macroeconomic Theory)	lecture (2 SWS) + exercises (2 SWS)	2 or 4		K	8	8

#### Appendix 1.4: Master's Thesis

Module	Corresponding lectures	Semester	Prerequisites	Coursework	Assessment	Credit points	Weighting
Master's Thesis		4	Key skills module and 75 credit points	R	MA	30	50

The master's thesis module includes one assessment.

## **Appendix 2: Assessment Types**

### **Appendix 2.1: Definitions**

#### **Paper**

A paper is an independently written assignment. It is generally completed under supervision, within a specified time during the lecture period.

#### **Written assignment**

<sup>1</sup>Written assignments are independent, academic papers on a predetermined topic. <sup>2</sup>They comprise task definition, problem solving, results and a conclusion. <sup>3</sup>Written assignments include reports, field trip reports, placement reports, project reports or protocols.

#### **Identification courses**

An identification course or test involves independent determination of animal and plant organisms using identification keys, up to a specified taxonomic rank.

#### **Documentation**

<sup>1</sup>Documentation comprises the preparation and presentation of an artistic, cognitive or action-oriented process. <sup>2</sup>Documentation can refer to reports and plans that correspond to those used in professional practice. <sup>3</sup>Conditions regarding the number of pages or number of plans or draft sheets may be determined by the lecturer at the beginning of the assessment and depend on the kind of task. <sup>4</sup>Further materials may be attached to the report.

#### **Essay**

<sup>1</sup>An essay is a written, critical, subjective analysis of a literary and/or scientific matter. <sup>2</sup>A topic is discussed in a greater overall context according to general academic standards and scientific positions are critically evaluated or analysed.

#### **Practical examination**

A practical examination is a performance review in sports, conducted during the semester.

#### **Case study**

A case study is an evaluation of the data of an experiment, including method description, programme listings, interpretation and conclusions in the form of a report.

#### **Term paper**

A term paper is an independently, written paper on a subject-specific or interdisciplinary topic.

#### **Written examination without choice format**

A written examination is a written or electronic assessment completed under supervision.

#### **Written examination with choice format**

<sup>1</sup>A written examination is a written or electronic assessment completed under supervision. <sup>2</sup>Written examinations may partially be conducted in choice format (e.g. single choice, multiple choice). <sup>3</sup>When preparing the examination questions and answers, it must be determined which answers are recognised as correct. <sup>4</sup>The examination questions and answers for examinations with choice format must be checked beforehand by two authorised examiners for errors, consistency of content and appropriateness. <sup>5</sup>Should a subsequent check of the examination questions reveal individual tasks to have obvious errors, these shall be deemed not to have been assigned. <sup>6</sup>Evaluation of the examinations shall be based on the number of questions minus the incorrect questions. <sup>7</sup>Reduction of the number of examination questions shall not have a disadvantageous effect for exam candidates.

**Colloquium**

<sup>1</sup>The colloquium comprises a presentation and a subsequent discussion of the topic, methods and results of the paper. <sup>2</sup>Sentences 2 to 5 of the definition for "oral examination" shall apply accordingly.

**Artistic presentation**

<sup>1</sup>An artistic presentation concerns one or more artistic exhibits (pictures, photographs, objects, sculptures, installations, videos, etc.), as well as documentation of the aesthetic process in the form of an appropriate (media) presentation - e.g. reports/journals of work, sketches/photographs with written commentary. <sup>2</sup>An artistic presentation is conducted as an individual examination, before an examiner and a proficient observer. <sup>3</sup>Sentences 2 to 5 of the definition for "oral examination" shall apply accordingly.

**Artistic and scientific presentation**

<sup>1</sup>An artistic and scientific presentation is based on the interaction between artistic processes and scientific analysis, which are addressed in an artistic project and presented in an appropriate form. <sup>2</sup>The visual and linguistic lines of argument and interpretation featured in the presentation are either expressed in an oral presentation with subsequent discussion or explained in a term paper. <sup>3</sup>An artistic and scientific presentation is conducted as an individual examination, before an examiner and a proficient observer. <sup>4</sup>Sentences 2 to 5 of the definition for "oral examination" shall apply accordingly.

**Short assignment**

A short assignment involves a written assignment, draft or plan completed independently in a set time, concerning a subject-specific or interdisciplinary topic.

**Laboratory exercises**

<sup>1</sup>Laboratory exercises comprise a series of practical tests or programming tasks, accompanied by written assignments (test reports). <sup>2</sup>Here, the students generally explain their practical work, interpret results and place them in a scientific context.

**Model**

<sup>1</sup>Models are an extension of two-dimensional designs or plans and aim to illustrate dimension and clarify planning issues. <sup>2</sup>They are created to different scales, depending on the task and focus.

**Oral examination**

<sup>1</sup>The oral examination is conducted privately, in the presence of one observer, who holds the qualification that will be ascertained through the said examination or an equivalent qualification. <sup>2</sup>The essential topics of the examination will be recorded in a protocol. <sup>3</sup>Students wishing to take the same examination at a later date or other members of the university, who express legitimate interest, must be permitted to observe the oral examination. <sup>4</sup>This permission does not extend to consultations and announcement of the exam candidate's results. <sup>5</sup>At the request of the exam candidate, the observers specified in sentence 3 must be excluded.

**Musical elaboration in a learning group**

"Musical elaboration in a learning group" aims to demonstrate the ability to apply practical educational skills (particularly practical school music performance) in a school class or a smaller group in an appropriate methodical and didactic manner.

**Practical musical presentation**

<sup>1</sup>A practical musical presentation is conducted as an individual examination before two examiners or one examiner and proficient observer. <sup>2</sup>Sentences 2 to 5 of the definition for "oral examination" shall apply accordingly.

**Practical music education presentation**

A practical music education presentation is based on a music education seminar and includes a musical performance by pupils.

**Pedagogic-oriented concert**

<sup>1</sup>The pedagogic-oriented concert is an assignment in relation to the artistic major, in which pedagogic orientation (if applicable, in terms of modern concert pedagogy) plays an important role in execution and presentation/performance. <sup>2</sup>In general, it is presented in a school learning group.

**Planning and implementation of a teaching unit**

The planning and implementation of a teaching unit is conducted in the context of a subject-related practical course and includes preparation and implementation of a teaching unit of a usual duration of 60 minutes, as well as documentation and reflection thereof in the form of a written assignment.

**Portfolio**

<sup>1</sup>A portfolio documents the learning process of certain issues or tasks, set by teaching staff at the start of the course. <sup>2</sup>Systematic self-reflection is conducted during the course or retrospectively, including a compilation of various materials in a folder, depending on what has been agreed. <sup>3</sup>An optional, supplementary interview may be conducted to discuss the portfolio. <sup>4</sup>Like the portfolio, the interview is competence-oriented.

**Presentation (PR)**

<sup>1</sup>A presentation comprises the preparation of a predetermined topic, using electronic media and an oral presentation, if applicable. <sup>2</sup>In a multimedia presentation, media in their broadest sense play an important role and the "multi" aspect may be achieved through the mutual interaction of a partition screen, poster or Power Point presentation, as well as through typical music and film media or through music-education-oriented media (particularly the creative of communication aspects). <sup>3</sup>The form of presentation and duration of the oral presentation are determined by agreement. <sup>4</sup>If the appendix specifies a presentation with a written assignment (PR/A), the presentation must be accompanied by a written assignment.

**Project work**

Project work comprises a written application for a research project and the presentation of the project idea in a seminar presentation (with discussion).

**Presentation (R)**

A presentation comprises:

1. an independent and detailed analysis of an issue within the context of the course, integrating and evaluating relevant literature,
2. account of the work and outcomes in the presentation, as well as in the subsequent discussion,
3. a written assignment, if applicable.

**Seminar paper**

A seminar paper involves experimental, documental or illustrative scientific practical work (project).

**Seminar assignment**

A seminar assignment comprises a term paper and presentation thereof, including subsequent discussion.

**Practical sports presentation**

<sup>1</sup>In a practical sports presentation, students exhibit their demonstration and movement skills. <sup>2</sup>Depending on the field of experience or learning, the presentation may include techniques and tactics specific to a particular sport; coordinative-rhythmic, coordinative-technical or conditional basics. <sup>3</sup>A variable ability to play or act, presented under situational circumstances may also be assessed in this type of examination. <sup>4</sup>The

respective type and duration of the presentation is determined by agreement. <sup>5</sup>Sentences 2 to 5 of the definition for "oral examination" shall apply accordingly.

### **Impromptu assignment**

<sup>1</sup>An impromptu assignment tests independent research and the ability to work creatively or scientific-analytically under time pressure. <sup>2</sup>As a result, a draft or plan is produced with respect to a subject-specific or interdisciplinary task in conceptual terms, taking into account particular aspects relating to the field of study. <sup>3</sup>A one-day impromptu assignment must be completed within 24 hours; a one-week impromptu assignment must be completed within seven days.

### **Academic research paper**

<sup>1</sup>In an academic research paper a subject-specific or interdisciplinary topic is addressed in theoretical, experimental or constructive respect and the developed solutions are presented and explained in a manner usual for the professional activity. <sup>2</sup>The scope of the work is specified bindingly in the appendix (in months or hours). <sup>3</sup>The topic of a paper can be proposed by any of the professors of the Faculty of Mathematics and Physics. <sup>4</sup>With the approval of the dean of studies or the examination board, the topic can also be proposed by a professor that is not a member of the Faculty of Mathematics and Physics. <sup>5</sup>The dean of studies or examination board may compile a list, restricting the selection of first examiners, if necessary. <sup>6</sup>The topic of the paper will be determined by the examiner after hearing the examinee. <sup>7</sup>The topic will be assigned by the dean of studies or the head of the examination board or a respective entity appointed by them; assignment of the topic must be recorded. <sup>8</sup>The topic and schedule for completion must also be determined upon assignment of the topic. <sup>9</sup>During preparation of the paper, the examinee will be supervised by the examiner. <sup>10</sup>The period from assignment of the topic to submission of the paper is six months. <sup>11</sup>Section 15 paragraph 1 sentence 3 shall apply accordingly. <sup>12</sup>The topic of the paper may only be returned once and only within the first eight weeks of the completion period. <sup>13</sup>Two copies of the paper must be submitted by the deadline to the entity appointed by the Examination Board; the date and time of submission must be recorded. <sup>14</sup>The paper will be evaluated by the examiner as per section 17 paragraph 1. <sup>15</sup>Evaluation of the paper may also include consideration of the development process. <sup>16</sup>As a rule, the paper shall be evaluated within four weeks of submission.

### **Practical theatrical presentation**

<sup>1</sup>Practical theatrical presentation is the display of practical theatrical work before an audience, either in a process-oriented or product-oriented form. <sup>2</sup>Sentences 2 to 5 of the definition for "oral examination" shall apply accordingly.

### **Exercises**

<sup>1</sup>As an assessment, an exercise is conducted under supervision during a given time, within the curriculum. <sup>2</sup>In order to pass, a certain portion of the tasks must be solved correctly according to the instructions given by the teaching staff.

### **Lesson design**

<sup>1</sup>A lesson plan entails independent planning and implementation of a lesson as part of a specialist placement at a school for children with special needs or in an inclusive environment. <sup>2</sup>The lesson is reviewed and evaluated by a mentor and the seminar coordinator of the preparation seminar.

### **Presentation (V)**

<sup>1</sup>A presentation should demonstrate the examinee's ability to present scientific facts briefly and concisely and the skill acquired to defend their position in a critical scientific discussion. <sup>2</sup>In order to ensure an objective evaluation, the examinee must submit a copy of the oral presentation to the teaching staff of the relevant course in advance.

### **Graphic representation**

<sup>1</sup>Graphic representations explain, clarify and present design and planning work. <sup>2</sup>Depending on the task and thematic focus, they are prepared according to different standards and techniques.

**Combined assessment**

<sup>1</sup>A combined assessment comprises up to five components. <sup>2</sup>Components may, for example, be a written examination, an oral examination, a placement or a term paper. <sup>3</sup>Evaluation of a combined assessment is regulated in section 17 paragraph 3.

Appendix 2.2: Glossary of Assessment Types

A	Paper	Aufsatz
AA	Written assignment	Ausarbeitung
BA	Bachelor's thesis	Bachelorarbeit
BÜ	Identification courses	Bestimmungsübungen
DO	Documentation	Dokumentation
ES	Essay	Essay
EX	Experimental seminar	Experimentelles Seminar
FP	Practical examination	Fachpraktische Prüfung
FS	Case study	Fallstudie
HA	Term paper	Hausarbeit
K	Written examination without choice format	Klausur ohne Antwortwahlverfahren
KA	Written examination with choice format	Klausur mit Antwortwahlverfahren
KO	Colloquium	Kolloquium
KP	Artistic presentation	Künstlerische Präsentation
KU	Short assignment	Kurzarbeit
KW	Artistic and scientific presentation	künstlerisch-wissenschaftliche Präsentation
LÜ	Laboratory exercises	Laborübungen
MA	Master's Thesis	Masterarbeit
ME	Musical elaboration in a learning group	Musikalische Erarbeitung in einer Lerngruppe
ML	Master's colloquium	Master-Kolloquium
MO	Models	Modelle
MP	Oral examination	mündliche Prüfung
MU	Practical musical presentation	Musikpraktische Präsentation
MK	Practical music education presentation	Musikpädagogisch-praktische Präsentation
P	Project work	Projektarbeit
PD	Planning and implementation of a teaching unit	Planung und Durchführung einer Lehrveranstaltungseinheit
PF	Portfolio	Portfolio
PK	Pedagogic-oriented concert	Pädagogisch orientiertes Konzert
PR	Presentation (PR)	Präsentation
PW	Planning	Planwerk
R	Presentation (R)	Referat
SA	Seminar paper	Seminararbeit
SG	Impromptu assignment	Stegreif
SM	Seminar assignment	Seminarleistung
SP	Practical sports presentation	Sportpraktische Präsentation
ST	Academic research paper	Studienarbeiten
TP	Practical theatrical presentation	Theaterpraktische Präsentation
U	Lesson design	Unterrichtsgestaltung
uK	Ungraded written examination	unbenotete Klausur
uKA	Ungraded written examination with choice format	unbenotete Klausur im Antwortwahlverfahren
Ü	Exercises	Übungen
V	Presentation (V)	Vortrag
ZD	Graphic representation	Zeichnerische Darstellung
ZP	Combined assessment	Zusammengesetzte Prüfungsleistung

Appendix 3: Supplementary ProvisionsAppendix 3.1: Registration and Examination Periods

<sup>1</sup>The responsible body, as specified in section 3, shall determine the variant for this degree programme or for the courses in this degree programme. <sup>2</sup>Variant 1 (one registration period/one examination period) or variant 2 (two registration periods/two examination periods) shall be determined.

<sup>3</sup> Variant 1	Registration period in the winter semester:	15.11. – 30.11.
	Examination period in the winter semester:	15.12. – 14.04.
	Registration period in the summer semester:	15.05. – 31.05.
	Examination period in the summer semester:	15.06. – 14.10.

<sup>4</sup>No examinations should take place during the period 15.10. – 14.11. for the winter semester and during the period 15.04. – 15.09. for the summer semester.

<sup>5</sup> Variant 2	Registration period I in the winter semester:	15.11. – 30.11.
	Examination period I in the winter semester:	15.12. – 28.02.
	Registration period II in the winter semester:	16.03. – 23.03.
	Examination period II in the winter semester:	24.03. – 14.04.
	Registration period I in the summer semester:	15.05. – 31.05.
	Examination period I in the summer semester:	15.06. – 31.08.
	Registration period II in the summer semester:	16.09. – 23.09.
	Examination period II in the summer semester:	24.09. – 14.10.

<sup>6</sup>No examinations should take place during the periods 15.10. – 14.11. and 01.03. – 15.03. for the winter semester and during the periods 15.04. – 14.05. and 01.09. – 15.09. for the summer semester. <sup>7</sup>It is possible to register for the bachelor's/master's thesis, projects and academic research papers outside of the periods stated in appendix 3.1. <sup>8</sup>Please note that within a degree programme, other registration and examination periods may apply for external modules (teaching exports).

<sup>9</sup>Registration for the assessment types listed as per appendix 3.3 of the examination regulations must occur in the first registration period of both variants.

Appendix 3.2: Deadlines for Evaluation of Examinations

Depending on the variant selected in accordance with section 13 paragraph 3, examiners must submit marks for:

Variant 1:

- by 15.04. for the winter semester,
- by 15.10. for the summer semester

Variant 2:

- by 01.09. (first examination period) /15.10. (second examination period) for the summer semester
- by 01.03. (first examination period) /15.04. (second examination period) for the winter semester

Appendix 3.3: Registration of Assessment Types in the First Registration Period

*No longer applicable.*