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The dean of the Faculty of Mathematics and Physics of Gottfried Wilhelm Leibniz Universität Hannover resolved, as a matter of urgency, on 10.09.2024 the following amended Examination Regulations for the Master's Degree Programme Physics of 18.09.2020, as last amended. The Presidential Board approved the examination regulations on 18.09.2024 in accordance with section 37 paragraph 1 subparagraph 5. b) of the Lower Saxony Higher Education Act (NHG). These regulations shall take effect on 01.10.2024 following publication in the official bulletin of Gottfried Wilhelm Leibniz Universität Hannover.

**Amendments to the Examination Regulations for the Master's Degree Programme Physics
at Gottfried Wilhelm Leibniz Universität Hannover
of 18.09.2020, rectified on 21.12.2020,
as amended on 10.08.2021 and 02.09.2022 (rectified on 29.09.2023)**

The Faculty of Mathematics and Physics of Gottfried Wilhelm Leibniz Universität Hannover has issued the following amended 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 Information

Section 1 Examination Purpose and Academic Degree

- (1) ¹The master's degree constitutes further academic qualification in a professional field. ²The master's examination aims to establish whether the examination candidate 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 examination candidate has gained a subject-related overview of the academic field and has acquired the knowledge and competence necessary for the transition to professional practice.
- (2) Upon successful completion of the master's examination, Gottfried Wilhelm Leibniz Universität Hannover shall confer the academic degree "Master of Science (M. Sc.)".

Section 2 Duration and Structure of the Degree Programme

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

Section 3 Responsibility (Dean of Studies, Examination Board)

- (1) The examination board authorised to perform such duties by the faculty council in agreement with the dean of studies is responsible for implementation of the obligations set out in these examination regulations.
- (2) ¹The examination board comprises five members, three of whom are from the group of professors and junior professors, one is from the group of academic staff and one from the group of students. ²The members of the examination board and their deputies are appointed by the respective group representatives. ³The chairperson and deputy chairperson are appointed by the examination board and must be members of the group of professors and junior professors or members who have completed their habilitation. ⁴The student member may only adopt an advisory role with regard to grading or decisions concerning recognition of assessments. ⁵If 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) ¹The members of the examination board and their deputies are subject to official secrecy. ²If they are not employed in public service, they must be sworn to secrecy by the chairperson.
- (4) ¹The examination board has a quorum provided that the majority of the members eligible to vote are present. ²Resolutions shall be passed by a majority of the valid votes cast; abstention from voting shall not be considered as a vote cast.
- (5) ¹The meetings of the examination board are not open to the public. ²Minutes shall be taken of the meetings of the examination board. ³The minutes shall document significant matters discussed and the decisions made.
- (6) Members of the examination board are entitled to observe examinations.
- (7) ¹The examination board may delegate authority to the chairperson and deputy chairperson, subject to revocation. ²The examination board may appoint a body to perform its duties. ³The chairperson shall prepare and implement the resolutions of the examination board and report to the examination board on a regular basis regarding these activities. ⁴Delegation of authority to the chairperson or deputy chairperson shall not be permissible 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) ¹The master's examination is conducted during the course of the degree programme. ²It comprises assessments and, as appropriate, coursework in compulsory modules; and, as appropriate, compulsory elective modules, elective modules and the compulsory module "master's thesis" in accordance with appendix 1.
- (2) The courses corresponding to the modules can be found in the module handbook or the course catalogue.

(3) not applicable

(4) ¹As a rule, courses and examinations are conducted in German. ²Courses and examinations may also be conducted in English or Spanish, provided that this is indicated accordingly in the module handbook.

³Examinations may be conducted in English or Spanish if agreed with or determined by the examiner.

Section 5 Examiners and Observers

¹The responsible body specified in section 3 shall appoint members of the group of professors and junior professors from the Faculty of Mathematics and Physics of Gottfried Wilhelm Leibniz Universität Hannover as authorised examiners for the modules of the degree programme as well as the observers. ²The responsible body specified in section 3 may appoint further examiners, provided that they hold at least the qualification that is to be ascertained through the said examination or an equivalent qualification. ³Provided 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. ⁴Observers must hold at least the qualification that is to be ascertained through the said examination or an equivalent qualification in order to be appointed. ⁵The responsible body as specified in section 3 may also delegate the appointment of observers to the examiners.

Section 6 Coursework and Assessments

(1) ¹Coursework comprises ungraded pieces of work that may be required in a module/a course in order to practice skills. ²The required coursework is explained in more detail in appendix 1 and/or the respective module handbook; coursework is determined by the teaching staff at the latest by the beginning of the course. ³As a rule, coursework is to be completed within the scope of the relevant course.

(2) ¹Assessments include the master's thesis (MA), term papers (HA), written examinations (K), multiple-choice examinations (KA), oral examinations (MP), placement reports (PB), project-related examinations (PJ), practical sports presentations (SP), independent assignments (ST) and course-accompanying examinations (VbP). ²Further details on assessment types are specified in appendix 2.1.

(3) ¹If alternative assessment types are specified for a module in appendix 1 or if one assessment type can be replaced by another, notification of the assessment type must occur before 15.10. for the winter semester and before 15.04. for the summer semester. ²The same applies to the weighting of individual components if a course-accompanying examination (VbP) is specified in appendix 1.

(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 (coursework and assessments), students must declare in writing that

a) the work was completed independently,

b) no sources or resources 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) ¹During the semester, in addition to the respective compulsory assessments, up to five minor assessments may be offered in the form of presentations (PR) or in-class tests (KU). ²Student participation is voluntary. ³If 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. ⁴Minor assessments may not account for more than 20 per cent of the exam mark. ⁵The number and evaluation of minor assessments must be indicated by the examiner at the beginning of the semester. ⁶The best mark for a compulsory assessment may likewise be achieved without participating in minor assessments. ⁷If 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. ⁸The additional assessments shall be organised to ensure that the times allocated for class attendance and independent study (credit points) within the respective modules specified in the appendices are observed.

Section 6a Digital Examination Formats

(1) ¹At the discretion of the examiners and in agreement with the responsible body specified in section 3, examinations which by their nature are suitable for a digital format may be conducted in such a format and without the requirement that examination candidates are personally present in a particular examination room. ²This includes written, oral, practical and other examinations and assessment types which are in whole or in part made available, submitted or conducted in digital form, namely using

computers or other electronic devices. ³If an examination is to be conducted in the form of a digital examination, the students must be informed of this. ⁴Section 6 paragraph 3 sentence 1 shall apply accordingly.

- (2) ¹Students must be informed at the latest four weeks before the beginning of the examination
- about processing their personal data in accordance with paragraph 3 as per the form on data protection information
 - about the technical requirements relating to the communications equipment to be used that must be fulfilled for the examination to be duly conducted, especially the existence of suitable video and audio for online proctoring as per paragraph 6 or for video conferencing as per paragraph 3 as well as a qualitatively sufficient internet connection and
 - about the organisational conditions for the examination to be duly conducted.
- ²Students should have the opportunity to test the examination situation regarding the technology, the equipment and the spatial surroundings in advance of the examination.
- (3) ¹Personal data may be processed within the context of digital examinations provided this is necessary for the examination to be conducted duly. ²This applies in particular to authentication processes as per paragraph 5 and proctoring as per paragraph 6. ³The university shall ensure that the personal data collected when conducting a digital examination shall be processed in conformity with the legal requirements for data protection, in particular with Regulation (EU) 2016/679 (General Data Protection Regulation – GDPR). ⁴The examination candidates shall be informed in a precise, transparent, comprehensible and easily accessible form in particular about the purpose for which personal data will be processed and when the personal data will be deleted. ⁵Express reference must be made to the rights of data subjects as per articles 12 to 21 GDPR.
- (4) Learning management systems, examination platforms, video conferencing systems and other technical equipment are to be used for digital examinations in such a way that necessary installations on the students' electronic communications equipment occur only under the following conditions:
- the functionality of the electronic communications equipment is not compromised outside the examination and is compromised during the examination only to the extent necessary to secure authentication and to prevent acts of deceit,
 - the information security of the electronic communications equipment is not compromised at any time,
 - the confidentiality of the information on the electronic communications equipment is not compromised at any time and
 - complete uninstallation is possible after the electronic examination.
- (5) ¹Authentication shall occur prior to the beginning of a digital examination by means of a valid identity document that is to be presented upon request or by means of another suitable authentication or authentication procedure. ²Storage of the data processed in connection with the authentication, beyond technically necessary intermediate storage, is not permitted. ³Personal data from intermediate storage must be deleted promptly. ⁴The students are to be informed that information on the identity document that is not required for the authentication may be masked. ⁵The authentication of the examination candidates in the virtual examination room must occur individually and thus under exclusion of the other examination candidates.
- (6) ¹To prevent acts of deceit during a digital examination, the students must be required to activate the camera and microphone on the communications equipment used during the examination (online proctoring). ²Online proctoring is to be planned and designed so that the examination candidates' camera images can be seen exclusively by the persons conducting online proctoring. ³Virtual backgrounds may be prohibited. ⁴Otherwise, online proctoring is to be organised in such a way that the protection of personality rights and the privacy of those affected are not compromised more than required for the justifiable monitoring purposes (*Übersichtskontrolle*). ⁵Monitoring the room in the absence of suspicion is not permitted. ⁶In the event of a concrete suspicion of deceit, individual monitoring may be conducted, whereby the persons affected must be informed of this promptly. ⁷Individual monitoring must be conducted in breakout rooms, excluding the other examination candidates. ⁸Online proctoring is carried out by the university's supervisory staff. ⁹Automated data analysis of video or audio data from online proctoring is not permitted. ¹⁰Recording the examination or other storage of video or audio data is not permitted. ¹¹Paragraph 3 sentence 5 shall apply accordingly. ¹²Only those video conferencing systems centrally authorised at LUH may be used for online proctoring. ¹³In the case of digital examinations, students may be required to provide an affidavit confirming that they completed the assessment independently and without impermissible help from others. ¹⁴If such an affidavit is required but not submitted, the examination shall be assessed as failed.
- ¹⁵An examiner or observer shall take minutes of the process and the essential aspects of the examination conducted remotely via electronic devices.

- (7) ¹If, in the case of a written examination, it is technically impossible to transmit the examination questions, to complete the examination questions, to transmit the piece of assessed work or to conduct online proctoring at the time of the examination, the examination shall be terminated prematurely; in the case of premature termination, the examination shall not be assessed, and the attempt to take the examination shall be deemed not taken. ²This shall not apply in the event of a minor malfunction. ³If it can be proven that students are responsible for the malfunction, the examination board can deem the attempt to take the examination as failed. ⁴If video or audio malfunction temporarily during an oral or practical examination, the examination shall be continued after the malfunction has been remedied. ⁵If the technical malfunction persists so that the oral or practical examination cannot be duly continued, the examination shall be conducted once again at a later point in time. ⁶Sentences 1-4 shall apply accordingly.

Section 7 Master's Thesis

- (1) ¹The master's thesis module comprises the master's thesis and, if applicable, an oral assessment and/or a piece of coursework as defined in appendix 1. ²The master's thesis aims to illustrate that the examination candidate is able to independently apply academic methods to address an issue in the field within a predetermined deadline. ³30 credit points shall be awarded for the successfully completed master's thesis module.
- (2) ¹The topic of the master's thesis must be appropriate in view of the purpose of the examination (section 1 paragraph 1 sentence 2) and the period of time provided for its completion as set out in paragraph 4. ²The topic of the thesis may not be assigned until successful admission of the student to the master's thesis as per section 12 paragraph 3.
- (3) ¹The student may return the topic once within the first third of the completion period. ²Renewed registration for the master's thesis module must occur within six months of returning the topic. ³If registration does not occur within this period, a topic determined by the first examiner shall be assigned, with a deadline specified in accordance with paragraph 4 sentence 1. ⁴Section 15 paragraphs 4 and 5 shall apply accordingly.
- (4) ¹The master's thesis must be submitted both in printed and electronic form within twelve months from the date of assignment. ²The 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, students must declare in writing that
- a) the work was completed independently,
 - b) no sources or resources 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) ¹The assessment process for the master's thesis module can be found in the module description in the module handbook. ²If the master's thesis module comprises more than one assessment, the mark shall be composed in accordance with appendix 1.
- (7) ¹The master's thesis must be written in German; in accordance with appendix 1 and in agreement with the examiners it may be written in English. ²In justified individual cases, students may also be permitted to write the thesis in a different language. ³The responsible body specified in section 3 shall decide upon applications as per sentence 2, at the latest when deciding on admission (section 12).
- (8) ¹The master's thesis shall be prepared at an institute involved in the master's degree programme at Gottfried Wilhelm Leibniz Universität Hannover. ²In agreement with the responsible body specified in section 3, it may also be prepared at a different institute or a different university or facility outside the university. ³If the external supervisor is appointed as an examiner in accordance with section 5, the thesis must be supervised by an authorised examiner from Gottfried Wilhelm Leibniz Universität Hannover. ⁴If the external supervisor is not appointed as an examiner, the master's thesis shall be evaluated by an authorised examiner from Gottfried Wilhelm Leibniz Universität Hannover.

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 appendix 1 have been passed and a minimum of 120 ECTS credit points have been attained.
- (2) ¹Failure of the master's examination shall be considered final if repetition of a failed assessment that is required in accordance with section 4 is no longer possible in accordance with section 14. ²Written notification shall be issued in the case of irrevocable failure of the master's examination.

Section 9 Additional Modules and Examinations

- (1) ¹Students may take further examinations in addition to those specified in appendix 1 as necessary for attaining the minimum required credit points for this degree programme (additional examinations). ²The same applies regarding completion of additional modules of this degree programme (additional modules). ³Upon application to the responsible body specified in section 3, examinations and modules outside of the degree programme may also be taken provided that this is approved by the examiner.
- (2) Upon application to the responsible body specified in section 3, results from additional examinations and modules shall be recorded in the final degree documents and any further documents as set out in section 21; however, results from additional examinations and modules shall not contribute to the overall mark.

Section 10 Recognition of Previous Coursework and Assessments

- (1) ¹Previous coursework and assessments can be recognised under the conditions below. ²Applications for recognition should be submitted at the beginning of the degree programme. ³Applications are to be submitted to the responsible body specified in section 3. ⁴As a rule, a decision shall be taken on the application within six weeks. ⁵The deadline for the decision shall apply from the date on which all documents required for the decision have been received. ⁶Coursework and assessments previously completed within the scope of a degree programme at Gottfried Wilhelm Leibniz Universität shall be recognised automatically.
- (2) ¹Coursework 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. ²In case of doubt, statements must be obtained from the examiner – a member of Gottfried Wilhelm Leibniz Universität Hannover authorised (in accordance with section 5) to examine the module for which recognition has been requested – or from the Central Office for Foreign Education (*Zentralstelle für ausländisches Bildungswesen – ZAB*). ³In the event of lack of equivalence or substantial differences, the burden of proof lies with Gottfried Wilhelm Leibniz Universität Hannover. ⁴The process shall be governed by the Orientation framework of Gottfried Wilhelm Leibniz Universität Hannover for the recognition of previously completed coursework and assessments (*Orientierungsrahmen zur Anerkennung von Studien- und Prüfungsleistungen der Gottfried Wilhelm Leibniz Universität*).
- (3) ¹Professional qualifications acquired outside of the degree programme shall be recognised to an extent of up to 50 percent of the required credit points as per section 2, provided that they are equivalent. ²In the event of lack of equivalence or substantial differences, the burden of proof lies with Gottfried Wilhelm Leibniz Universität Hannover. ³The process is governed by the orientation framework of Gottfried Wilhelm Leibniz Universität Hannover for the recognition of acquired professional competence (*Orientierungsrahmen für die Anerkennung beruflich erworbener Kompetenzen der Gottfried Wilhelm Leibniz Universität*).
- (4) ¹When previously completed assessments are recognised, the marks are recognised as well or – if the marking scale differs – converted; the corresponding periods of study are recognised and credit points are awarded as per appendix 1. ²Assessments completed abroad shall remain ungraded upon request; in particular this shall apply to the case specified in paragraph 3 sentence 1. ³Recognised performance shall be indicated in the final degree documents.
- (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 substantiated that, due to being refugees, they cannot provide evidence of previously completed academic study and assessments can take a special placement examination to prove that they have the knowledge and skills necessary to complete the degree programme in accordance with the examination regulations; their knowledge and skills shall be credited towards 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 Assessments

- (1) ¹Those 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. ²Further requirements for admission to individual assessments can be found in appendix 1.
- (2) ¹Admission to examinations in master's degree programmes shall be denied if an assessment in a module that is equivalent to a compulsory module in this degree programme has been irrevocably failed in a previous degree programme. ²Irrevocably failed assessments in a module equivalent to a compulsory elective module in the degree programme for which admission is sought cannot be repeated in this degree programme.
- (3) ¹Students must apply for admission to the master's thesis. ²Admission to the master's thesis requires that the student has fulfilled the requirements specified in appendix 1. ³Should there be valid reason, the responsible body specified in section 3 shall decide upon exceptions.
- (4) ¹Admission in accordance with paragraph 3 shall be denied if the admission requirements have not been met. ²The examination candidate shall be notified if admission is denied.

Section 13 Registration

¹Registration is necessary for each individual assessment and resit, within the period set out in appendix 3.1. ²In exceptional circumstances, registration may be permitted outside of the stipulated period; such applications must be made to the responsible body specified in section 3. ³Registration/admission to the master's thesis implies registration for all assessments required in this module in accordance with appendix 1.

Section 14 Resit

- (1) ¹Students cannot resit assessments they have passed. ²Students may resit a failed assessment twice. ³The master's thesis as well as independent assignments (ST) may however only be repeated once. ⁴Students must resit assessments from compulsory modules and compulsory elective modules that have already been started until they pass or until it is no longer possible to resit them, in accordance with sentence 2 or sentence 3; section 19 paragraph 2 sentence 3 and section 19 paragraph 3 sentence 3 shall remain unaffected. ⁵The first time an examination is taken or the time of assignment of the topic shall be deemed to be the beginning of the assessment. ⁶Students are not required to resit failed assessments of elective modules; they may replace them with other elective modules. ⁷In the case of failed course-accompanying examinations (VbP), all assessment components must be repeated.
- (2) ¹Assessments may be repeated as a different assessment type – selected from those specified in section 6 paragraph 2 – at the discretion of the examiner. ²The assessment type must be announced by the start of the registration period (section 13 sentence 1).
- (3) ¹For the final attempt to repeat an assessment, the mark “insufficient” (*nicht ausreichend*) – for a written examination actually taken – or “failed” (*nicht bestanden*) – in the case of ungraded written examinations – may only be awarded after a supplementary assessment has been taken. ²As 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. ³If the supplementary assessment is conducted as an oral examination, an observer must be present at the examination in addition to the examiner. ⁴As a rule, an oral supplementary assessment should not exceed a maximum duration of 20 minutes. ⁵The supplementary assessment may be taken as another assessment type, selected from those specified in section 6 paragraph 2, but not as a written examination. ⁶If the student has passed the assessment following the supplementary assessment, only the mark “sufficient” (*ausreichend* – 4.0) – or “passed” (*bestanden*) in the case of ungraded assessments – may be awarded. ⁷A supplementary assessment shall not be permissible if section 18 applies with regard to evaluation of the written assessment. ⁸Once results for the final resit have been announced, the Examination Office shall invite students at least three weeks in advance to take the supplementary assessment. ⁹Section 15 paragraphs 4 and 5 shall apply accordingly.

Section 15 Late Submission, Withdrawal, Deadline Extension

- (1) ¹Students can deregister from a written examination (whether or not it is a multiple-choice examination, graded or ungraded) up until seven calendar days before the start of the examination. ²Students can deregister from an oral examination or practical sports presentation up until one calendar day before the

start of the examination. ³Students can deregister from all other assessment types specified in appendix 2 up until the start of the assessment. ⁴This does not apply to returning a topic if this occurs within the deadline specified in section 7 paragraph 3 – or appendix 2 in the case of an independent assignment (ST).

- (2) ¹For assessments with a submission deadline, assignment of the topic shall be determined as the start of the examination. ²For VbP, starting the first assessment component shall be deemed as the start of the examination, as per section 14 paragraph 1 sentence 5. ³Should the student deregister from the first assessment component of a VbP, this deregistration shall apply for the entire VbP. ⁴Students may deregister in accordance with paragraph 1 sentences 1 to 3 without giving a reason.
- (3) ¹Deregistration from written examinations in accordance with paragraph 1 sentence 1 must occur online via the examination system. ²For oral examinations and practical sports presentations, deregistration in accordance with paragraph 1 sentence 2 must occur in writing, via email or in a form determined by the examiner. ³The method used to deregister in accordance with sentence 2 shall also apply for assessments specified in appendix 2 that involve assignment of a topic.
- (4) ¹If an examination candidate fails to meet a fixed submission deadline, does not withdraw until after the start of the assessment, does not attend a scheduled written examination, oral examination or practical sports presentation, or does not withdraw until after the deadline defined in paragraph 1 sentences 1 and 2, the assessment concerned shall be deemed “failed” (*nicht bestanden*).
- (5) ¹However, in deviation to paragraph 4, if valid reason for failure to meet a submission deadline, absence from an examination or withdrawal is promptly provided and substantiated in writing to the responsible body specified in section 3, the assessment shall be deemed as not taken. ³In the event of illness, the student must provide a doctor’s certificate and – at the request of the responsible body specified in section 3 – a medical certificate issued by a public medical officer (*Amtsarzt*). ³The medical certificate must include a description of the health impairment and must state the resulting hindrance to the examination concerned. ⁴The form available on the website of Gottfried Wilhelm Leibniz Universität Hannover under Information about Examinations can be used for this purpose. ⁵The responsible body specified in section 3 shall decide upon recognition of valid reason within two weeks after the medical certificate has been submitted. ⁶Sentences 2 and 5 shall also apply with respect to illness and the resulting necessary care for a close relative. ⁷Close relatives are your children, parents, grandparents, as well as your spouse or partner and their children.
- (6) ¹If valid reason for failure to meet a submission deadline is credibly proven, the responsible body specified in section 3 may extend the deadline by a maximum of a third of the original completion period. ²Further extension of the deadline is only permitted in justified individual cases. ³If a further extension of the deadline is disproportionate, the responsible body specified in section 3 can decide that a new topic be issued. ⁴In this case, the assessment shall be deemed as not taken.

Section 16 Assessment Procedure in Cases of Hardship

¹The responsible body specified in section 3 shall enable students who provide evidence – in the form of a doctor’s certificate or medical certificate issued by a medical specialist or public medical officer (*Amtsarzt*) – of a serious long-term health issue, to take assessments in an equivalent alternative form, on another date, or within other deadlines. ²Should other valid reasons be substantiated – particularly maternity leave and parental leave – these shall be dealt with accordingly.

Section 17 Evaluation of Assessments

(1) ¹As a rule, assessments shall be evaluated by the examiners within one month; further details are specified in appendix 3.2. ²As a rule, assessments are graded. ³Coursework and ungraded assessments are evaluated as “passed” (*bestanden*) or “failed” (*nicht bestanden*).

⁴The following classifications are to be used for evaluating 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*) = a performance that fulfils the basic requirements despite shortcomings,

5.0 = “insufficient” (*nicht ausreichend*) = a performance that does not fulfil the requirements due to serious shortcomings.

⁵An assessment evaluated as “insufficient” (*nicht ausreichend*) has been failed.

- (2) ¹If 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. ²In this case, the mark is calculated as the average of the individual marks awarded by the examiners. ³Section 20 paragraph 3 sentence 4 shall apply accordingly.
- (3) ¹For a course-accompanying examination (VbP) as per section 6 paragraph 3 sentence 2, the individual assessment components shall be evaluated in accordance with the classifications set out in section 17 paragraph 1. ²Using the weighting predetermined for the individual marks, the overall mark for the course-accompanying examination (VbP) shall be calculated as set out in section 20 paragraph 3 sentences 1, 2 and 4. ³A course-accompanying examination (VbP) is deemed passed if the overall grade is 4.0 or better. It is irrelevant here whether individual assessment components have not been passed.
- (4) ¹An examination conducted in choice format (e.g. single choice or multiple choice) is deemed passed if the exam candidate has attained at least 50 per cent of the maximum points available (absolute pass mark). ²In cases however where the average of all examinations minus 18 per cent is worse than the absolute pass mark, the resulting value shall be deemed the relative pass mark. ³To calculate each examinee’s results, the difference between the relative and absolute pass mark shall be added to their points. ⁴In the case of repeated assessments, the average performance of the examinees from the first possible examination date shall apply.
- (5) ¹If 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”), if the minimum
- available points have been attained. ²Should the examinee fail to achieve the minimum points required for passing, the examination shall be deemed “failed” (“nicht bestanden”).

Section 18 Deceit, Breach of Regulations

- (1) ¹Attempts to influence the outcome of an assessment or coursework through deceit shall result in evaluation of the assessment concerned as “failed” (*nicht bestanden*). ²Carrying unauthorised resources after the assessment has started shall always be considered attempted deceit. ³Electronic communication devices are also considered unauthorised resources. ⁴In particularly serious cases – particularly repeated breach of regulations as per sentence 2 or plagiarism – the responsible body specified in section 3 may exclude the examination candidate from completing further assessments and coursework, or deem irrevocable failure of the entire examination. ⁵Sentence 4 shall also apply in the event of breach of regulations in other degree programmes at Gottfried Wilhelm Leibniz Universität Hannover.
- (2) ¹Those who breach regulations may be excluded from continuing the assessment concerned; in this case, the assessment concerned shall be evaluated as “failed” (*nicht bestanden*). ²Section 14 shall remain unaffected, except in the cases specified in section 18 paragraph 1 sentence 4.

Section 19 Credit Points for Modules

- (1) ¹The credit points listed in appendix 1 are awarded for a module if the corresponding coursework has been completed and the required assessments have been passed or evaluated as “sufficient” (*ausreichend*) or better. ²For modules assessed in the form of examinations covering multiple modules (module group) as per appendix 1, credit points are not awarded until the examination covering multiple modules has been passed.
- (2) ¹A module has been passed once all of the credit points stipulated in appendix 1 have been attained. ²A module group is considered passed if all modules relating to the examination and the examination covering multiple modules have been passed.

- (3) ¹In areas other than the compulsory modules specified in appendix 1, more modules can be selected and completed than is necessary to achieve the required credit points. ²Calculation of the overall mark is regulated by section 20 paragraphs 1 to 3. ³Students who have attained the credit points required for the overall progress review and have passed the prescribed number of compulsory elective modules or elective modules may apply to discontinue the examination process for the remaining compulsory elective modules or elective modules that they have started but not yet passed.

Section 20 Calculation of the Overall Mark

- (1) ¹The best marks from passed compulsory modules, compulsory elective modules and elective modules shall be used to calculate the overall mark as set out in paragraph 3, unless otherwise requested by the student. ²The other passed compulsory elective modules and elective modules shall be treated as additional modules as defined in section 9.
- (2) ¹To calculate the overall mark as per paragraph 3, only the marks from modules necessary to achieve the credit points specified in section 4 may be taken into account. ²If selection of the final module necessary to achieve the credit points specified in section 4 results in slightly exceeding this number of credit points, the modules shall be taken into account to calculate the overall mark as per paragraph 3.
- (3) ¹The overall mark for the master's examination is the arithmetic mean of the marks of all graded modules as per section 17 paragraphs 1 and 2. ²The credit points listed there shall be used for weighting unless particular weightings are specified in appendix 1. ³The overall mark shall be:
- 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*).
- ⁴To calculate the overall mark as per sentence 3, only the first decimal place shall be taken into account; all further decimal places shall be omitted without rounding up or down.
- (4) If the overall mark of the master's examination is 1.1 or better and the master's thesis module achieves a mark of 1.0, the classification "with distinction" shall be awarded and indicated on the degree documents as per section 21.
- (5) ¹Unless stipulated otherwise in appendix 1, the arithmetic mean of all graded assessments assigned to the module shall form the mark for the module. ²The particular weightings or proportionate credit points specified in the appendices shall be used for weighting. ³If 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. ⁴In accordance with paragraph 3 sentence 4, only the first decimal place will be taken into account to form the mark for the module. ⁵All further decimal places will be omitted without rounding up or down.

Section 21 Certificates of Results and Other Documents

- (1) ¹A degree certificate (*Urkunde*) featuring the awarded academic degree and final degree documents shall be issued for the successfully completed master's degree. ²The final degree documents comprise a certificate of results (*Zeugnis*) and a record of passed modules (*Verzeichnis der bestandenen Module*). ³Furthermore, students will receive a diploma supplement and a grading table confirming the relative ECTS grade distribution (*Einstufungstabelle*); upon request, confirmation of the overall degree mark in the form of a grade point average (GPA) is also available from the examination office.
- (2) ¹Provided that no additional subsections are specified in appendix 1 in conjunction with section 20 paragraph 6, the certificate of results (*Zeugnis*) shows the modules and their marks, the title of the master's thesis and its mark, the attained credit points as well as the overall mark awarded for the academic degree and – if applicable – the rating "with distinction" (*mit Auszeichnung*; section 20 paragraph 4). ²The record of passed modules (*Verzeichnis der bestandenen Module*) – including the master's thesis module – indicates the respective courses and credit points as well as marks or evaluations of assessments. ³All marks shall be shown as decimal numbers. ⁴The date on 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 documents. ⁵The issue date of all final degree documents shall be the date of printing.

- (3) ¹The diploma supplement includes a description of the qualifications achieved through the degree programme as well as the overall mark attained as per section 20 paragraph 3. ²Paragraph 2 sentences 3 to 5 shall apply accordingly.
- (4) ¹Confirmation of the relative ECTS grade distribution is issued in the form of a grading table. ²The calculation is based on the ECTS Users' Guide of the European Commission, as amended. ³The responsible body 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) ¹The document confirming the overall mark for the degree as a grade point average (GPA) additionally shows the assessments indicated in the certificate of results (*Zeugnis*) as per paragraph 2 as the following GPA equivalent grades:

| Mark | Equivalent Grade |
|------|------------------|
| 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 |

²The equivalent grades of these assessments are used – as specified in section 20 paragraph 6 – to calculate the equivalent grades for the module marks. ³In deviation to section 20 paragraph 3, the marks shall be rounded up to the first decimal place. ⁴Using the equivalent grades of these modules, the GPA shall be calculated as the average of the equivalent grades in accordance with section 20 paragraphs 1 and 2. ⁵When calculating the overall mark as per sentence 4, it shall be rounded up to the first decimal place.

- (6) ¹In the case of section 8 paragraph 2 and when a student otherwise discontinues the degree programme concerned at Gottfried Wilhelm Leibniz Universität Hannover, written confirmation shall be issued upon request specifying passed assessments and modules, their marks and the credit points awarded. ²All marks shall be shown as decimal numbers. ³If applicable, written confirmation shall also indicate irrevocable failure of the degree programme.
- (7) ¹All documents stated in paragraph 1 shall be issued in German. ²Additionally, English versions of the documents shall be provided by the examination office.

Section 22 Access to Examination Records

¹After completing a module examination, students can submit an application to the examination office to be granted access to their complete examination records. ²The application must be submitted at the latest within one year of announcement of results or issuance of the certificate of results (*Zeugnis*).

Section 23 Procedural Provisions

- (1) Reasons for non-beneficial administrative acts must be given in writing; such acts must be accompanied by information on legal remedies and delivered to the person concerned.
- (2) ¹The person concerned may submit a written objection to a decision based on the evaluation of an assessment; this must be submitted to the responsible body specified in section 3 within one month of receipt of the notification. ²The responsible body specified in section 3 shall make a decision regarding the objection.
- (3) ¹Should the examination candidate raise concrete and substantiated objections against an evaluation by one of the examiners, 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 so that they may respond. ²If the evaluation is changed by the examiner(s) in accordance with the request, the examination board shall remedy the objection. ³Otherwise, the examination board shall review the evaluation on the basis of the response(s), paying particular attention to whether

1. the examination process was duly carried out,
 2. the evaluation was based on incorrect facts,
 3. generally applicable evaluation principles were not observed,
 4. a reasonable and logically justified solution was evaluated as incorrect, or whether
 5. the examiner was guided by irrelevant considerations.
- (4) A decision regarding the objection must be made within three months.
- (5) The proceedings shall not result in a worse examination mark for the examination candidate.

Part Four: Final Provisions

Section 24 Entry into Force and Interim Provisions

- (1) These amended examination regulations shall enter into force as of 1 October 2024 after approval by the Presidential Board and publication in the official bulletin of Gottfried Wilhelm Leibniz Universität Hannover.
- (2) ¹Students who have enrolled in the master's degree programme Physics at Gottfried Wilhelm Leibniz Universität shall be subject to these examination regulations from their entry into force. ²The responsible body specified in section 3 shall decide upon exceptions referring to appendix 1 upon substantiated request, which must be submitted within three months of entry into force of these examination regulations. ³Any general transition rules that may be necessary shall be resolved by the responsible body specified in section 3 in supplement to these examination regulations.

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

At the discretion of the member of teaching staff, a piece of coursework for a tutorial consists of one of the following pieces of coursework or a combination of them: in-class assignments, homework assignments and short written examinations on the material covered in the tutorial.

Unless indicated otherwise in the examination regulations or the module handbook, the duration of examinations shall follow the following guidelines. The duration of written examinations (K) is at least 45 minutes and at most 180 minutes. Within this framework, written examinations (K) should have a duration of 5 to 15 minutes per credit point. The duration of oral examinations (MP) is at least 15 minutes and at most 60 minutes. Within this framework, oral examinations (MP) should have a duration of 1 to 4 minutes per credit point. These guidelines do not apply to elective modules (appendix 1.3) of other faculties.

If a course is taught in multiple languages in parallel, students may freely select which course to take.

Appendix 1.1: Compulsory modules

Appendix 1.1.a: Schwerpunktphase

| Module | Courses | Semester | Prerequisites for admission | Pieces of coursework | Assessment | CP |
|---------|---------|------------|-----------------------------|----------------------|------------|----|
| Seminar | Seminar | 1 or above | | | VbP | 3 |

Appendix 1.2: Compulsory Elective Modules

Appendix 1.2.a: Compulsory Elective Modules of the Schwerpunktphase

Students must select modules comprising 27 credit points; students who select the module "Selected Topics in Modern Physics B" must complete an industry placement in which they obtain 10 credit points.

The examination in the module "Selected Topics in Modern Physics A" or "Selected Topics in Modern Physics B" covers thematically related courses comprising at least 12 CP.

| Module | Courses | Semester | Prerequisites for admission | Pieces of coursework | Assessment | CP |
|-------------------------------------|--|------------|-----------------------------|---|------------|-----------|
| Selected Topics in Modern Physics A | Courses comprising at least 27 credit points | 1 or above | | 1 per course | MP | 27 |
| Selected Topics in Modern Physics B | Courses comprising at least 17 credit points | 1 or above | | 1 per course | MP | 17 |
| Industry Placement MA Physics | Industry placement | 1 or above | | Written assignment (AA) of at least 8 pages | | 10 |
| Total | | | | | | 27 |

Appendix 1.2.b: Fortgeschrittene Vertiefungsphase

Students must select modules comprising 10 credit points.

With the agreement of the responsible body specified in section 3, the following supplementary option for recognition shall apply for a study period abroad if the host university does not offer a suitable course: the list of modules in the following table can be supplemented by the host university's courses from other areas of experimental physics or theoretical physics.

| Module | Courses | Semester | Prerequisites for admission | Pieces of coursework | Assessment | CP |
|---------------------------------------|---|------------|-----------------------------|----------------------|------------|-----------|
| Advanced Solid-State Physics | Lecture and tutorial Advanced Solid-State Physics | 1 or above | | Ü | MP or K | 5 |
| Gravitational Physics | Lecture and tutorial Gravitational Physics | 1 or above | | Ü | MP or K | 5 |
| Quantum Optics | Lecture and tutorial Quantum Optics | 1 or above | | Ü | MP or K | 5 |
| Quantum Field Theory | Lecture and tutorial Quantum Field Theory | 1 or above | | Ü | MP or K | 5 |
| Radiation Protection and Radioecology | Lecture Radiation Protection and Radioecology or Lecture Chemistry and Physical Analysis of Radionuclides Seminar Radiation Protection and Radioecology | 1 or above | | 1 SL | MP or K | 5 |
| Total | | | | | | 10 |

Appendix 1.2.c: Key skills

Students must complete 4 CP. They may select courses for key skills:

- a) from those offered by the Leibniz Language Centre, the Centre for Quality Enhancement in Teaching and Learning or courses indicated accordingly by the faculties; or
- b) upon application to the responsible body specified in section 3, computer courses offered by the Faculty of Electrical Engineering and Computer Science, Leibniz Universität LUIS Services (LUIS) or other computer courses.

Students must take courses different from those in their bachelor's degree programme.

If the area offering the course does not offer coursework, students must complete an ungraded assessment instead, as a piece of coursework.

| Module | Courses | Semester | Prerequisites for admission | Coursework | Assessment | CP |
|------------|---------|------------|-----------------------------|--------------|------------|----|
| Key skills | Course | 1 or above | | 1 per course | | 4 |

Appendix 1.2.d: Additional Language Skills

An individual, binding curriculum may be prepared for students who do not have sufficient proficiency in German after prior consultation with a representative of the responsible body specified in section 3. This curriculum may include the German Language Proficiency Module comprising up to 16 CP; accordingly, fewer credit points need to be attained in the selected elective subject (appendix 1.3.).

| Module | Courses | Semester | Prerequisites for admission | Pieces of coursework | Assessments | CP |
|-----------------------------|--|------------|-----------------------------|---|-------------|--------|
| German Language Proficiency | Courses offered by the Leibniz Language Centre | 1 or above | | In accordance with the guidelines of the course coordinator | - | 0 - 16 |

Appendix 1.3: Elective Modules

Students must select one of the following elective subjects comprising 16 CP.

However, English-speaking students may select courses comprising fewer credits points in the elective subjects and select courses as per appendix 1.2.d: Additional language skills instead.

Appendix 1.3.a: Elective Subject Chemistry

The elective subject Chemistry consists of two compulsory modules unless it was already selected in the bachelor's degree programme.

| Module | Courses | Semester | Coursework | Assessments | CP |
|---|--|-----------------|------------|-------------|-----------|
| General Chemistry I for Nanotechnology, Optical Technologies and Physics | Lecture and tutorial General Chemistry for Nanotechnology, Optical Technologies and Physics | winter semester | - | K | 5 |
| General Chemistry II for Nanotechnology, Optical Technologies and Physics | Experimental tutorial and seminar General and Inorganic Chemistry for Nanotechnology, Optical Technologies and Physics | summer semester | 2 | - | 5 |
| Total | | | | | 10 |

and compulsory elective modules:

| Module | Courses | Semester | Pieces of coursework | Assessments | CP |
|-----------------------|--|-----------------|----------------------|-------------|----------|
| Chemistry of Elements | Lecture and tutorial Chemistry of Elements | summer semester | 1 | - | 6 |
| Organic Chemistry 1 | Lecture and tutorial Structure and Reactivity of Organic Compounds | winter semester | 1 | - | 6 |
| Total | | | | | 6 |

Students who already took Chemistry as an elective in their bachelor's degree programme must select modules comprising at least 16 CP from the following table. They must complete modules different to those in their bachelor's degree programme.

| Module | Courses | Semester | Pieces of coursework | Assessments | CP |
|--|---|-----------------|----------------------|-------------|----|
| Chemistry of Elements | Lecture and tutorial Chemistry of Elements | summer semester | 1 | - | 6 |
| Organic Chemistry 1 | Lecture and tutorial Structure and Reactivity of Organic Compounds | winter semester | 1 | - | 6 |
| Inorganic Solid State Chemistry | Lecture and tutorial Inorganic Solid State Chemistry | summer semester | - | MP or K | 5 |
| Instrumental Methods 1 | (Can be taken only through winter semester 23/24) Lecture Molecular Symmetry/ Crystallography (2 semester hours) Lecture Instrumental Methods I (2 semester hours) | winter semester | K120 | - | 6 |
| Optical Materials, Chemistry of Quantum Dots & Computational Chemistry | Lecture Structure of Matter & Chemistry of Quantum Dots, tutorial Computational Chemistry | winter semester | 1 | MP | 5 |

| | | | | | |
|---|--|-----------------|---|---------|-----------|
| Structure of Matter & Computational Chemistry | Structure of Matter & tutorial Computational Chemistry | winter semester | 2 | K or MP | 5 |
| Total | | | | | 16 |

Appendix 1.3.b: Elective Subject Electrical Engineering

Students must take courses according to the following table unless they already selected the elective subject Electrical Engineering in their bachelor's degree programme.

| Module | Courses | Semester | Pieces of coursework | Assessments | CP |
|---|---|-------------------------|----------------------|-------------|-----------|
| Principles of Electrical Measurement Technique | Lecture and tutorial Principles of Electrical Measurement Technique | summer semester | 1SL | K or MP | 5 |
| Lecture and tutorial Fundamentals of Communications Engineering | Lecture and tutorial Fundamentals of Communications Engineering | summer semester | | K | 5 |
| Microelectronics | Lecture Fundamentals of Semiconductor Devices (summer semester) | winter/ summer semester | 1 SL | - | 7 |
| | Lecture and tutorial Microelectronic Circuits (summer semester) | | | K | |
| Total | | | | | 16 |

or, in case Electrical Engineering was already taken in the bachelor's degree programme as a minor subject: Advanced modules from the module handbook Electrical Engineering comprising at least 16 CP in accordance with the following table.

| Module | Courses | Semester | Prerequisites | Pieces of coursework | Assessment | CP |
|---|---------------------------|-------------------------|---------------|----------------------|------------|----|
| Basics of Electrical Engineering: DC and AC Networks / Basic lab I | Lecture and tutorial | winter semester | | | K | 8 |
| | Lab I | summer semester | | LÜ | | |
| Basics of Electrical Engineering: Electrical and Magnetical Fields | Lecture and tutorial | summer semester | | | K | 8 |
| Basics of Electrical Engineering: Special Aspects of Network Theory / Laboratory of Electrical Engineering II | Lecture and tutorial | winter semester | | | K | 6 |
| | Lab II | winter semester | Basic lab I | LÜ | | |
| Principles of Electromagnetical Power Conversion | Lecture and tutorial | winter semester | | | K | 5 |
| Introduction to Digital Systems | Lecture and tutorial | winter semester | | | K | 5 |
| Signals and Systems | Lecture and tutorial | winter semester | | | K | 5 |
| Control Engineering I | Lecture, tutorial, lab | winter semester | | 1 SL | K | 5 |
| Control Engineering II | Lecture and tutorial | summer semester | | 1 SL | K | 5 |
| Automation Technology I | Lecture, tutorial and lab | winter/ summer semester | | 1 SL | K / MP | 5 |
| Power Engineering I | Lecture, tutorial and lab | winter/ summer semester | | 1 SL | K / MP | 5 |
| Microelectronics I | Lecture, tutorial and lab | winter/ summer semester | | 1 SL | K / MP | 5 |

| | | | | | | |
|-----------------------------|---------------------------|----------------------------|--|------|--------|-----------|
| Microelectronics II | Lecture, tutorial and lab | winter/ summer semester | | 1 SL | K / MP | 5 |
| Communications Technology I | Lecture, tutorial and lab | winter/ summer semester | | 1 SL | K / MP | 5 |
| Computer Engineering I | Lecture, tutorial and lab | winter/ summer semester | | 1 SL | K / MP | 5 |
| Computer Engineering II | Lecture, tutorial and lab | winter/ summer semester | | 1 SL | K / MP | 5 |
| Total | | | | | | 16 |

Appendix 1.3.c: Elective Subject Geodesy

Students must take courses according to the following table unless they already selected the elective subject geodesy in their bachelor's degree programme.

| Module | Courses | Semester | Prerequisites for admission | Pieces of course-work | Assessments | CP |
|---|--|----------|-----------------------------|-----------------------|-------------|-----------|
| Digital Image Processing | Principles of Digital Image Processing Selected Chapters of Programming | 2 | | 2 x Ü | K or MP | 6 |
| Principles of Geoinformatics and Spatial Planning | Introduction to GIS and Cartography I Principles of Urban and Regional Planning | 1. | | 2 x Ü | K | 5 |
| Modelling and Acquisition of Topographic Data | Aerial Photogrammetry GIS I - Modelling and Data Structures | 4. | | 2 x Ü | K | 6 |
| Total | | | | | | 16 |

or, in case Geodesy and Geoinformatics was already taken as an elective subject in the bachelor's degree programme:

| Module | Courses | Semester | Prerequisites for admission | Pieces of course-work | Assessments | CP |
|--|--|---------------------------|-----------------------------|-----------------------|---------------|----|
| Elective module Geodesy in the master's degree programme Physics | Three of the following courses: <ul style="list-style-type: none"> • Photogrammetric Computer Vision • Operational Remote Sensing • Internet GIS • Geosensor Networks • Recursive State Estimation for Dynamic Systems • Signal Processing in Physical Geodesy • Orbit Calculation and Relativistic Modeling in Geodesy • Special Models for Advanced GNSS Applications • Image Analysis I • Image Analysis II | Winter or summer semester | | Ü | 3 x (K or MP) | 16 |

| | | | | | | |
|--|--|--|--|--|--|--|
| | <ul style="list-style-type: none"> • GIS for Navigation Application • Laser Scanning - Modelling and Interpretation • Gravimetry and Physical Geodesy II • Research Project • SLAM and Path Planning • Methods and Applications of Physical Geodesy • Advanced Concepts for Positioning and Navigation • Space Geodetic Techniques and Project Land Survey • GNSS II and Mathematical Geodesy • Inertial Navigation • Geodetic Astronomy • Geodynamics and Geokinematics | | | | | |
|--|--|--|--|--|--|--|

Appendix 1.3.d: Elective Subject Computer Science

Students who did not select the elective subject Computer Science in their bachelor's degree programme must study according to the following table; they must take one of the two modules Programming I or Programming II:

| Module | Courses | Semester | Prerequisites for admission | Pieces of course-work | Assessments | CP |
|--|--|-----------------|-----------------------------|-----------------------|--------------------------------|----|
| Data Structures and Algorithms | Data Structures and Algorithms | winter semester | | | K 90 | 5 |
| Introduction to Theoretical Computer Science | Introduction to Theoretical Computer Science | winter semester | | | K 90 | 5 |
| Programming I | Programming I (2+2 semester hours) | winter semester | | LÜ | K (ungraded) | 6 |
| Programming II | Programming II ¹ (2+2 semester hours) | summer semester | | LÜ | K (ungraded) or VbP (ungraded) | 6 |

or, in case Computer Science was already taken in the bachelor's degree programme as an elective subject: advanced modules comprising at least 16 CP from the following table.

| Module | Courses | Semester | Prerequisites for admission | Pieces of course-work | Assessments | CP |
|---|--|---------------------------|-----------------------------|-----------------------|-------------|----|
| Logic and Formal Systems | Logic and Formal Systems (2+2 semester hours) | Winter or summer semester | | | K | 5 |
| Introduction to Database Systems | Lecture and tutorial Introduction to Database Systems (2+2 semester hours) | | | | K | 5 |
| Introduction to Computer Architecture | Lecture and tutorial Introduction to Computer Architecture (2+2 semester hours) | | | | K | 5 |
| Introduction to Operating Systems | Lecture and tutorial Introduction to Operating Systems (2+2 semester hours) | | | | K | 5 |
| Algorithms and Complexity | Lecture and tutorial Algorithms and Complexity (2+2 semester hours) | | | | K | 5 |
| Introduction to Digital Systems | Lecture and tutorial Introduction to Digital Systems (2+2 semester hours) | | | | K | 5 |
| Evolutionary Algorithms | Lecture and tutorial Evolutionary Algorithms (2+2 semester hours) | | | | K | 5 |
| Grundlagen der Human Computer Interaction | Lecture and tutorial Introduction to Human Computer Interaction (2+2 semester hours) | | | | K | 5 |
| Software Quality | Lecture and tutorial Software Quality (2+2 semester hours) | | | | K | 5 |
| Computer Architecture | Lecture and tutorial Computer Architecture (2+2 semester hours) | | | | K | 5 |
| Grundlagen der IT Security | Lecture and tutorial Foundations of IT Security (2+2 semester hours) | | | | K | 5 |
| Logic Design of Digital Systems | Lecture and tutorial Logic Design of Digital Systems (2+2 semester hours) | | | | K | 5 |
| Programming | Lecture and tutorial Programming | | | | K | 5 |

¹ Students should select Programming II only if they have prior knowledge.

| | | | | | | |
|---|--|--|--|--|---------|-----------|
| Languages and Compilers | Languages and Compilers (2+2 semester hours) | | | | | |
| Computer Networks | Lecture and tutorial Computer Networks (2+2 semester hours) | | | | K | 5 |
| Machine Learning | Lecture and tutorial Machine Learning (2+2 semester hours) | | | | K | 5 |
| Artificial Intelligence I | Lecture and tutorial Artificial Intelligence I (2+2 semester hours) | | Only for courses completed before 01.10.2022 | | K | 5 |
| Module for Recognition Other Faculties Computer Science 1 | Lecture and tutorial offered by the Faculty of Electrical Engineering and Computer Science | | | | MP or K | 4-7 |
| Module for Recognition Other Faculties Computer Science 2 | Lecture and tutorial offered by the Faculty of Electrical Engineering and Computer Science | | | | MP or K | 4-7 |
| Module for Recognition Other Faculties Computer Science 3 | Lecture and tutorial offered by the Faculty of Electrical Engineering and Computer Science | | | | MP or K | 4-7 |
| Total | | | | | | 16 |

Appendix 1.3.e: Elective Subject Mechanical Engineering

Students must take courses according to the following table unless they already selected the elective subject mechanical engineering in their bachelor's degree programme.

| Module | Courses | Semester | Prerequisites for admission | Pieces of coursework | Assessment | CP |
|------------------|-------------------------------|-----------------|-----------------------------|----------------------|------------|----------|
| Product Design I | Lecture and tutorial Design I | winter semester | | | K | 4 |
| | Design Project I | winter semester | | 1 | | |
| Total | | | | | | 4 |

Students must select modules comprising at least 12 CP from the following table.

| Module name | Courses | Semester | Prerequisites | Pieces of coursework | Assessment | CP |
|--|--|-----------------|---------------|----------------------|------------|----|
| Product Design II | Product Design II Design Project II | summer semester | | 1 | K | 5 |
| Fundamentals of Electrical Engineering I for Students of Mathematics or Physics | Electrical Engineering I + tutorial | 1 | | | K | 5 |
| Fundamentals of Electrical Engineering II and Electrical Drives for Students of Mathematics or Physics | Electrical Engineering II and Electrical Drives + tutorial | 2 | | | K | 5 |
| Control Engineering I | Control Engineering I + tutorial + group tutorial | 4 | | | K | 5 |
| | Lab | | | 1 | | |
| Metrology I | Metrology I + tutorial + group tutorial | 5 | | | K | 5 |
| Engineering Mechanics I | Engineering Mechanics + tutorial | 1 | | | K | 5 |
| Engineering Mechanics II | Engineering Mechanics II + tutorial | 2 | | | K | 5 |
| Engineering Mechanics III | Engineering Mechanics III + tutorial + group tutorial | 3 | | | K | 5 |

| | | | | | | |
|--|---|---|--|------|---|-----------|
| Engineering Mechanics IV | Engineering Mechanics IV + tutorial + group tutorial | 4 | | | K | 5 |
| Introduction to Manufacturing Technology | Introduction to Manufacturing Technology + tutorial | 3 | | | K | 5 |
| Thermodynamics I/ Chemistry | Thermodynamics I / Chemistry + tutorial | 3 | | | K | 7 |
| | Chemistry + tutorial | | | | | |
| Thermodynamics II | Thermodynamics II + tutorial | 4 | | | K | 5 |
| | Lab | | | 1 | | |
| Fluid Dynamics I | Fluid Dynamics I + tutorial + group tutorial | 5 | | | K | 5 |
| | Basic Laboratory A | | | 1 | | |
| Heat Transfer I | Heat Transfer I + tutorial | 5 | | | K | 5 |
| | Basic Laboratory B | | | 1 | | |
| Material Science I | Material Science I + tutorial | 1 | | | K | 5 |
| Material Science II | Material Science II + tutorial | 2 | | | K | 5 |
| | Basic lab Material Science | 2 | | 1 | | |
| Module for Recognition of Courses offered by the Faculty of Mechanical Engineering 1 | Lecture and tutorial offered by the Faculty of Mechanical Engineering | | Only for courses completed before 01.10.2022 | 1 SL | K | 5-7 |
| Module for recognition of courses offered by the Faculty of Mechanical Engineering 2 | Lecture and tutorial offered by the Faculty of Mechanical Engineering | | | 1 SL | K | 5-7 |
| Total | | | | | | 12 |

or three of the following advanced modules if Mechanical Engineering was already taken in the bachelor's degree programme as an elective subject:

| Module | Courses | Semester | Prerequisites for admission | Pieces of course-work | Assessments | CP |
|-------------------------------|-------------------------------|----------|-----------------------------|-----------------------|-------------|-----------|
| Mechatronic Systems | Mechatronic Systems | 1, 2 | | | K | 6 |
| Automation: Control Systems | Automation: Control Systems | 1, 2 | | | K | 6 |
| Basic Transport Phenomena - I | Basic Transport Phenomena - I | 1, 2 | | | K | 6 |
| Machine Tools - I | Machine Tools - I | 1, 2 | | 1 | K | 6 |
| Robotics I | Robotics I | 1, 2 | | | K | 6 |
| Total | | | | | | 16 |

Appendix 1.3.f: Elective Subject Mathematics

| Module | Courses | Semester | Prerequisites for admission | Pieces of course-work | Assessments | CP |
|--|--|----------------------------|-----------------------------|-----------------------|--------------------------|----|
| Analysis III | Lecture and tutorial Analysis III (4+2 semester hours) | winter semester | | Ü | K or MP | 10 |
| Algebra I | Lecture and tutorial Algebra I (4+2 semester hours) | winter semester | | Ü | K or MP | 10 |
| Practical Methods of Mathematics | Lecture and tutorial Algorithmic Programming (2+1 semester hours) | summer semester | | | K or MP (33%) | 16 |
| | Lecture and tutorial Numerical Mathematics I (4+2 semester hours) | winter semester | | Ü | K or MP (67%) | |
| Stochastic Methods | Lecture and tutorial Mathematical Stochastics I (4+2 semester hours) | summer semester | | Ü | K or MP | 10 |
| Fundamentals Bachelor Algebra, Number Theory, Discrete Mathematics | Lecture and tutorial Algebra II (4+2 semester hours) or Discrete Mathematics (4 + 2 semester hours) | winter/ summer semester | | 1 Ü | MP or K | 10 |
| Fundamentals Bachelor Analysis | Lecture and tutorial Theory of Functions (4+2 semester hours) or Manifolds (4+2 semester hours) | winter/ summer semester | | 1 Ü | MP or K | 10 |
| Fundamentals Bachelor Geometry | Lecture and tutorial Classical Differential Geometry (4+2 semester hours) or Manifolds (4+2 semester hours) or Algebra II (4+2 semester hours) | winter/ summer semester | | 1 Ü | MP or K | 10 |
| Fundamentals Bachelor Numerics | Lecture and tutorial Numerics II (4+2 semester hours) | winter/ summer semester | | 1 Ü | MP or K | 10 |
| Fundamentals Bachelor Stochastics | Lecture and tutorial Stochastics II (4+2 semester hours) | winter/ summer semester | | 1 Ü | MP or K | 10 |
| Specialisation Bachelor Algebra, Number Theory, Discrete Mathematics | One course (4 + 2 semester hours) as per the module handbook | winter/ summer semester | | 1 Ü | MP or K | 10 |
| Specialisation Bachelor Algebra, Number Theory, Discrete Mathematics B | Two courses (2 + 1 semester hours) as per the module handbook | winter/ summer semester | | 2 Ü | Two examinations MP or K | 10 |
| Specialisation Bachelor Analysis | One course (4 + 2 semester hours) as per the module handbook | winter/ summer semester | | 1 Ü | MP or K | 10 |
| Specialisation Bachelor Analysis B | Two courses (2 + 1 semester hours) as per the module handbook | winter/ summer semester | | 2 Ü | Two examinations MP or K | 10 |
| Specialisation Bachelor Geometry | One course (4 + 2 semester hours) as per the module handbook | winter/ summer semester | | 1 Ü | MP or K | 10 |

| | | | | | | |
|---------------------------------------|--|------------------------|--|-----|--------------------------|--------------|
| Specialisation Bachelor Geometry B | Two courses (2 + 1 semester hours) as per the module handbook | winter/summer semester | | 2 Ü | Two examinations MP or K | 10 |
| Specialisation Bachelor Numerics | One course (4 + 2 semester hours) as per the module handbook | winter/summer semester | | 1 Ü | MP or K | 10 |
| Specialisation Bachelor Numerics B | Two courses (2 + 1 semester hours) as per the module handbook | winter/summer semester | | 2 Ü | Two examinations MP or K | 10 |
| Specialisation Bachelor Stochastics | One course (4 + 2 semester hours) as per the module handbook | winter/summer semester | | 1 Ü | MP or K | 10 |
| Specialisation Bachelor Stochastics B | Two courses (2 + 1 semester hours) as per the module handbook | winter/summer semester | | 2 Ü | Two examinations MP or K | 10 |
| Elective Module 1 | One lecture with tutorials (4 + 2 semester hours) in Pure or Applied Mathematics | winter/summer semester | | 1 Ü | K or MP | 10 |
| Elective module 2 | One lecture with tutorials (4 + 2 semester hours) in Pure or Applied Mathematics | winter/summer semester | | 1 Ü | K or MP | 10 |
| Total | | | | | | 16-20 |

Appendix 1.3.g: Elective Subject Meteorology

Students must study according to the following table. They must select four of the courses listed below or Introduction to Meteorology and two other courses. The combination of courses is to be agreed with the course advice meteorology so that the oral examination (MP) can be guaranteed. Students must not take courses that were already credited in the bachelor's degree programme in the elective subject meteorology.

| Module | Courses | Semester | Prerequisites for admission | Pieces of course-work | Assessments | CP |
|---|---|----------|-----------------------------|-------------------------------------|-------------|----|
| Elective Subject Meteorology in the Master's Degree Programme Physics | Lecture and tutorial Introduction to Meteorology Lecture and tutorial Introduction to Climatology Lecture and tutorial Kinematics and Dynamics Lecture and tutorial Turbulence and Diffusion Lecture and tutorial Radiation I Lecture and tutorial Radiation II Lecture and tutorial Agricultural Meteorology Lecture and tutorial Cloud Physics Lecture and tutorial Thermodynamics and Statics Lecture and tutorial Remote Sensing I Lecture and tutorial Remote Sensing II | 1-4 | | One piece of course-work per course | MP | 16 |

Appendix 1.3.h: Elective Subject Philosophy

Students may select modules comprising at least 17 and at most 27 CP in the elective subject Philosophy. Students who did not select Philosophy in their bachelor's degree programme select either one basic module and one advanced specialisation module or three basic modules here.

Students who already studied Philosophy in their bachelor's degree programme select either two basic modules and one advanced specialisation module or one basic module and two advanced specialisation modules here. They may not take modules again that they already took in their bachelor's degree programme.

| Module | Courses | Semester | Prerequisites for admission | Pieces of course-work | Assessment | CP |
|---|----------|----------------------------------|-----------------------------|-----------------------|-------------------------|-------------------|
| Basic Module Metaphysics, Epistemology, Mind, and Language | Lecture | winter semester | - | 1 SL | K 90 | 7 |
| | Tutorial | | | | | |
| Basic Module Value Theory | Lecture | summer semester | - | 1 SL | K 90 | 7 |
| | Tutorial | | | | | |
| Basic Module History of Philosophy I | Lecture | winter semester | - | 1 SL | K 90 | 7 |
| | Tutorial | | | | | |
| Basic Module History of Philosophy II | Lecture | summer semester | - | 1 SL | K 90 | 7 |
| | Tutorial | | | | | |
| Advanced Specialisation Module Metaphysics, Epistemology, Mind, and Language | Seminar | Winter and summer semester | - | 1 SL | HA 10-12 or MP 20 | 10 |
| | Seminar | | | 1 SL | | |
| Advanced Specialisation Module Value Theory | Seminar | Winter and summer semester | - | 1 SL | HA 10-12 or MP 20 | 10 |
| | Seminar | | | 1 SL | | |
| Advanced Specialisation Module Philosophy of Science | Seminar | Winter and summer semester | - | 1 SL | HA 10-12 or MP 20 | 10 |
| | Seminar | | | 1 SL | | |
| Total | | | | | | 17- 27 |

Appendix 1.3.i: Elective Subject Economics and Management

Provided that students have already successfully completed courses in business administration or economics comprising 16 credit points in their bachelor's degree programme, training in their minor subject (Nebenfach) Economics and Management enables them to specialise in that specific subject. Students may select from the following courses:

- Accounting, Taxation and Public Finance
- Economic Policy and Theory
- Empirical Economics and Econometrics
- Finance, Banking & Insurance
- Health Economics
- Information and Operations Management
- International Environment and Development Studies
- Strategic Management.

The academic advisors for the minor subject at the Faculty of Economics and Management shall prepare an individual curriculum for conducting the master's phase.

| Module | Courses | Semester | Prerequisites for admission | Pieces of course-work | Assessments | CP |
|--|---|-------------------------------------|-----------------------------|-----------------------|--------------------------|-----------|
| Minor in Economics and Management in the master's degree programme | Four courses according to the specifications of the Faculty of Economics and Management | summer semester/ winter semester | | | 4 x K or MP or HA or VbP | 16 |
| Total | | | | | | 16 |

or: Minor Subject Modules in Business Administration in the master's degree programme if the student did not take Business Administration as an elective subject in their bachelor's degree programme:

| Module | Courses | Semester | Prerequisites for admission | Pieces of course-work | Assessments | CP |
|---|----------------------------|-----------------|-----------------------------|-----------------------|-------------|-----------|
| Principles of Business Administration I | Lecture (2 semester hours) | winter semester | | | K | 4 |
| Principles of Business Administration II | Lecture (2 semester hours) | winter semester | | | K | 4 |
| Principles of Business Administration III | Lecture (2 semester hours) | summer semester | | | K | 4 |
| Principles of Business Administration IV | Lecture (2 semester hours) | summer semester | | | K | 4 |
| Accounting I | Lecture (2 semester hours) | winter semester | | | K | 4 |
| Accounting II | Lecture (2 semester hours) | summer semester | | | K | 4 |
| Total | | | | | | 16 |

or: Minor subject modules in Economics in the master's degree programme if the student did not take Economics as an elective subject in their bachelor's degree programme:

| Module | Courses | Semester | Prerequisites for admission | Pieces of course-work | Assessments | CP |
|-----------------------------|----------------------------|-----------------|-----------------------------|-----------------------|-------------|-----------|
| Principles of Economics I | Lecture(2 semester hours) | winter semester | | | K | 4 |
| Principles of Economics II | Lecture (2 semester hours) | summer semester | | | K | 4 |
| Principles of Economics III | Lecture (2 semester hours) | winter semester | | | K | 4 |
| Principles of Economics IV | Lecture (2 semester hours) | summer semester | | | K | 4 |
| Principles of Economics V | Lecture (2 semester hours) | winter semester | | | K | 4 |
| Principles of Economics VI | Lecture (2 semester hours) | summer semester | | | K | 4 |
| Total | | | | | | 16 |

Appendix 1.3.j: Special Elective Subject

Students may select a different elective subject, the Special Elective Subject, upon application to the responsible body specified in section 3. Upon application to the responsible body specified in section 3, the modules to be completed in this elective subject, comprising at least 16 credit points, shall be determined in an individual, binding curriculum by the faculty offering the courses.

Appendix 1.4: Module Master's Thesis and Research Phase

The Master's Thesis Module includes one assessment.

| Module | Course | Semester | Prerequisites for admission | Pieces of course-work | Assessment | CP |
|-----------------|--------|----------|-----------------------------|-----------------------|------------|----|
| Master's Thesis | | 3, 4 | 40 ECTS | | MA | 30 |

The oral presentation of the research phase should refer to the contents of the master's thesis.

| Module | Courses | Semester | Prerequisites for admission | Pieces of coursework | Assessment | CP |
|---|---------|----------|-----------------------------|----------------------|------------|----|
| Research placement/ Project planning | | 3, 4 | | 1 SL | VbP | 30 |

Appendix 2: Assessment Types

Appendix 2.1: Definitions

Bachelor's thesis (BA)

The bachelor's thesis module comprises the bachelor's thesis and, if applicable, an oral assessment and/or a piece of coursework as defined in the (degree programme-related) appendix.

Term paper (HA)

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

Written examination (K)

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

Multiple-choice examination (KA)

¹A written examination is a written or electronic assessment completed under supervision. ²Parts of written examinations may be conducted as multiple-choice examinations. ³When drafting the examination questions and answers, the examiner must determine which answers shall be recognised as correct. ⁴Two authorised examiners must review the examination questions and answers for multiple-choice examinations in advance for errors, consistency of content and appropriateness. ⁵Should a subsequent review of the examination questions reveal obvious errors in individual questions, these shall be deemed not to have been assigned. ⁶Evaluation of the examinations shall be based on the number of questions minus the number of erroneous questions. ⁷Reduction of the number of examination questions shall not have a disadvantageous effect for examination candidates.

Master's thesis (MA)

The master's thesis module comprises the master's thesis and, if applicable, an oral assessment and/or a piece of coursework as defined in the (degree programme-related) appendix.

Oral examination (MP)

¹Oral examinations are conducted privately in the presence of an observer who holds the qualification to be ascertained through said examination or an equivalent qualification. ²The essential topics of the examination shall be recorded in the minutes of the assessment. ³Students wishing to take the same examination at a later date and other members of the university who express legitimate interest must be permitted to observe the oral examination as guests. ⁴This permission does not extend to the consultations about the results and the announcement of the examination candidate's or candidates' results. ⁵At the request of the examination candidate or candidates, the guests specified in sentence 3 must be excluded.

Placement report (PB)

¹A placement report is a written paper relating to a placement organised individually by the student and undertaken outside of the determined registration and examination periods at an external institution or at one of the university facilities. ²Topics include, for example, preparing and performing the placement as well as critical reflection on a predetermined subject.

Project-related examination (PJ)

¹A project-related examination involves addressing a predefined subject-specific or interdisciplinary topic in a theoretical, empirical, experimental, constructive, conceptual, applied artistic or documentary manner. ²The results are presented in the form of a written and/or planning and/or artistic and/or electronic assignment. ³The examiner may require a presentation followed by a discussion. ⁴The scope of the work (in months or hours) specified in appendix 1 is binding.

Practical sports presentation (SP)

¹A practical sports presentation comprises one or more assignments to prove the demonstration and movement skills of examination candidates in the subject of sports. ²Skills such as techniques and tactics specific to a particular sport; coordinative-rhythmic, coordinative-technical or conditional basics as well as

the situational ability to play or act may be evaluated. ³The type of presentation in a particular case is determined by agreement. ⁴The practical sports presentation is conducted before one examiner and one proficient observer. ⁵The essential topics of the examination shall be recorded in the minutes of the assessment. ⁶Students wishing to take the same examination at a later date and other members of the university who express legitimate interest must be permitted to observe the practical sports presentation as guests. ⁷This permission does not extend to the consultations about the results and the announcement of the examination candidate's or candidates' results. ⁸At the request of the examination candidate or candidates, the guests specified in sentence 6 must be excluded.

Independent assignment (ST)

¹In an independent assignment a subject-specific or interdisciplinary topic is addressed in a theoretical, experimental or constructive respect and the solutions developed are presented and explained in a manner usual for the professional activity. ²The scope of the work (in months or hours) specified in appendix 1 is binding. ³The stipulations in section 5 of these examination regulations shall apply. ⁴The topic of the independent assignment shall be determined by the examiner after hearing the examination candidate. ⁵The topic shall be assigned by the responsible body specified in section 3 or the entity appointed by that body; assignment of the topic must be recorded. ⁶The topic and a schedule for completion must also be set when the topic is assigned; the schedule for completion is to be prepared by the examination candidate. ⁷During preparation of the independent assignment, the examination candidate shall be supervised by the examiner, if appropriate in consultation with a person designated by the examiner. ⁸The period from assignment of the topic to submission of the independent assignment is six months. ⁹The student may return the topic of the independent assignment only once and only within the first eight weeks of the period provided for its preparation. ¹⁰Two copies of the independent assignment must be submitted to the entity appointed by the responsible body specified in section 3 by the deadline; the date and time of submission must be recorded. ¹¹Evaluation of the independent assignment may also include consideration of the process of its preparation.

Course-accompanying examination (VbP)

¹A course-accompanying examination (VbP) addresses a topic relating to a specific course and is conducted continuously during the semester. ²A VbP may comprise multiple examination components, which shall not exceed four components. ³The examiner shall determine and communicate the assessment type for a VbP by 15.10. for the winter semester or by 15.04. for the summer semester at the latest, at least for the semester in question. ⁴For courses and modules with a VbP, other assessments may be mandated as prerequisites only if the responsible dean of studies office can ensure that evaluation of the required module has been completed by the registration period for the VbP. ⁵The relevant registration and examination periods for the VbP examinations can be found in appendix 3.1 of the examination regulations.

⁶A VbP may comprise the following assessment types:

Written assignment (AA)

¹Written assignments are independent academic papers on a predetermined topic. ²They comprise a definition of the topic, a discussion of the problem, results and a conclusion. ³Written assignments include reports and/or minutes of field trips, placements or projects.

Documentation (DO)

¹A documentation comprises the analysis and presentation of an artistic, cognitive or action-oriented process. ²Documentations can take the form of reports and plans that correspond to those used in professional practice. ³Conditions regarding the number of pages or the number of plans or draft sheets may be determined by the examiner at the beginning of the examination and depend on the assignment. ⁴Further materials may be appended to the report.

Essay (ES)

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

Colloquium (KO)

¹A colloquium comprises an oral presentation with a subsequent discussion of the topic, methods and results of the paper. ²The examination candidate is to demonstrate in the colloquium that they have the ability to defend their point of view within the scope of critical academic discussion. ³The essential topics of the assessment shall be recorded in the minutes of the assessment. ⁴Students 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 colloquium as guests. ⁵This permission does not extend to the consultations about the results and the announcement of the examination candidate's or candidates' results. ⁶At the request of the examination candidate or candidates, the guests specified in sentence 4 must be excluded.

In-class test (KU)

¹An in-class test is a written assessment conducted under supervision during a set time. Following the requirements of the examiner, students must successfully complete a certain proportion of the assigned tasks in order to pass the in-class test.

Artistic academic presentation (KW)

¹An artistic academic presentation is based on the interaction between artistic processes and scientific analysis addressed in an artistic project and presented in an appropriate form. ²The lines of argument and interpretation featured in the presentation in the form of images and text are either expressed in an oral presentation with a subsequent discussion or explained in a term paper. ³An artistic academic presentation is conducted as an individual examination before an examiner and a proficient observer. ⁴The essential topics of the examination shall be recorded in the minutes of the assessment. ⁵Students wishing to take the same examination at a later date and other members of the university who express legitimate interest must be permitted to observe the artistic academic presentation as guests. ⁶This permission does not extend to the consultations about the results and the announcement of the examination candidate's or candidates' results. ⁷At the request of the examination candidate or candidates, the guests specified in sentence 5 must be excluded.

Lab exercise (LÜ)

¹A lab exercise comprises a series of practical tests or programming assignments, accompanied by written assignments (lab reports). ²As a rule, students explain their practical work, interpret the results and place them in a scientific context.

Model (MO)

¹Models are extensions of two-dimensional designs or plans and serve to illustrate a plan's spatial layout and to clarify planning issues. ²They are created to different scales, depending on the task and focus.

Teaching a group to play music (ME)

The aim of the VbP component "teaching a group to play music" is to demonstrate the ability to apply practical teaching skills (particularly practical music making at school) in a school class or a smaller group in an appropriate methodological and didactic manner.

Musical performance (MU)

¹The VbP component "musical performance" is conducted as an individual examination before two examiners or one examiner and one proficient observer. ²The essential topics of the examination shall be recorded in the minutes of the assessment. ³Students wishing to take the same examination at a later date and other members of the university who express legitimate interest must be permitted to observe the musical performance as guests. ⁴This permission does not extend to the consultations about the results and the announcement of the examination candidate's or candidates' results. ⁵At the request of the examination candidate or candidates, the guests specified in sentence 3 must be excluded.

Musical performance by pupils (MK)

The VbP component "musical performance by pupils" is based on a music education seminar and includes a musical performance by pupils.

Portfolio (PF)

¹A portfolio documents the learning process concerning certain topics or assignments set by the examiners at the start of the course. ²Students conduct systematic self-reflection during the course or retrospectively; in so doing, they may compile various materials in a folder, depending on what is agreed. ³An optional supplementary interview may be conducted to discuss the portfolio. ⁴Like the portfolio itself, the interview is competence-oriented.

Concert with an educational focus (PK)

¹The VbP component "concert with an educational focus" is an assignment in relation to the artistic major in which the educational focus (if applicable, in terms of modern concert pedagogy) plays an important role in execution and presentation/performance. ²As a rule, it is presented in a school learning group.

Presentation (PR)

¹A presentation is an independent and in-depth analysis of a predetermined topic within the context of the course. ²The work and results are presented orally and/or using electronic and other media, as well as in the subsequent discussion. ³The examiner may require a written assignment. ⁴The type and duration of the presentation shall be determined by the examiner, unless this is specified in the (degree programme-related) appendix.

Practical examination (PP)

¹A practical examination comprises one or more assignments to prove students' movement skills in the subject of sports. ²Skills such as techniques and tactics specific to a particular sport; coordinative-rhythmic, coordinative-technical or conditional basics as well as the situational ability to play or act may be evaluated. ³The type of presentation in a particular case is determined by agreement. ⁴The ungraded practical examination is conducted by one examiner over the course of the semester.

Project assignment (P)

¹A project assignment involves addressing a predefined subject-specific or interdisciplinary topic in a theoretical, empirical, experimental, constructive, conceptual, applied artistic or documentary manner. ²The results are presented in the form of a written and/or planning and/or artistic and/or electronic assignment. ³The examiner may require a presentation followed by a discussion.

Seminar assignment (SE)

A seminar assignment comprises a term paper and – depending on the requirements of the examiner – may include a presentation with a subsequent discussion.

Theatrical performance (TP)

¹A theatrical performance is the presentation of practical theatrical work before an audience, either in a process-oriented or product-oriented form. ²The essential topics of the examination shall be recorded in the minutes of the assessment. ³Students wishing to take the same examination at a later date and other members of the university who express legitimate interest must be permitted to observe the theatrical performance as guests. ⁴This permission does not extend to the consultations about the results and the announcement of the examination candidate's or candidates' results. ⁵At the request of the examination candidate or candidates, the guests specified in sentence 3 must be excluded.

Practical assessment (Ü)

¹A practical assessment is an assessment conducted under supervision during a set time within the course schedule. ²Following the requirements of the examiner, students must successfully complete a certain proportion of the practical assessment assignments in order to pass.

Lesson preparation and implementation (U)

¹As an assessment type, lesson preparation and implementation entails independent planning and implementation of a lesson as part of a teaching placement at a school for children with special needs or in an inclusive environment. ²The lesson is reviewed and evaluated by a mentor and the seminar coordinator of the preparation seminar.

Graphic representation (ZD)

¹Graphic representations explain, clarify and present design and planning work. ²Depending on the task and thematic focus, they are prepared at different scales and using different techniques.

Appendix 2.2: Glossary of Assessment Types

| | |
|-----|---------------------------------------|
| BA | Bachelor's thesis |
| HA | Term paper |
| K | Written examination |
| KA | Multiple-choice examination |
| MA | Master's thesis |
| MP | Oral examination |
| PB | Placement report |
| PJ | Project-related examination |
| SP | Practical sports presentation |
| ST | Independent assignment |
| VbP | Course-accompanying examination |
| AA | Written assignment |
| DO | Documentation |
| ES | Essay |
| KO | Colloquium |
| KU | In-class test |
| KW | Artistic academic presentation |
| LÜ | Lab exercise |
| MO | Model |
| ME | Teaching a group to play music |
| MU | Musical performance |
| MK | Musical performance by pupils |
| PF | Portfolio |
| PK | Concert with an educational focus |
| PR | Presentation |
| PP | Practical examination |
| P | Project assignment |
| SE | Seminar assignment |
| TP | Theatrical performance |
| Ü | Tutorial |
| U | Lesson preparation and implementation |
| ZD | Graphic representation |

Appendix 3: Supplementary Provisions

Appendix 3.1: Registration and Examination Periods

¹The responsible body specified in section 3 shall determine the variant for this degree programme and for the subjects in this degree programme. ²It shall decide either on variant 1 (one registration period/one examination period) or on variant 2 (two registration periods/two examination periods).

³In the case of modules that are exported to other degree programmes or made available to them, the degree programme or the responsible body of the faculty as specified in section 3 offering the module shall determine the variant; as a result, modules in this degree programme offered by other degree programmes (imported modules) may be assigned to a different variant. ⁴Students may register for the bachelor’s thesis, master’s thesis and independent assignments (ST) outside of the periods stated. ⁵Placement reports shall be registered in the registration period corresponding to the specified variant, but can be completed outside of the applicable examination periods and during the subsequent semester.

⁶Students must be notified of examination dates for oral examinations at least 14 days in advance via appropriate means of communication.

| | Registration Period Summer Semester | Examination Period Summer Semester | Registration Period Winter Semester | Examination Period Winter Semester |
|--|-------------------------------------|------------------------------------|-------------------------------------|------------------------------------|
| Variant 1 | | | | |
| <i>Period for all assessment types except VbP</i> | 15.05. – 31.05. | 15.06. – 14.10. | 15.11. – 30.11. | 15.12. – 14.04. |
| <i>Period for VbP assessment types</i> | 15.04. – 30.04. | 01.05. – 31.08. | 15.10. – 31.10. | 01.11. – 28.02. |
| Variant 2 | | | | |
| <i>Period I for all assessment types except VbP</i> | 15.05. – 31.05. | 15.06. – 31.08. | 15.11. – 30.11. | 15.12. – 28.02. |
| <i>Period II for all assessment types except VbP</i> | 16.09. – 23.09. | 24.09. – 14.10. | 16.03. – 23.03. | 24.03. – 14.04. |
| <i>Period for VbP assessment types</i> | 15.04. – 30.04. | 01.05. – 31.08. | 15.10. – 31.10. | 01.11. – 28.02. |

Appendix 3.2: Deadlines for Evaluation of Assessments

¹Depending on the variant selected, as specified in appendix 3.1, examiners shall submit marks as follows:



| | Summer Semester | Winter Semester |
|--|-----------------|-----------------|
| Variant 1 | | |
| <i>Period for all assessment types except VbP</i> | by 26.10. | by 26.04. |
| <i>Period for VbP assessment types</i> | by 15.09. | by 15.03. |
| Variant 2 | | |
| <i>Period I for all assessment types except VbP</i> | by 12.09. | by 12.03. |
| <i>Period II for all assessment types except VbP</i> | by 26.10. | by 26.04. |
| <i>Period for VbP assessment types</i> | by 15.09. | by 15.03. |

²Examiners shall evaluate assessments and submit marks within the deadline in accordance with section 17 paragraph 1. ³Assessments that occur at the end of the examination period shall be subject to a shorter deadline for evaluation of at least 12 days. ⁴The same shall apply for VbP.

Appendix 3.3: Deviating Stipulations Concerning Variant 2 Assessment Types

In variant 2, term papers must be registered during registration period I. In these cases, the assessment must be completed at the latest at the end of examination period II, as determined by the examiner.