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A corrected version of the amended examination regulations for the Master's Degree Programme Computer Engineering, last published in the official bulletin of Gottfried Wilhelm Leibniz Universität Hannover 17/2022 of 12.09.2022, is published on the basis of the decision taken on 02.11.2022 by the Dean of the Faculty of Electrical Engineering and Computer Science as a matter of urgency and the approval issued on 09.11.2022 by the President as a matter of urgency. It shall enter into force upon publication in the official bulletin.

# Amendments to the Examination Regulations for the Master's Degree Programme Computer Engineering at Gottfried Wilhelm Leibniz Universität Hannover of 23.03.2017,

# as amended on 18.09.2018, 13.08.2019, corrected on 11.12.2019 and amended on 06.08.2020, 30.07.2021 and 12.09.2022

The Faculty of Electrical Engineering and Computer Science 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):

# Overview

# Part One: General information

- Section 1 Examination Purpose and Academic Degree
- Section 2 Duration and Structure of the Degree Programme
- Section 3 Responsibility (Dean of Studies, Examination Board)

# Part Two: Master's Examination

- Section 4 Structure and Content of the Examination
- Section 5 Examiners and Observers
- Section 6 Coursework and Assessments
- Section 7 Master's Thesis
- Section 8 Passing and Failing
- Section 9 Additional Modules and Examinations
- Section 10 Recognition of Previous Coursework and Assessments
- Section 10a Placement Examinations for Refugees
- Section 11 Distance Learning

Part Three: Examination Procedure

- Section 12 Admission to Assessments
- Section 13 Registration
- Section 15 Late Submission, Withdrawal, Deadline Extension
- Section 16 Assessment Procedure in Cases of Hardship
- Section 17 Evaluation of Assessments
- Section 18 Deceit, Breach of Regulations

- Section 19 Credit Points for Modules
- Section 20 Calculation of the Overall Mark
- Section 21 Certificates of Results and Other Documents
- Section 22 Access to Examination Records
- Section 23 Procedural Provisions

Part Four: Final Provisions

Section 24 Entry into Force and Interim Provisions

# Part One: General information

#### Section 1 Examination Purpose and Academic Degree

- (1) <sup>1</sup>The master's degree constitutes further academic qualification in a professional field. <sup>2</sup>The master's examination aims to establish whether the 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

<sup>1</sup>The standard period of study is two years. <sup>2</sup>The time required for class attendance and independent study is 120 ECTS (credit points) at 30 hours each. <sup>3</sup>The 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) <sup>1</sup>The 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. <sup>2</sup>The members of the examination board and their deputies are appointed by the respective group representatives. <sup>3</sup>The chairperson and deputy chairperson are appointed by the examination board and must be members of the group of professors and junior professors or members who have completed their habilitation. <sup>4</sup>The student member may only adopt an advisory role with regard to grading or decisions concerning recognition of assessments. <sup>5</sup>If not appointed as a member of the examination board, the dean of studies may participate in meetings of the examination board in an advisory role.
- (3) <sup>1</sup>The members of the examination board and their deputies are subject to official secrecy. <sup>2</sup>If they are not employed in public service, they must be sworn to secrecy by the chairperson.
- (4) <sup>1</sup>The examination board has a quorum provided that the majority of the members eligible to vote are present. <sup>2</sup>Resolutions shall be passed by a majority of the valid votes cast; abstention from voting shall not be considered as a vote cast.
- (5) <sup>1</sup>The meetings of the examination board are not open to the public. <sup>2</sup>Minutes shall be taken of the meetings of the examination board. <sup>3</sup>The minutes shall document significant matters discussed and the decisions made.
- (6) Members of the examination board are entitled to observe examinations.
- (7) <sup>1</sup>The examination board may delegate authority to the chairperson and deputy chairperson, subject to revocation. <sup>2</sup>The examination board may appoint a body to perform its duties. <sup>3</sup>The chairperson shall prepare and implement the resolutions of the examination board and report to the examination board on a regular basis regarding these activities. <sup>4</sup>Delegation of authority to the chairperson or deputy chairperson 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) <sup>1</sup>The master's examination is conducted during the course of the degree programme. <sup>2</sup>It 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. <sup>3</sup>The modules as per sentence 2 are organised into areas of expertise.
- (2) The courses corresponding to the modules can be found in the module handbook or the course catalogue.
- (3) not applicable
- (4) <sup>1</sup>As a rule, courses and examinations are conducted in German. <sup>2</sup>Courses and examinations may also be conducted in English, provided that this is indicated accordingly in the module handbook. <sup>3</sup>Examinations may be conducted in English if agreed with or determined by the examiner.

#### Section 5 Examiners and Observers

<sup>1</sup>The responsible body specified in section 3 shall appoint members of the group of professors and junior professors from the Faculty of Electrical Engineering and Computer Science of Gottfried Wilhelm Leibniz Universität Hannover as authorised examiners for the modules of the degree programme Computer Engineering as well as the observers. <sup>2</sup>The 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 examiners may also be appointed who are not members or affiliates of Gottfried Wilhelm Leibniz Universität Hannover. <sup>4</sup>Observers must hold at least the qualification that is to be ascertained through the said examination or an equivalent qualification in order to be appointed. <sup>5</sup>The responsible body as specified in section 3 may also delegate the appointment of observers to the examiners.

#### Section 6 Coursework and Assessments

- (1) <sup>1</sup>Coursework comprises ungraded pieces of work that may be required in a module/a course in order to practice skills. <sup>2</sup>The 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. <sup>3</sup>As a rule, coursework is to be completed within the scope of the relevant course.
- (2) Assessments include the master's thesis (MA), term papers (HA), written examinations (K), multiplechoice examinations (KA), oral examinations (MP), placement reports (PB), project-related examinations (PJ), practical sports presentations (SP), independent assignments (ST) and course-accompanying examinations (VbP). Further details on assessment types are specified in appendix 2.1.
- (3) <sup>1</sup>If alternative assessment types are specified for a module in 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. <sup>2</sup>The 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) not applicable
- (7) <sup>1</sup>Practical evaluations ("Testate") may count additionally towards an assessment. <sup>2</sup>They monitor learning progress and are only assigned to one individual assessment. <sup>3</sup>Individual criteria such as homework assignments or short assessments (oral or written) may count towards them. <sup>4</sup>Practical evaluations are not explicitly indicated in the certificate of results; subject to the examiner's stipulations, they count towards the assessment with a maximum weighting of 25 per cent. <sup>5</sup>It must also be possible to pass the assessment without a practical evaluation. <sup>6</sup>Subject to the examiner's stipulations, the result of a practical

evaluation may remain unaffected regardless of whether the assessment is passed. <sup>7</sup>The examiner must announce (via notice board) the conditions under which practical evaluations will be conducted and how they count towards assessment marks by the start of the course at the latest.

# Section 7 Master's Thesis

- (1) <sup>1</sup>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 appendix 1. <sup>2</sup>The 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. <sup>3</sup>30 credit points shall be awarded for the successfully completed master's thesis module.
- (2) <sup>1</sup>The 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. <sup>2</sup>The 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) <sup>1</sup>The student may return the topic once within the first third of the completion period. <sup>2</sup>Renewed registration for the master's thesis module must occur within six months of returning the topic. <sup>3</sup>If registration does not occur within this period, a topic determined by the first examiner shall be assigned, with a deadline specified in accordance with paragraph 4 sentence 1. <sup>4</sup>Section 15 paragraphs 4 and 5 shall apply accordingly.
- (4) <sup>1</sup>The master's thesis must be submitted both in printed and electronic form within six months from the date of assignment. <sup>2</sup>The master's thesis should be marked by both examiners within six weeks – within ten weeks at the latest.
- (5) When submitting the master's thesis, 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) <sup>1</sup>The assessment process for the master's thesis module can been found in the module description in the module handbook. <sup>2</sup>If the master's thesis module comprises more than one assessment, the mark shall be composed in accordance with appendix 1.
- (7) <sup>1</sup>The 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. <sup>2</sup>In justified individual cases, students may also be permitted to write the thesis in a different language. <sup>3</sup>The responsible body specified in section 3 shall decide upon applications as per sentence 2, at the latest when deciding on admission (section 12).
- (8) <sup>1</sup>The first examiner of the master's thesis (MA) must be a member of the Faculty of Electrical Engineering and Computer Science.

# 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) <sup>1</sup>Failure 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. <sup>2</sup>Written notification shall be issued in the case of final failure of the master's examination.

#### Section 9 Additional Modules and Examinations

- (1) <sup>1</sup>Students may take further examinations in addition to those specified in appendix 1 as necessary for attaining the minimum required credit points for this degree programme (additional examinations). <sup>2</sup>The same applies regarding completion of additional modules of this degree programme (additional modules). <sup>3</sup>Upon application to the responsible body specified in section 3, examinations and modules outside of the degree programme may also be taken 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) <sup>1</sup>Previous coursework and assessments can be recognised under the conditions below. <sup>2</sup>Applications for recognition should be submitted at the beginning of the degree programme. <sup>3</sup>Applications are to be submitted to the responsible body specified in section 3. <sup>4</sup>As a rule, a decision shall be taken on the application within six weeks. <sup>5</sup>The deadline for the decision shall apply from the date on which all documents required for the decision have been received. <sup>6</sup>Coursework and assessments previously completed within the scope of a degree programme at Gottfried Wilhelm Leibniz Universität shall be recognised automatically.
- <sup>2</sup>Coursework and assessments that were completed at a university in Germany or abroad shall be recognised in accordance with the Convention on the Recognition of Qualifications concerning Higher Education in the European Region dated 11 April 1997 (Lisbon Recognition Convention), provided that there are no substantial differences to the coursework and assessments required under these examination regulations. <sup>2</sup>In case of doubt, statements must be obtained from the examiner 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*). <sup>3</sup>In the event of lack of equivalence or substantial differences, the burden of proof lies with 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) <sup>1</sup>Professional 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. <sup>2</sup>In the event of lack of equivalence or substantial differences, the burden of proof lies with Gottfried Wilhelm Leibniz Universität Hannover. <sup>3</sup>The 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) <sup>1</sup>When 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. <sup>2</sup>If no comparable marking system exists, the assessment shall remain ungraded; in particular, this shall apply to the case specified in paragraph 3 sentence 1. <sup>3</sup>Recognised 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) <sup>1</sup>Those enrolled in a master's degree programme at Gottfried Wilhelm Leibniz Universität Hannover are eligible to take examinations in the relevant degree programme – taking into account paragraph 2. <sup>2</sup>Further requirements for admission to individual assessments can be found in appendix 1.

- (2) Admission to examinations in master's degree programmes will be denied if the student is no longer entitled to take an examination in a comparable degree programme, in particular a degree programme in computer engineering.
- (3) <sup>1</sup>Students must apply for admission to the master's thesis. <sup>2</sup>Admission to the master's thesis requires that the student has fulfilled the requirements specified in appendix 1. <sup>3</sup>Should there be valid reason, the responsible body specified in section 3 shall decide upon exceptions.
- (4) <sup>1</sup>Admission in accordance with paragraph 3 shall be denied if the admission requirements have not been met. <sup>2</sup>The examination candidate shall be notified if admission is denied.

# Section 13 Registration

<sup>1</sup>Registration is necessary for each individual assessment and resit, within the period set out in appendix 3.1. <sup>2</sup>In exceptional circumstances, registration may be permitted outside of the stipulated period; such applications must be made to the responsible body specified in section 3. <sup>3</sup>Registration/admission to the master's thesis implies registration for all assessments required in this module in accordance with appendix 1. <sup>4</sup>The responsible body specified in section 3 may determine that registration is also necessary for individual pieces of coursework.

# Section 14 Resit

- (1) <sup>1</sup>Students cannot resit assessments they have passed. <sup>2</sup>Students may resit a failed assessment twice. <sup>3</sup>The master's thesis as well as independent assignments (ST) may however only be repeated once. <sup>4</sup>Students 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. <sup>5</sup>The first time an examination is taken or the time of assignment of the topic shall be deemed to be the beginning of the assessment. <sup>6</sup>Students are not required to resit failed assessments of elective modules; they may replace them with other elective modules. <sup>7</sup>In the case of failed course-accompanying examinations (VbP), all assessment components must be repeated.
- (2) <sup>1</sup>Assessments may be repeated as a different assessment type selected from those specified in section 6 paragraph 2 – at the discretion of the examiner. <sup>2</sup>The assessment type must be announced by the start of the registration period (section 13 sentence 1).
- (3) <sup>1</sup>For the final attempt to repeat an assessment, the mark "insufficient" (*nicht ausreichend*) for an 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. <sup>2</sup>As a rule, the supplementary assessment, which must be based on the content of the previous written examination, shall be conducted within six weeks after results have been announced. <sup>3</sup>If the supplementary assessment is conducted as an oral examination, an observer must be present at the examination in addition to the examiner. <sup>4</sup>As a rule, an oral supplementary assessment should not exceed a maximum duration of 20 minutes. <sup>5</sup>The supplementary assessment may be taken as another assessment type, selected from those specified in section 6 paragraph 2, but not as a written examination. <sup>6</sup>If 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. <sup>7</sup>A supplementary assessment shall not be permissible if section 18 applies with regard to evaluation of the written assessment. <sup>8</sup>Once 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. <sup>9</sup>Section 15 paragraphs 4 and 5 shall apply accordingly.

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

- (1) <sup>1</sup>Students 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. <sup>2</sup>Students can deregister from an oral examination or practical sports presentation up until one calendar day before the start of the examination. <sup>3</sup>Students can deregister from all other assessment types specified in appendix 2 up until the start of the assessment. <sup>4</sup>This 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) <sup>1</sup>For assessments with a submission deadline, assignment of the topic shall be determined as the start of the examination. <sup>2</sup>For course-accompanying examinations (VbP), starting the first assessment component shall be deemed as the start of the examination, as per section 14 paragraph 1 sentence 5.

<sup>3</sup>Should the student deregister from the first assessment component of a VbP, this deregistration shall apply for the entire VbP. <sup>4</sup>Students may deregister in accordance with paragraph 1 sentences 1 to 3 without giving a reason.

- (3) <sup>1</sup>Deregistration from written examinations in accordance with paragraph 1 sentence 1 must occur online via the examination system. <sup>2</sup>For 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. <sup>3</sup>The 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) <sup>1</sup>If 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) <sup>1</sup>However, 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. <sup>3</sup>In 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*). <sup>3</sup>The medical certificate must include a description of the health impairment and must state the resulting hindrance to the examination concerned. <sup>4</sup>The form in appendix 4 should be used for this purpose. <sup>5</sup>The responsible body specified in section 3 shall decide upon recognition of valid reason within two weeks after the medical certificate has been submitted. <sup>6</sup>Sentences 2 and 5 shall also apply with respect to illness and the resulting necessary care for a close relative. <sup>7</sup>Close relatives are your children, parents, grandparents, as well as your spouse or partner and their children.
- (6) <sup>1</sup>If 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. <sup>2</sup>Further extension of the deadline is only permitted in justified individual cases. <sup>3</sup>If a further extension of the deadline is disproportionate, the responsible body specified in section 3 can decide that a new topic be issued. <sup>4</sup>In this case, the assessment shall be deemed as not taken.

# Section 16 Assessment Procedure in Cases of Hardship

<sup>1</sup>The 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. <sup>2</sup>Should other valid reasons be substantiated – particularly maternity leave and parental leave – these shall be dealt with accordingly.

#### Section 17 Evaluation of Assessments

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

<sup>4</sup>The 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.

<sup>5</sup>An assessment evaluated as "insufficient" (*nicht ausreichend*) has been failed.

- (2) <sup>1</sup>If an assessment is evaluated by two examiners, it is only deemed as passed if both examiners evaluate it as "passed" (*bestanden*), "sufficient" (*ausreichend*) or better. <sup>2</sup>In this case, the mark is calculated as the average of the individual marks awarded by the examiners. <sup>3</sup>Section 20 paragraph 3 sentence 4 shall apply accordingly.
- (3) <sup>1</sup>For 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. <sup>2</sup>Using 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. <sup>3</sup>A 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) <sup>1</sup>An 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). <sup>2</sup>In 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. <sup>3</sup>To calculate each examinee's results, the difference between the relative and absolute pass mark shall be added to their points. <sup>4</sup>In the case of repeated assessments, the average performance of the examinees from the first possible examination date shall apply.
- (5) <sup>1</sup>If the examinee has achieved the minimum points required for passing an examination conducted in choice format as specified in paragraph 4, the following marks shall be awarded:
  - 1.0 = "very good" ("sehr gut"), if at least 95 per cent,
  - 1.3 = "very good" ("sehr gut"), if at least 90 per cent,
  - 1.7 = "good" ("gut"), if at least 85 per cent,
  - 2.0 = "good" ("gut"), if at least 80 per cent,
  - 2.3 = "good" ("gut"), if at least 75 per cent,
  - 2.7 = "satisfactory" ("befriedigend"), if at least 70 per cent,
  - 3.0 = "satisfactory" ("befriedigend"), if at least 65 per cent,
  - 3.3 = "satisfactory" ("befriedigend"), if at least 60 per cent,
  - 3.7 = "sufficient" ("ausreichend"), if at least 55 per cent and
  - 4.0 = "sufficient" ("ausreichend"), if the minimum

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

#### Section 18 Deceit, Breach of Regulations

- (1) <sup>1</sup>Attempts to influence the outcome of an assessment or coursework through deceit shall result in evaluation of the assessment concerned as "failed" (*nicht bestanden*). <sup>2</sup>Carrying unauthorised resources after the assessment has started shall always be considered attempted deceit. <sup>3</sup>Electronic communication devices are also considered unauthorised resources. <sup>4</sup>In 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. <sup>5</sup>Sentence 4 shall also apply in the event of breach of regulations in other degree programmes at Gottfried Wilhelm Leibniz Universität Hannover.
- (2) <sup>1</sup>Those who breach regulations may be excluded from continuing the assessment concerned; in this case, the assessment concerned shall be evaluated as "failed" (*nicht bestanden*). <sup>2</sup>Section 14 shall remain unaffected, except in the cases specified in section 18 paragraph 1 sentence 4.

#### Section 19 Credit Points for Modules

- (1) <sup>1</sup>The credit points listed in 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. <sup>2</sup>For 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) <sup>1</sup>A module has been passed once all of the credit points stipulated in appendix 1 have been attained. <sup>2</sup>A module group is considered passed if all modules relating to the examination and the examination covering multiple modules have been passed.
- (3) <sup>1</sup>In 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. <sup>2</sup>Calculation of the overall mark is regulated by section 20 paragraphs 1 to 3. <sup>3</sup>Students 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.

(4) An area of expertise has been passed if all the respective modules as per appendix 1 have been passed.

# Section 20 Calculation of the Overall Mark

- (1) <sup>1</sup>The 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. <sup>2</sup>The other passed compulsory elective modules and elective modules shall be treated as additional modules as defined in section 9.
- (2) <sup>1</sup>To 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. <sup>2</sup>If 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) <sup>1</sup>The 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. <sup>2</sup>The credit points listed there shall be used for weighting unless particular weightings are specified in appendix 1. <sup>3</sup>The 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*).

<sup>4</sup>To 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 1.3 or better and the master's thesis achieves a mark of 1.0, the classification "with distinction" shall be awarded and indicated on the degree documents as per section 21.
- (5) <sup>1</sup>Unless stipulated otherwise in appendix 1, the arithmetic mean of all graded assessments assigned to the module shall form the mark for the module. <sup>2</sup>The particular weightings or proportionate credit points specified in the appendices shall be used for weighting. <sup>3</sup>If no particular weighting is specified for modules with multiple graded assessments or if credit points are not allocated proportionately to assessments, the assessments shall hold equal weighting to form the module mark. <sup>4</sup>In accordance with paragraph 3 sentence 4, only the first decimal place will be taken into account to form the mark for the module. <sup>5</sup>All further decimal places will be omitted without rounding up or down.
- (6) The marks from passed graded assessments or modules within the scope of the module or module group shall form the mark for the module or module group as specified in paragraph 3. <sup>2</sup>The same applies for calculating the overall mark of an area of expertise.

# Section 21 Certificates of Results and Other Documents

- (1) <sup>1</sup>A degree certificate (*Urkunde*) featuring the awarded academic degree and final degree documents shall be issued for the successfully completed master's degree. <sup>2</sup>The final degree documents comprise a certificate of results (*Zeugnis*) and a record of passed modules (*Verzeichnis der bestandenen Module*). <sup>3</sup>Furthermore, 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) <sup>1</sup>Provided 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). <sup>2</sup>The 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. <sup>3</sup>All marks shall be shown as decimal numbers. <sup>4</sup>The 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. <sup>5</sup>The issue date of all final degree documents shall be the date of printing.
- (3) <sup>1</sup>The 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. <sup>2</sup>Paragraph 2 sentences 3 to 5 shall apply accordingly.

- (4) <sup>1</sup>Confirmation of the relative ECTS grade distribution is issued in the form of a grading table. <sup>2</sup>The calculation is based on the ECTS Users' Guide of the European Commission, as amended. <sup>3</sup>The 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) <sup>1</sup>The 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		

<sup>2</sup>The equivalent grades of these assessments are used – as specified in section 20 paragraph 6 – to calculate the equivalent grades for the module marks. <sup>3</sup>In deviation to section 20 paragraph 3, the marks shall be rounded up to the first decimal place. <sup>4</sup>Using 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. <sup>5</sup>When calculating the overall mark as per sentence 4, it shall be rounded up to the first decimal place.

- (6) <sup>1</sup>In 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. <sup>2</sup>All marks shall be shown as decimal numbers. <sup>3</sup>If applicable, written confirmation shall also indicate irrevocable failure of the degree programme.
- (7) <sup>1</sup>All documents stated in paragraph 1 shall be issued in German. <sup>2</sup>Additionally, English versions of the documents shall be provided by the examination office.

# Section 22 Access to Examination Records

<sup>1</sup>After completing a module examination, students can submit an application to the examination office to be granted access to their complete examination records. <sup>2</sup>The 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) <sup>1</sup>The 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. <sup>2</sup>The responsible body specified in section 3 shall make a decision regarding the objection.
- (3) <sup>1</sup>Should 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. <sup>2</sup>If the evaluation is changed by the examiner(s) in accordance with the request, the examination board shall remedy the objection. <sup>3</sup>Otherwise, 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 2022 after approval by the Presidential Board and publication in the official bulletin of Gottfried Wilhelm Leibniz Universität Hannover.
- (2) <sup>1</sup>Students who have enrolled in the master's degree programme in Computer Engineering at Gottfried Wilhelm Leibniz Universität shall be subject to these examination regulations from their entry into force. <sup>2</sup>The 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. <sup>3</sup>Any general transition rules that may be necessary shall be resolved by the responsible body specified in section 3 in supplement to these examination regulations.

# List of Appendices

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

Appendix 1.1 Area of Expertise Computational Health Informatics
Appendix 1.1.a) Compulsory modules – not applicable
Appendix 1.1.b) Compulsory elective modules
Appendix 1.1.c) Elective modules – not applicable
Appendix 1.2: Area of Expertise Data Science and Digital Libraries
Appendix 1.2.a) Compulsory modules – not applicable
Appendix 1.2.b) Compulsory elective modules
Appendix 1.2.c) Elective modules – not applicable
Appendix 1.3: Area of Expertise Data Base and Information Systems
Appendix 1.3.a) Compulsory modules – not applicable
Appendix 1.3.b) Compulsory elective modules
Appendix 1.3.c) Elective modules – not applicable
Appendix 1.4: Area of Expertise Real Time Systems
Appendix 1.4.a) Compulsory modules – not applicable
Appendix 1.4.b) Compulsory elective modules
Appendix 1.4.c) Elective modules – not applicable
Appendix 1.5: Area of Expertise Hardware Platforms of Computer Science
Appendix 1.5.a) Compulsory modules – not applicable
Appendix 1.5.b) Compulsory elective modules
Appendix 1.5.c) Elective modules – not applicable
Appendix 1.6: Area of Expertise IT-Security
Appendix 1.6.a) Compulsory modules – not applicable
Appendix 1.6.b) Compulsory elective modules
Appendix 1.6.c) Elective modules – not applicable
Appendix 1.7: Area of expertise Machine Learning
Appendix 1.7.a) Compulsory modules – not applicable
Appendix 1.7.b) Compulsory elective modules
Appendix 1.7.c) Elective modules – not applicable
Appendix 1.8: Area of expertise Man-Machine Communications
Appendix 1.8.a) Compulsory modules – not applicable
Appendix 1.8.b) Compulsory elective modules
Appendix 1.8.c) Elective modules – not applicable
Appendix 1.9: Area of expertise Scientific Data Management
Appendix 1.9.a) Compulsory modules – not applicable
Appendix 1.9.b) Compulsory elective modules
Appendix 1.9.c) Elective modules – not applicable
Appendix 1.10: Area of expertise Software Engineering
Appendix 1.10.a) Compulsory modules – not applicable
Appendix 1.10.b) Compulsory elective modules
Appendix 1.10.c) Elective modules – not applicable
Appendix 1.11: Area of expertise Systems and Computer Architecture
Appendix 1.11.a) Compulsory modules – not applicable
Appendix 1.11.b) Compulsory elective modules
Appendix 1.11.c) Elective modules – not applicable
Appendix 1.12: Area of expertise Theoretical Computer Science

Appendix 1.12.a)	Compulsory modules – not applicable
Appendix 1.12.b)	Compulsory elective modules
Appendix 1.12.c)	Elective modules – not applicable
	endable and Scalable Software Systems
Appendix 1.13.a)	Compulsory modules – not applicable
Appendix 1.13.b)	Compulsory elective modules
Appendix 1.13.c)	Elective modules – not applicable
Appendix 1.14: Area of expertise Visu	-
Appendix 1.14.a) Appendix 1.14.b)	Compulsory modules – not applicable
11 ,	Compulsory elective modules Elective modules
Appendix 1.14.c) Appendix 1.15: Area of expertise Kno	
Appendix 1.15. Area of expense kno Appendix 1.15.a)	Compulsory modules – not applicable
Appendix 1.15.a)	Compulsory modules – not applicable
Appendix 1.15.b) Appendix 1.15.c)	Elective modules – not applicable
Appendix 1.16: Area of Expertise Arcl	-
Appendix 1.16.a) Appendix 1.16.b)	Compulsory modules – not applicable Compulsory elective modules
Appendix 1.16.c)	Elective modules – not applicable
Appendix 1.17: Area of Expertise Auto	omatic Image Interpretation
Appendix 1.17.a) Appendix 1.17.b)	Compulsory modules – not applicable Compulsory elective modules
Appendix 1.17.c)	Elective modules – not applicable
Appendix 1.18.: Area of Expertise Aut	
Appendix 1.18.a)	Compulsory modules – not applicable
Appendix 1.18.b)	Compulsory elective modules
Appendix 1.18.c)	Elective modules – not applicable
Appendix 1.19: Area of Expertise Elec	ctrical Engineering and Electronics
Appendix 1.19.a)	Compulsory modules – not applicable
Appendix 1.19.b)	Compulsory elective modules
Appendix 1.19.c)	Elective modules – not applicable
Appendix 1.20: Area of Expertise Rad	liofrequency and Microwave Engineering
Appendix 1.20.a)	Compulsory modules – not applicable
Appendix 1.20.b)	Compulsory elective modules
Appendix 1.20.c)	Elective modules – not applicable
Appendix 1.21: Area of Expertise Con	nmunication Networks
Appendix 1.21.a)	Compulsory modules – not applicable
Appendix 1.21.b)	Compulsory elective modules
Appendix 1.21.c)	Elective modules – not applicable
Appendix 1.22.: Area of Expertise Mix	ed-Signal Circuits
Appendix 1.22.a)	Compulsory modules – not applicable
Appendix 1.22.b)	Compulsory elective modules
Appendix 1.22.c)	Elective modules – not applicable
Appendix 1.23: Area of Expertise Mult	timedia Signal Processing
Appendix 1.23.a)	Compulsory modules – not applicable
Appendix 1.23.b)	Compulsory elective modules
Appendix 1.23.c)	Elective modules – not applicable
Appendix 1.24: Area of Expertise Con	nmunications Systems
Appendix 1.24.a)	Compulsory modules – not applicable

Appendix 1.24.b)	Compulsory elective modules
Appendix 1.24.c)	Elective modules – not applicable
Appendix 1.25: Area of Expertise Robo	otics and Control Engineering
Appendix 1.25.a)	Compulsory modules – not applicable
Appendix 1.25.b)	Compulsory elective modules
Appendix 1.25.c)	Elective modules – not applicable
Appendix 1.26: Area of expertise Studi	um Generale
Appendix 1.26.a)	Compulsory modules – not applicable
Appendix 1.26.b)	Compulsory elective modules
Appendix 1.26.c)	Elective modules – not applicable
Appendix 1.27: Area of expertise Indus	strial Placement
Appendix 1.27.a)	Compulsory modules – not applicable
Appendix 1.27.b)	Compulsory modules – not applicable
Appendix 1.27.c)	Compulsory elective modules
Appendix 1.28: Area of Expertise Fund	lamentals of Computer Engineering
Appendix 1.28.a)	Compulsory modules – not applicable
Appendix 1.28.b)	Compulsory modules – not applicable
Appendix 1.28.c)	Compulsory elective modules
Appendix 1.29: Master's Thesis Module	e

# Appendix 2: Assessment Types

Appendix 2.1: Definitions

Appendix 2.2: Glossary

#### Appendix 3: Supplementary Provisions

Appendix 3.1: Registration and Examination Periods

Appendix 3.2: Deadlines for Evaluation of Assessments

Appendix 3.3: Deviating Stipulations Concerning Variant 2 Assessment Types

# Appendix 4: Proof of Incapacity to Take an Examination Due to Illness

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

Students obtain the 120 credit points required to pass the master's examination in compulsory elective modules, elective modules and the master's thesis (MA). The compulsory elective modules comprise the studium generale as well as the academic core areas of computer science (20-57 CP) and information technology (30-67 CP). The modules of the individual areas of expertise may include lectures and tutorials (5 CP), projects (6 CP), seminars (3 CP) and labs (6 CP). In addition, lecture modules taught by external lecturing staff, seminar modules and, in exceptional cases, project modules may be offered, with 3 to 4 CP. Up to three modules in Computer Science taken abroad or up to three modules in information technology taken abroad may be counted; each module comprised 5 to 10 credit points.

The areas of expertise in Computer Science include modules in the following core areas at least:

- Computational Health Informatics
- Data Science and Digital Libraries
- Data Base and Information Systems
- Real Time Systems
- Hardware Platforms of Computer Science
- IT-Security
- Machine Learning
- Human-Computer Interaction
- Scientific Data Management
- Software Engineering
- Systems and Computer Architecture
- Theoretical Computer Science
- Dependable and Scalable Software Systems
- Visual Analytics
- Knowledge-Based Systems

The areas of expertise in information technology include modules in the following core areas at least:

- Architectures and Systems
- Automatic Image Interpretation
- Automation Technology
- Electrical Engineering and Electronics
- Radiofrequency and Microwave Engineering
- Mixed-Signal Circuits
- Communication Networks
- Multimedia Signal Processing
- Communications Systems
- Robotics and Control Engineering

An industrial placement and/or modules from the area of expertise Fundamentals of Computer Engineering can be selected as elective modules.

Appendix	Areas of expertise	Credit points Requirements
1.1 – 1.15	Computer Science	20-57
1.16 -1.25	Information Technology	30-67
1.26	Studium Generale	3-6
1.27	Industrial placement	0 or 15-20
1.28	Fundamentals of Computer Engineering	0-15
1.29	Master's thesis	30
	Total required credit points	120

Generic modules which may encompass various topics cover module structures for new modules and/or modules offered on an irregular basis as compulsory elective modules. They merely indicate examples of the

structure of the work to be completed for new modules and/or modules offered on an irregular basis in the area of expertise in question. As a rule, these modules are called "Current Topics". If these modules are not included in the module handbook at the beginning of the semester, then such new modules and/or modules offered on an irregular basis are not offered during that semester.

The duration of a written examination is usually 15 to 25 minutes per credit point for the module. The duration of an oral examination is 5 to 10 minutes per credit point. "K" indicates that a written examination (K) shall take place, "MP" an oral examination (MP). The examiner shall announce the relevant assessment type at the beginning of each semester.

All written examinations (K), oral examinations (MP), seminars, and the master's thesis (MA) as per the appendices are graded unless indicated otherwise in the column 'assessment'. Labs, projects and the industrial placement 1 are usually ungraded. If a student has not completed an industrial placement, a maximum of 35 credit points from labs or projects as per appendices 1.1 - 1.15, 1.16 - 1.25 and 1.28 shall be credited. If a student has completed an industrial placement, a maximum of 45 credit points from labs, projects or an industrial placement as per appendices 1.1 - 1.25, 1.27 and 1.28 shall be credited.

In the column "courses", the number following the type of course indicates the number of semester hours.

ppendix 1.1.b) Compulsory elective modules					
Module	Course	Semester	Coursewor k	Assessment	Credit points
Computational Health Informatics	Lecture 2 Tutorial 2	1 to 3	-	MP	5
Healthcare IT Infrastructure	Lecture 2 Tutorial 2	1 to 3	-	MP	5
Lab: Advanced Computational Health Informatics	Lab 4	1 to 3	1 piece of coursework	-	6
Lab: Magnetic Resonance Imaging	Lab 4	1 to 3	1 piece of coursework	-	6
Lab: Medical Applications on Edge Devices	Lab 4	1 to 3	1 piece of coursework	-	6
Lab: Neuroevolution	Lab 4	1 to 3	1 piece of coursework	-	6
Lab: Use of Container Virtualization in Medicine	Lab 4	1 to 3	1 piece of coursework	-	6
Project: Deep Neural Networks for Medical Applications	Project 4	1 to 3	1 piece of coursework		6
Quantum Computing	Lecture 2 Tutorial 2	1 to 3	-	к	5
Seminar: Digital Health	Seminar 2	1 to 3	-	VbP (SE)	3
Seminar: Information Security in Medicine	Seminar 2	1 to 3	-	VbP (SE)	3
Current Topics in Computational Health Informatics - VÜ	Lecture 2 Tutorial 2	1 to 3		K/MP	5

# Appendix 1.1: Area of Expertise Computational Health Informatics

Appendix 1.1.a)	Compulsory modules – not applicable
Appendix 1.1.b)	Compulsory elective modules

Current Topics in Computational Health Informatics - VÜL	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Current Topics in Computational Health Informatics - VÜS	Lecture 2 Tutorial 1 Seminar 2	1 to 3	-	K / MP / VbP (SE)	7
Current Topics in Computational Health Informatics - V	Lecture 2	1 to 3	-	K/MP	3
Current Topics in Computational Health Informatics - L	Lab 4	1 to 3	1 piece of coursework	-	6
Current Topics in Computational Health Informatics - S	Seminar 2	1 to 3	-	VbP (SE)	3
Current Topics in Computational Health Informatics - P	Project 4	1 to 3	1 piece of coursework	-	6
Current Topics in Computational Health Informatics - VS	Lecture 2 Seminar 2	1 to 3		K / MP / VbP (SE)	5
Total					0- 57

Appendix 1.1.c)	Elective modules – not applicable
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# Appendix 1.2: Area of Expertise Data Science and Digital Libraries

Appendix 1.2.a) Con	npulsory modules – not applicable
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Appendix 1.2.b) Compulsory elective modules

Module	Course	Semester	Coursewor k	Assessment	Credit points
Data Streams: Algorithms and Management Systems	Lecture 2 Tutorial 2	1 to 3	-	K/MP	5
Introduction to Neurosymbolic Hybrid Systems: Theory, Technologies and Applications	Lecture 2	1 to 3	-	VbP / HA	3
Knowledge Engineering and Semantic Web	Lecture 2 Tutorial 2	1 to 3	-	к	5
Seminar: Data Science & Digital Libraries	Seminar 2	1 to 3	-	VbP (SE)	3
Seminar: Personalization in Technology Enhanced Learning (TEL) Environments	Seminar 2	1 to 3	-	VbP (SE)	3
Current Topics in Data Science and Digital Libraries - VÜ	Lecture 2 Tutorial 2	1 to 3	-	K/MP	5
Current Topics in Data Science and Digital Libraries - VÜL	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5

Current Topics in Data Science and Digital Libraries - VÜS	Lecture 2 Tutorial 1 Seminar 2	1 to 3	-	K / MP / VbP (SE)	7
Current Topics in Data Science and Digital Libraries - V	Lecture 2	1 to 3	-	K/MP	3
Current Topics in Data Science and Digital Libraries - L	Lab 4	1 to 3	1 piece of coursework	-	6
Current Topics in Data Science and Digital Libraries - S	Seminar 2	1 to 3	-	VbP (SE)	3
Current Topics in Data Science and Digital Libraries - P	Project 4	1 to 3	1 piece of coursework	-	6
Current Topics in Data Science and Digital Libraries - VS	Lecture 2 Seminar 2	1 to 3	-	K / MP / VbP (SE)	5
Total					0- 57

Appendix 1.2.c) Elective modules – not applicable

# Appendix 1.3: Area of Expertise Data Base and Information Systems

Appendix 1.3.b)	Compulsory elective modules						
Module	Course	Semester	Coursewor k	Assessment	Credi point		
Project: Big Data Technologies	Project 4	1 to 3	1 piece of coursework	-	6		
Seminar: Advanced Topics in Database Systems	Seminar 2	1 to 3	-	VbP (SE)	3		
Seminar: Database Systems	Seminar 2	1 to 3	-	VbP (SE)	3		
The 800-pound Gorilla in the corner: Data Integration	Lecture 3 Tutorial 1	1 to 3	-	MP	5		
Current Topics in Data Base and Information Systems - VÜ	Lecture 2 Tutorial 2	1 to 3	-	K/MP	5		
Current Topics in Data Base and Information Systems - VÜL	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5		
Current Topics in Data Base and Information Systems - VÜS	Lecture 2 Tutorial 1 Seminar 2	1 to 3	-	K / MP / VbP (SE)	7		
Current Topics in Data Base and Information Systems - V	Lecture 2	1 to 3	-	K/MP	3		
Current Topics in Data Base and Information Systems - L	Lab 4	1 to 3	1 piece of coursework	-	6		
Current Topics in Data	Seminar 2	1 to 3	-	VbP (SE)	3		

Total				0- 57	
Current Topics in Data Base and Information Systems - VS	Lecture 2 Seminar 2	1 to 3		K / MP / VbP (SE)	5
Current Topics in Data Base and Information Systems - P	Project 4	1 to 3	1 piece of coursework	-	6
Base and Information Systems - S					

# Appendix 1.3.c) Elective modules – not applicable

Appendix 1.4: Area of Expertise Real Time Systems

Appendix 1.4.a)	Compulsory mod	lules – not applicab	le					
Appendix 1.4.b)	Compulsory elec	Compulsory elective modules						
Module	Course	Semester	Coursewor k	Assessment	Credit points			
Design of Discrete Control Systems	Lecture 2 Tutorial 2	1 to 3	-	к	5			
Mobile Robotics	Lecture 2	1 to 3	-	к	3			
Project: External IT Project	Project 2	1 to 3	1 piece of coursework		3			
Current Topics in Real Time Systems - VÜ	Lecture 2 Tutorial 2	1 to 3	-	K/MP	5			
Current Topics in Real Time Systems - VÜL	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5			
Current Topics in Real Time Systems - VÜS	Lecture 2 Tutorial 1 Seminar 2	1 to 3	-	K / MP / VbP (SE)	7			
Current Topics in Real Time Systems - V	Lecture 2	1 to 3		K/MP	3			
Current Topics in Real Time Systems - L	Lab 4	1 to 3	1 piece of coursework	-	6			
Current Topics in Real Time Systems - S	Seminar 2	1 to 3		VbP (SE)	3			
Current Topics in Real Time Systems - P	Project 4	1 to 3	1 piece of coursework	-	6			
Current Topics in Real Time Systems - VS	Lecture 2 Seminar 2	1 to 3		K / MP / VbP (SE)	5			
Total					0- 57			

Appendix 1.4.c) Elective modules – not applicable

# Appendix 1.5: Area of Expertise Hardware Platforms of Computer ScienceAppendix 1.5.a)Compulsory modules – not applicable

Module	Course	Semester	Coursewor k	Assessment	Credit points
Application-Specific Instruction-Set Processors	Lecture 2 Tutorial 2	1 to 3	-	MP	5
Architectures for Digital Signal Processing	Lecture 2 Tutorial 2	1 to 3	-	MP	5
FPGA Design	Lecture 2 Tutorial 2	1 to 3	-	MP	5
Lab: FPGA Design	Lab 4	1 to 3	1 piece of coursework	-	6
Project: ASIPLab: Design of Application- Specific Instruction-Set Processors	Project 4	1 to 3	1 piece of coursework	-	6
Project: Microelectronics - Chip Design	Project 4	1 to 3	1 piece of coursework	-	6
Current Topics in Hardware Platforms of Computer Science - VÜ	Lecture 2 Tutorial 2	1 to 3	-	K/MP	5
Current Topics in Hardware Platforms of Computer Science - VÜL	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Current Topics in Hardware Platforms of Computer Science - VÜS	Lecture 2 Tutorial 1 Seminar 2	1 to 3	-	K / MP / VbP (SE)	7
Current Topics in Hardware Platforms of Computer Science - V	Lecture 2	1 to 3	-	K/MP	3
Current Topics in Hardware Platforms of Computer Science - L	Lab 4	1 to 3	1 piece of coursework	-	6
Current Topics in Hardware Platforms of Computer Science - S	Seminar 2	1 to 3	-	VbP (SE)	3
Current Topics in Hardware Platforms of Computer Science - P	Project 4	1 to 3	1 piece of coursework	-	6
Current Topics in Hardware Platforms of Computer Science - VS	Lecture 2 Seminar 2	1 to 3	-	K / MP / VbP (SE)	5
Total		· · ·			0- 57

Appendix 1.5.b)	Compulsory elective modules
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Appendix 1.5.c)

Elective modules - not applicable

Module	Course	Semester	Coursewor k	Assessment	Credit points
Introduction Usable Security and Privacy	Lecture 2 Tutorial 2	1 to 3	-	к	5
Lab: Usable Security Lab	Lab 4	1 to 3	1 piece of coursework	-	6
Human Centered Security	Lecture 2	1 to 3	-	к	3
Seminar: Digital Sovereignty	Seminar 2	1 to 3	-	VbP (SE)	3
Seminar: Human Factors in Cybersecurity	Seminar 2	1 to 3	-	VbP (SE)	3
Current Topics in IT Security - VÜ	Lecture 2 Tutorial 2	1 to 3	-	K/MP	5
Current Topics in IT Security - VÜL	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Current Topics in IT Security - VÜS	Lecture 2 Tutorial 1 Seminar 2	1 to 3	-	K / MP / VbP (SE)	7
Current Topics in IT Security - V	Lecture 2	1 to 3	-	K/MP	3
Current Topics in IT Security - L	Lab 4	1 to 3	1 piece of coursework	-	6
Current Topics in IT Security - S	Seminar 2	1 to 3		VbP (SE)	3
Current Topics in IT Security - P	Project 4	1 to 3	1 piece of coursework	-	6
Current Topics in IT Security - VS	Lecture 2 Seminar 2	1 to 3		K / MP / VbP (SE)	5
Total			<b>I</b>		0- 57

# Appendix 1.6: Area of Expertise IT-Security

Appendix 1.6.a) Compulsory modules – not applicable

Appendix 1.6.c) Elective modules – not applicable

Appendix 1.7: Area of Expertise Machine LearningAppendix 1.7.a)Compulsory modules – not applicableAppendix 1.7.b)Compulsory elective modules

Module	Course	Semester	Coursewor k	Assessment	Credit points
AutoML Lab	Lab 4	1 to 3	1 piece of coursework		6
Automated Machine Learning	Lecture 2 Tutorial 2	1 to 3		K/MP	5
Interpretable Machine Learning	Lecture 2 Tutorial 2	1 to 3		MP	5

		1			1
Reinforcement Learning	Lecture 2 Tutorial 2	1 to 3	-	PJ / MP	5
Project: Reproducibility Challenge in Machine Learning	Project 4	1 to 3	1 piece of coursework		6
Seminar: Automated Machine Learning	Seminar 2	1 to 3	-	VbP (SE)	3
Seminar: Reinforcement Learning	Seminar 2	1 to 3	-	VbP (SE)	3
Social Responsibility in Machine Learning	Lecture 2 Tutorial 1 Project 1	1 to 3	-	MP /VbP	5
Current Topics in Machine Learning - VÜ	Lecture 2 Tutorial 2	1 to 3	-	K/MP	5
Current Topics in Machine Learning - VÜL	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Current Topics in Machine Learning - VÜS	Lecture 2 Tutorial 1 Seminar 2	1 to 3	-	K / MP / VbP (SE)	7
Current Topics in Machine Learning - V	Lecture 2	1 to 3	-	K/MP	3
Current Topics in Machine Learning - L	Lab 4	1 to 3	1 piece of coursework	-	6
Current Topics in Machine Learning - S	Seminar 2	1 to 3	-	VbP (SE)	3
Current Topics in Machine Learning - P	Project 4	1 to 3	1 piece of coursework	-	6
Current Topics in Machine Learning - VS	Lecture 2 Seminar 2	1 to 3		K / MP / VbP (SE)	5
Total					0- 57

Appendix 1.7.c) Elective modules – not applicable

# Appendix 1.8: Area of Expertise Man-Machine Communications

Appendix 1.8.a)	Compulsory modules – not applicable
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# Appendix 1.8.b) Compulsory elective modules

Module	Course	Semester	Coursewor k	Assessment	Credit points
Interactive Systems	Lecture 2 Tutorial 2	1 to 3	-	к	5
Mobile Interaction Design Lab	Lecture 1 Lab 3	1 to 3	1 piece of coursework	-	6
Mobile Interaction	Lecture 2 Tutorial 2	1 to 3	-	К	5
Physical Computing Lab	Lecture 1 Lab 3	1 to 3	1 piece of coursework	-	6
Research Project Human-Computer Interaction	Project 4	1 to 3	1 piece of coursework	-	6

Seminar: Human- Computer Interaction	Seminar 2	1 to 3	-	VbP (SE)	3
Current Topics in Man- Machine Communications - VÜ	Lecture 2 Tutorial 2	1 to 3	-	K/MP	5
Current Topics in Man- Machine Communications - VÜL	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Current Topics in Man- Machine Communications - VÜS	Lecture 2 Tutorial 1 Seminar 2	1 to 3	-	K / MP / VbP (SE)	7
Current Topics in Man- Machine Communications - V	Lecture 2	1 to 3	-	K/MP	3
Current Topics in Man- Machine Communications - L	Lab 4	1 to 3	1 piece of coursework	-	6
Current Topics in Man- Machine Communication - S	Seminar 2	1 to 3	-	VbP (SE)	3
Current Topics in Man- Machine Communications - P	Project 4	1 to 3	1 piece of coursework	-	6
Current Topics in Man- Machine Communications - VS	Lecture 2 Seminar 2	1 to 3		K / MP / VbP (SE)	5
Total					0- 57

Appendix 1.8.c) Elective modules – not applicable

# Appendix 1.9: Area of expertise Scientific Data Management

Appendix 1.9.a)	Compulsory modules – not applicable
Appendix 1.9.b)	Compulsory elective modules

Module	Course	Semester	Coursewor k	Assessment	Credit points
Seminar on Scientific Data Management	Seminar 2	1 to 3	-	VbP (SE)	3
Current Topics in Scientific Data Management - VÜ	Lecture 2 Tutorial 2	1 to 3	-	K/MP	5
Current Topics in Scientific Data Management - VÜL	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Current Topics in Scientific Data Management - VÜS	Lecture 2 Tutorial 1 Seminar 2	1 to 3	-	K / MP / VbP (SE)	7
Current Topics in Scientific Data Management - V	Lecture 2	1 to 3	-	K/MP	3
Current Topics in Scientific Data Management - L	Lab 4	1 to 3	1 piece of coursework	-	6

Current Topics in Scientific Data Management - S	Seminar 2	1 to 3	-	VbP (SE)	3
Current Topics in Scientific Data Management - P	Project 4	1 to 3	1 piece of coursework	-	6
Current Topics in Scientific Data Management - VS	Lecture 2 Seminar 2	1 to 3		K / MP / VbP (SE)	5
Total					

# Appendix 1.9.c) Elective modules – not applicable

Appendix 1.10.a)Compulsory modules – not applicableAppendix 1.10.b)Compulsory elective modules						
Appendix 1.10.b) Module	Course	Semester	Coursewor k	Assessment	Credit points	
Architectures for Software and Systems	Lecture 2	1 to 3	-	к	3	
Agile Software Development Lab	Lab 4	1 to 3	1 piece of coursework	-	6	
Usability Engineering Lab	Lab 4	1 to 3	1 piece of coursework	-	6	
Advanced Software Development Approaches	Lecture 2 Tutorial 2	1 to 3	-	к	5	
Requirements Engineering	Lecture 2 Tutorial 2	1 to 3	-	MP	5	
Requirements Engineering Lab	Lab 4	1 to 3	1 piece of coursework	-	6	
Software Engineering in Projects	Lecture 2	1 to 3	-	к	3	
Software Process Engineering	Lecture 2 Tutorial 2	1 to 3	-	к	5	
Socio-Technical Aspects of Software Engineering	Lecture 2 Tutorial 2	1 to 3	-	НА	5	
Current Topics in Software Engineering - VÜ	Lecture 2 Tutorial 2	1 to 3	-	K/MP	5	
Current Topics in Software Engineering - VÜL	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5	
Current Topics in Software Engineering - VÜS	Lecture 2 Tutorial 1 Seminar 2	1 to 3	-	K / MP / VbP (SE)	7	
Current Topics in Software Engineering - V	Lecture 2	1 to 3	-	K/MP	3	
Current Topics in Software Engineering - L	Lab 4	1 to 3	1 piece of coursework	-	6	

Appendix 1.10: Area of expertise Software Engineering Appendix 1.10.a) Compulsory modules – not applicable

Current Topics in Software Engineering - S	Seminar 2	1 to 3		VbP (SE)	3
Current Topics in Software Engineering - P	Project 4	1 to 3	1 piece of coursework	-	6
Current Topics in Software Engineering - VS	Lecture 2 Seminar 2	1 to 3		K / MP / VbP (SE)	5
Total					0- 57

# Appendix 1.10.c) Elective modules – not applicable

# Appendix 1.11: Area of expertise Systems and Computer Architecture

Appendix 1.11.a)	Compulsory modules – not applicable
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Appendix 1.11.b)	Compulsory elective modules
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Module	Course	Semester	Coursewor k	Assessment	Credit points
Operating System Construction for Multicore Platforms	Lecture 2 Tutorial 4	1 to 3	-	MP	8
Lab: Operating System Technology Lab	Lecture 1 Lab 3	1 to 3	1 piece of coursework	-	6
Project: System and Computer Architecture	Project 4	1 to 3	1 piece of coursework		6
Seminar: Hot Topics in Systems	Seminar 2	1 to 3	-	VbP (SE)	3
Current Topics in Systems and Computer Architecture - VÜ	Lecture 2 Tutorial 2	1 to 3		K/MP	5
Current Topics in Systems and Computer Architecture - VÜL	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Current Topics in Systems and Computer Architecture - VÜS	Lecture 2 Tutorial 1 Seminar 2	1 to 3	-	K / MP / VbP (SE)	7
Current Topics in Systems and Computer Architecture - V	Lecture 2	1 to 3	-	K/MP	3
Current Topics in Systems and Computer Architecture - L	Lab 4	1 to 3	1 piece of coursework	-	6
Current Topics in Systems and Computer Architecture - S	Seminar 2	1 to 3	-	VbP (SE)	3
Current Topics in Systems and Computer Architecture - P	Project 4	1 to 3	1 piece of coursework	-	6
Current Topics in Systems and Computer Architecture - VS	Lecture 2 Seminar 2	1 to 3		K / MP / VbP (SE)	5
Total		· ·			0- 57

# Appendix 1.11.c) Elective modules – not applicable

Appendix 1.12: Area of	of expertise Theoretical Computer Science
Appendix 1.12.a)	Compulsory modules – not applicable
Appendix 1.12.b)	Compulsory elective modules

Module	Course	Semester	Coursewor k	Assessment	Credit points
Agent-Based Control in Energy Systems	Lecture 2 Tutorial 2	1 to 3	-	к	5
Computability and Logic	Lecture 2 Tutorial 1 Seminar 2	1 to 3	-	MP	7
Introduction to Energy Informatics	Lecture 2 Seminar 2	1 to 3	-	к	5
Efficient Algorithms	Lecture 2 Tutorial 1 Seminar 2	1 to 3	-	MP	7
Formal Languages	Lecture 2 Tutorial 1 Seminar 2	1 to 3	-	MP	7
SAT Algorithms	Lecture 2 Tutorial 1 Lab 2	1 to 3		K/MP	7
Computational Complexity	Lecture 2 Tutorial 1 Seminar 2	1 to 3	-	MP	7
Cryptography	Lecture 2 Tutorial 1 Seminar 2	1 to 3	-	MP	7
Advanced Logics	Lecture 2 Tutorial 2	1 to 3	-	MP	5
Seminar: Computational Complexity	Seminar 2	1 to 3	-	VbP (SE)	3
Text Algorithms	Lecture 2 Tutorial 2	1 to 3	-	MP	5
Circuit Complexity	Lecture 2 Tutorial 1 Seminar 2	1 to 3	-	MP	7
Parameterized Complexity Theory	Lecture 2 Tutorial 1 Seminar 2	1 to 3	-	MP	7
Current Topics in Theoretical Computer Science - VÜ	Lecture 2 Tutorial 2	1 to 3		K/MP	5
Current Topics in Theoretical Computer Science - VÜL	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Current Topics in Theoretical Computer	Lecture 2	1 to 3	-	K / MP / VbP	7

Science - VÜS	Tutorial 1 Seminar 2			(SE)	
Current Topics in Theoretical Computer Science - V	Lecture 2	1 to 3	-	K/MP	3
Current Topics in Theoretical Computer Science - L	Lab 4	1 to 3	1 piece of coursework	-	6
Current Topics in Theoretical Computer Science - S	Seminar 2	1 to 3	-	VbP (SE)	3
Current Topics in Theoretical Computer Science - P	Project 4	1 to 3	1 piece of coursework	-	6
Current Topics in Theoretical Computer Science - VS	Lecture 2 Seminar 2	1 to 3		K / MP / VbP (SE)	5
Total	·	·	•	•	0- 57

# Appendix 1.12.c) Elective modules – not applicable

# Appendix 1.13: Area of expertise Dependable and Scalable Software Systems

Appendix 1.13.a)	Compulsory modules – not applicable
Appendix 1.13.b)	Compulsory elective modules

Module	Course	Semester	Coursewor k	Assessment	Credit points
Seminar: Dependable and Scalable Systems	Seminar 2	1 to 3	-	VbP (SE)	3
Current Topics in Dependable and Scalable Software Systems - VÜ	Lecture 2 Tutorial 2	1 to 3	-	K/MP	5
Current Topics in Dependable and Scalable Software Systems - VÜL	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Current Topics in Dependable and Scalable Software Systems - VÜS	Lecture 2 Tutorial 1 Seminar 2	1 to 3	-	K / MP / VbP (SE)	7
Current Topics in Dependable and Scalable Software Systems - V	Lecture 2	1 to 3	-	K/MP	3
Current Topics in Dependable and Scalable Software Systems - L	Lab 4	1 to 3	1 piece of coursework	-	6
Current Topics in Dependable and Scalable Software Systems - S	Seminar 2	1 to 3	-	VbP (SE)	3
Current Topics in Dependable and Scalable Software	Project 4	1 to 3	1 piece of coursework	-	6

Systems - P					
Current Topics in Dependable and Scalable Software Systems - VS	Lecture 2 Seminar 2	1 to 3		K / MP / VbP (SE)	5
					0- 57

# Appendix 1.13.c) Elective modules – not applicable

# Appendix 1.14: Area of expertise Visual Analytics

Module	Course	Semester	Coursewor k	Assessment	Credit points
Lab: Visual Analytics / Multimedia Retrieval	Lab 4	1 to 3	1 piece of coursework	-	6
Multimedia Retrieval	Lecture 2 Tutorial 2	1 to 3	-	MP	5
Seminar Visual Analytics	Seminar 2	1 to 3	-	VbP (SE)	3
Visual Analytics	Lecture 2 Tutorial 2	1 to 3	-	K/MP	5
Current Topics in Visual Analytics - VÜ	Lecture 2 Tutorial 2	1 to 3	-	K/MP	5
Current Topics in Visual Analytics - VÜL	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Current Topics in Visual Analytics - VÜS	Lecture 2 Tutorial 1 Seminar 2	1 to 3	-	K / MP / VbP (SE)	7
Current Topics in Visual Analytics - V	Lecture 2	1 to 3	-	K/MP	3
Current Topics in Visual Analytics - L	Lab 4	1 to 3	1 piece of coursework	-	6
Current Topics in Visual Analytics - S	Seminar 2	1 to 3	-	VbP (SE)	3
Current Topics in Visual Analytics - P	Project 4	1 to 3	1 piece of coursework	-	6
Current Topics in Visual Analytics - VS	Lecture 2 Seminar 2	1 to 3		K / MP / VbP (SE)	5
Total		·			0- 57

Appendix 1.14.a)Compulsory modules – not applicableAppendix 1.14.b)Compulsory elective modules

Appendix 1.14.c) Elective modules – not applicable

# Appendix 1.15: Area of expertise Knowledge-Based SystemsAppendix 1.15.a)Compulsory modules – not applicableAppendix 1.15.b)Compulsory elective modules

Module	Course	Semester	Coursewor k	Assessment	Credit points
Advanced Topics on Knowledge Graphs	Lecture 2 Tutorial 2	1 to 3	-	K/MP	5
Data Mining II	Lecture 2 Tutorial 2	1 to 3	-	к	5
Deep Learning	Lecture 2 Tutorial 2	1 to 3	-	к	5
Digital Transformation in the Automotive Industry	Lecture 2	1 to 3	-	MP	3
Foundations of Human Computation and Crowdsourcing	Lecture 2 Tutorial 2	1 to 3	-	к	5
Foundations of Information Ethics	Lecture 2 Seminar 2	1 to 3	-	K / VbP (SE)	5
Hybrid Artificial Intelligence	Seminar 2	1 to 3	-	VbP (SE)	3
Introduction to Data Science	Lecture 2 Tutorial 2	1 to 3	-	к	5
Artificial Intelligence for Healthcare	Lecture 2 Tutorial 2	1 to 3	-	к	5
Artificial Intelligence II	Lecture 2 Tutorial 2	1 to 3	-	к	5
Artificial Intelligence for the Automotive Industry	Lecture 2	1 to 3	-	к	3
Lab: Artificial Intelligence	Lab 4	1 to 3	1 piece of coursework	-	6
Machine Learning for Graphs	Lecture 2 Tutorial 2	1 to 3	-	MP	5
Multi-Agent Interactions and Games	Lecture 2	1 to 3	-	к	3
Multi-Agent Reinforcement Learning	Lecture 2 Tutorial 2	1 to 3	-	K/MP	5
Natural Language Processing	Lecture 2 Tutorial 2	1 to 3	-	к	5
Probabilistic Machine Learning	Lecture 2 Tutorial 2	1 to 3	-	к	5
Seminar: Artificial Intelligence	Seminar 2	1 to 3	-	VbP (SE)	3
Current Topics in Knowledge-Based Systems - VÜ	Lecture 2 Tutorial 2	1 to 3	-	K/MP	5
Current Topics in Knowledge-Based Systems - VÜL	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5

Current Topics in Knowledge-Based Systems - VÜS	Lecture 2 Tutorial 1 Seminar 2	1 to 3	-	K / MP / VbP (SE)	7
Current Topics in Knowledge-Based Systems - V	Lecture 2	1 to 3	-	K/MP	3
Current Topics in Knowledge-Based Systems - L	Lab 4	1 to 3	1 piece of coursework	-	6
Current Topics in Knowledge-Based Systems - S	Seminar 2	1 to 3	-	VbP (SE)	3
Current Topics in Knowledge-Based Systems - P	Project 4	1 to 3	1 piece of coursework	-	6
Current Topics in Knowledge-Based Systems - VS	Lecture 2 Seminar 2	1 to 3		K / MP / VbP (SE)	5
Total	•	-			0- 57

Appendix 1.15.c) Elective modules – not applicable

# Appendix 1.16: Area of Expertise Architectures and Systems

Appendix 1.16.b) Compulsory elective modules						
Module	Course	Semester	Coursewor k	Assessment	Credit points	
Algorithms and Architectures of Digital Hearing Aid Systems	Lecture 2 Tutorial 2	1 to 3		K/MP	5	
Application-Specific Instruction-Set Processors	Lecture 2 Tutorial 2	1 to 3		K/MP	5	
Architectures for Digital Signal Processing	Lecture 2 Tutorial 2	1 to 3		K/MP	5	
Imaging Systems for Medical Engineering	Lecture 2 Tutorial 2	1 to 3		K/MP	5	
Design of Integrated Digital Circuits	Lecture 2 Tutorial 2	1 to 3		K/MP	5	
FPGA Design	Lecture 2 Tutorial 2	1 to 3		K/MP	5	
Lab: FPGA Design	Lab 4	1 to 3	1 piece of coursework	-	6	
Memory Systems	Lecture 2 Tutorial 2	1 to 3	1 piece of coursework	MP	5	
Project: ASIPLab: Design of Application- Specific Instruction-Set Processors	Project 4	1 to 3	1 piece of coursework	-	6	
Verification, Validation and Testing of ASIC	Lecture 2 Tutorial 1	1 to 3	-	K/MP	5	

Designs	Lab 1					
Current Topics in Automatic Image Interpretation - VÜ	Lecture 2 Tutorial 2	1 to 3	-	K/MP	5	
Current Topics in Automatic Image Interpretation - VÜL	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5	
Current Topics in Architectures and Systems - VÜS	Lecture 2 Tutorial 1 Seminar 2	1 to 3	-	K / MP / VbP (SE)	7	
Current Topics in Architectures and Systems - V	Lecture 2	1 to 3	-	K/MP	3	
Current Topics in Architectures and Systems - L	Lab 4	1 to 3	1 piece of coursework	-	6	
Current Topics in Architectures and Systems - S	Seminar 2	1 to 3	-	VbP (SE)	3	
Current Topics in Architectures and Systems - P	Project 4	1 to 3	1 piece of coursework	-	6	
Current Topics in Architectures and Systems - VS	Lecture 2 Seminar 2	1 to 3		K / MP / VbP (SE)	5	
Total						

# Appendix 1.17.c) Elective modules – not applicable

# Appendix 1.17: Area of Expertise Automatic Image Interpretation

Appendix 1.17.a)	Compulsory modules – not applicable
Appendix 1.17.b)	Compulsory elective modules

Module	Course	Semester	Coursewor k	Assessment	Credit points
Computer and Robot Assisted Surgery	Lecture 2 Tutorial 2	1 to 3		K/MP	5
Computer Vision	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	к	5
Graph-based Machine Learning	Lecture 2 Tutorial 2	1 to 3	-	к	5
Lab: 3D Computer Graphics in Medicine	Lab 4	1 to 3	1 piece of coursework	-	6
Lab: Machine Learning for Games Als	Lab 4	1 to 3	1 piece of coursework	-	6
Lab: Matlab for Medical and Industrial Image Processing	Lab 4	1 to 3	1 piece of coursework	-	6
Lab: Self-Localisation and Mapping (SLAM)	Lab 4	1 to 3	1 piece of coursework	-	6

Machine LearningLecture 2 Tutorial 1 Lab 11 to 31 piece of courseworkK5Computer-Aided Scene AnalysisLecture 2 Tutorial 1 Lab 11 to 31 piece of courseworkK5Seminar: Computer Vision, Scene Analysis and CodingSeminar 21 to 3-K5Current Topics in Automatic Image Interpretation - VÜLLecture 2 Tutorial 1 Lab 11 to 3-VbP (SE)3Current Topics in Automatic Image Interpretation - VÜLLecture 2 Tutorial 1 Lab 11 to 3-K/MP5Current Topics in Automatic Image Interpretation - VÜLLecture 2 Tutorial 1 Lab 11 to 31 piece of courseworkK/MP5Current Topics in Automatic Image Interpretation - VÜLLecture 2 Tutorial 1 Seminar 21 to 3%7		1.				
Computer-Aided Scene AnalysisTutorial 1 Lab 11 to 31 piece of courseworkK5Seminar: Computer Vision, Scene Analysis and CodingSeminar 21 to 3-VbP (SE)3Current Topics in Automatic Image Interpretation - VÜLecture 2 Tutorial 21 to 3-K/MP5Current Topics in Automatic Image Interpretation - VÜLecture 2 Tutorial 11 to 3-K/MP5Current Topics in Automatic Image Interpretation - VÜLecture 2 Tutorial 11 to 31 piece of courseworkK/MP5Current Topics in Automatic Image Interpretation - VÜLLecture 2 Tutorial 11 to 3-K/MP5Current Topics in Automatic Image Interpretation - VÜLLecture 2 Tutorial 11 to 3-K / MP / VbP (SE)7	Machine Learning	Tutorial 1	1 to 3		к	5
Vision, Scene Analysis and CodingSeminar 21 to 3-VbP (SE)3Current Topics in Automatic Image Interpretation - VÜLecture 2 Tutorial 21 to 3-K/MP5Current Topics in Automatic Image Interpretation - VÜLLecture 2 Tutorial 11 to 31 piece of courseworkK/MP5Current Topics in Automatic Image Interpretation - VÜLLecture 2 Tutorial 11 to 31 piece of courseworkK/MP5Current Topics in Automatic Image Tutorial 1Lecture 2 Tutorial 11 to 3-K/MP / VbP7		Tutorial 1	1 to 3		к	5
Automatic image Interpretation - VÜLecture 2 Tutorial 21 to 3-K/MP5Current Topics in Automatic Image Interpretation - VÜLLecture 2 Tutorial 1 Lab 11 to 31 piece of courseworkK/MP5Current Topics in Automatic Image Tutorial 1Lecture 2 Tutorial 1 Lab 11 to 3-K/MP5	Vision, Scene Analysis	Seminar 2	1 to 3	-	VbP (SE)	3
Current Topics in Automatic Image Interpretation - VÜLTutorial 1 Lab 11 to 31 piece of courseworkK/MP5Current Topics in Automatic Image Utorial 1Lecture 2 Tutorial 11 to 3-K / MP / VbP (SE)7	Automatic Image		1 to 3	-	K/MP	5
Automatic Image Tutorial 1 to 3 - K / MP / VbP (SE) 7	Automatic Image	Tutorial 1	1 to 3		K/MP	5
	Automatic Image	Tutorial 1	1 to 3	-		7
Current Topics in Automatic Image Interpretation - V Lecture 2 1 to 3 - K/MP 3	Automatic Image	Lecture 2	1 to 3	-	K/MP	3
Current Topics in Automatic Image Interpretation - LLab 41 to 31 piece of coursework-6	Automatic Image	Lab 4	1 to 3		-	6
Current Topics in Automatic Image Interpretation - SSeminar 21 to 3-VbP (SE)3	Automatic Image	Seminar 2	1 to 3	-	VbP (SE)	3
Current Topics in Automatic Image Interpretation - PProject 41 to 31 piece of coursework-6	Automatic Image	Project 4	1 to 3		-	6
Current Topics in Automatic Image Interpretation - VSLecture 2 Seminar 21 to 3K / MP / VbP (SE)5	Automatic Image		1 to 3			5
Total 0- 67	Total					0- 67

Appendix 1.18.c) Elective modules – not applicable

# Appendix 1.18: Area of Expertise Automation Technology

Appendix 1.18.a)	Compulsory modules – not applicable
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Appendix 1.18.b)	Compulsory ele	ective modules

Module	Course	Semester	Coursewor k	Assessment	Credit points
Automotive Electronics I - Power Train	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Automotive Electronics II - Infotainment and Driver Assistance	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Dynamic Measurement Technology and Error Calculation	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5

Small Electrical Motors and Servo Drives	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Navigation Engineering of Radio Navigation Aids	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Micro and Nanotechnology	Lecture 2 Tutorial 2	1 to 3		K/MP	5
Current Topics in Automation Technology - VÜ	Lecture 2 Tutorial 2	1 to 3	-	K/MP	5
Current Topics in Automation Technology - VÜL	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Current Topics in Automation Technology - VÜS	Lecture 2 Tutorial 1 Seminar 2	1 to 3	-	K / MP / VbP (SE)	7
Current Topics in Automation Technology - V	Lecture 2	1 to 3	-	K/MP	3
Current Topics in Automation Technology - L	Lab 4	1 to 3	1 piece of coursework	-	6
Current Topics in Automation Technology - S	Seminar 2	1 to 3	-	VbP (SE)	3
Current Topics in Automation Technology - P	Project 4	1 to 3	1 piece of coursework	-	6
Current Topics in Automation Technology - VS	Lecture 2 Seminar 2	1 to 3		K / MP / VbP (SE)	5
Total					

Appendix 1.18.c) Elective modules – not applicable

# Appendix 1.19: Area of Expertise Electrical Engineering and Electronics

Appendix 1.19.a)Compulsory modules – not applicableAppendix 1.19.b)Compulsory elective modules

Module	Course	Semester	Coursewor k	Assessment	Credit points
Principles of Electrical Measurement Technique	Lecture 2 Tutorial 2	1 to 3		K/MP	5
Principles and Calculation Methods of the Electric Power Industry	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Seminar for Electronic Materials and Devices	Seminar 2	1 to 3	-	VbP (SE)	3
Sensors in Medical Engineering	Lecture 2 Tutorial 1	1 to 3	1 piece of coursework	K/MP	5

	Lab 1				
Sensor Technology and Nanosensors - Measuring Non- Electrical Quantities	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Operating Principles and Technology of Silicon Solar Cells	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Current Topics in Electrical Engineering and Electronics - VÜ	Lecture 2 Tutorial 2	1 to 3	-	K/MP	5
Current Topics in Electrical Engineering and Electronics - VÜL	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Current Topics in Electrical Engineering and Electronics - VÜS	Lecture 2 Tutorial 1 Seminar 2	1 to 3	-	K / MP / VbP (SE)	7
Current Topics in Electrical Engineering and Electronics - V	Lecture 2	1 to 3	-	K/MP	3
Current Topics in Electrical Engineering and Electronics - L	Lab 4	1 to 3	1 piece of coursework	-	6
Current Topics in Electrical Engineering and Electronics - S	Seminar 2	1 to 3	-	VbP (SE)	3
Current Topics in Electrical Engineering and Electronics - P	Project 4	1 to 3	1 piece of coursework	-	6
Current Topics in Electrical Engineering and Electronics - VS	Lecture 2 Seminar 2	1 to 3		K / MP / VbP (SE)	5
Total					0- 67

# Appendix 1.19c) Elective modules – not applicable

# Appendix 1.20: Area of Expertise Radiofrequency and Microwave EngineeringAppendix 1.20.a)Compulsory modules – not applicableAppendix 1.20.b)Compulsory elective modules

Appendix 1.20.b) Compulsory elective modules					
Module	Course	Semester	Coursewor k	Assessment	Credit points
Antennas	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Electromagnetics and Wireless Commmunications for Biomedical Applications	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Radar-Applications in Aviation	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5

Transmitter and Receiver Circuits	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Current Topics in Radiofrequency and Microwave Engineering - VÜ	Lecture 2 Tutorial 2	1 to 3	-	K/MP	5
Current Topics in Radiofrequency and Microwave Engineering - VÜL	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Current Topics in Radiofrequency and Microwave Engineering - VÜS	Lecture 2 Tutorial 1 Seminar 2	1 to 3	-	K / MP / VbP (SE)	7
Current Topics in Radiofrequency and Microwave Engineering - V	Lecture 2	1 to 3	-	K/MP	3
Current Topics in Radiofrequency and Microwave Engineering - L	Lab 4	1 to 3	1 piece of coursework	-	6
Current Topics in Radiofrequency and Microwave Engineering - S	Seminar 2	1 to 3	-	VbP (SE)	3
Current Topics in Radiofrequency and Microwave Engineering - P	Project 4	1 to 3	1 piece of coursework	-	6
Current Topics in Radiofrequency and Microwave Engineering - VS	Lecture 2 Seminar 2	1 to 3		K / MP / VbP (SE)	5
Total					

Appendix 1.20.c) Elective modules – not applicable

# Appendix 1.21: Area of Expertise Communication Networks

Appendix 1.21.a)	Compulsory modules – not applicable
Appendix 1.21.b)	Compulsory elective modules

Module	Course	Semester	Coursewor k	Assessment	Credit points
Future Internet Communications Technologies	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Lab: IoT Communication Technologies	Lab 4	1 to 3	1 piece of coursework	-	6
Lab: Computer Networks	Lab 4	1 to 3	1 piece of coursework	-	6
Mobile Communications	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Teletraffic Theory	Lecture 2	1 to 3	1 piece of	K/MP	5

	Tutorial 1 Lab 1		coursework		
Current Topics in Intelligent Systems	Lecture 2 Tutorial 2	1 to 3	-	K/MP	5
Current Topics in Communication Networks - VÜL	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Current Topics in Communication Networks - VÜS	Lecture 2 Tutorial 1 Seminar 2	1 to 3	-	K / MP / VbP (SE)	7
Current Topics in Communication Networks - V	Lecture 2	1 to 3	-	K/MP	3
Current Topics in Communication Networks - L	Lab 4	1 to 3	1 piece of coursework	-	6
Current Topics in Communication Networks - S	Seminar 2	1 to 3	-	VbP (SE)	3
Current Topics in Communication Networks - P	Project 4	1 to 3	1 piece of coursework	-	6
Current Topics in Communication Networks - VS	Lecture 2 Seminar 2	1 to 3		K / MP / VbP (SE)	5
Total					0- 67

## Appendix 1.21.c) Elective modules – not applicable

# Appendix 1.22: Area of Expertise Mixed-Signal CircuitsAppendix 1.22.a)Compulsory modules – not applicableAppendix 1.22.b)Compulsory elective modules

Module	Course	Semester	Coursewor k	Assessment	Credit points
Analog Integrated Circuits	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Electrical Performance of Electronic Packaging	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Mixed-Signal Circuits	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Lab: Energy-Efficient Microelectronics	Lab 4	1 to 3	1 piece of coursework	-	6
Circuit Design Lab	Lab 4	1 to 3	1 piece of coursework	-	6
Design of Integrated Power Management and Smart Power Circuits	Lecture Tutorial Lab	1 to 3	1 piece of coursework	K/MP	5
Programming Project: Electronic Design	Lab 4	1 to 3	1 piece of coursework	-	6

Automation					
Relativistic Electrodynamics - Fundamentals and Limits	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Reliability of Electronic Components	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Current Topics in Mixed- Signal Circuits - VÜS	lecture and seminar	1 to 3	1 piece of coursework	K/MP	7
Current Topics in Mixed- Signal Circuits - V	Lecture 2	1 to 3	-	K/MP	3
Current Topics in Mixed- Signal Circuits - L	Lab	1 to 3	1 piece of coursework	-	6
Current Topics in Mixed- Signal Circuits - S	Seminar	1 to 3	-	VbP (SE)	3
Current Topics in Mixed- Signal Circuits - P	Project 4	1 to 3	1 piece of coursework	-	6
Current Topics in Mixed- Signal Circuits - VS	Lecture 2 Seminar 2	1 to 3		K / MP / VbP (SE)	5
Total					0- 67

## Appendix 1.22.c) Elective modules – not applicable

Module	Course	Semester	Coursewor k	Assessment	Credit points
Applications of Digital Audio Signal Processing	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Audio and Speech Signal Processing	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Information Theory	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Scientific Computing I	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Current Topics in Multimedia Signal Processing - VÜ	Lecture 2 Tutorial 2	1 to 3	-	K/MP	5
Current Topics in Multimedia Signal Processing - VÜL	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Current Topics in Multimedia Signal Processing - VÜL	Lecture 2 Tutorial 1 Seminar 2	1 to 3	-	K / MP / VbP (SE)	7

## Appendix 1.23: Area of expertise Multimedia Signal ProcessingAppendix 1.23.a)Compulsory modules – not applicableAppendix 1.23.b)Compulsory elective modules

Current Topics in Multimedia Signal Processing - VÜ	Lecture 2	1 to 3	-	K/MP	3
Current Topics in Multimedia Signal Processing - VÜL	Lab 4	1 to 3	1 piece of coursework	-	6
Current Topics in Multimedia Signal Processing - S	Seminar 2	1 to 3	-	VbP (SE)	3
Current Topics in Multimedia Signal Processing - P	Project 4	1 to 3	1 piece of coursework	-	6
Current Topics in Multimedia Signal Processing - VSL	Lecture 2 Seminar 2	1 to 3		K / MP / VbP (SE)	5
Total					0- 67

## Appendix 1.23.c) Elective modules – not applicable

## Appendix 1.24: Area of Expertise Communications Systems

Appendix 1.24.b) Compulsory elective modules					
Module	Course	Semester	Coursewor k	Assessment	Credit points
3D-Audio - Fundamentals of Spatial Audio Reproduction Systems	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Digital Information Transmission	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Elektroacoustics	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Fundamentals of Acoustics	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Lab: Audio Communication and Acoustics	Lab 4	1 to 3	1 piece of coursework	-	6
Current Topics in Communication Systems - VÜ	Lecture 2 Tutorial 2	1 to 3	-	K/MP	5
Current Topics in Communication Systems - VÜL	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Current Topics in Communication Systems - VÜS	Lecture 2 Tutorial 1 Seminar 2	1 to 3	-	K / MP / VbP (SE)	7
Current Topics in Communication Systems - V	Lecture 2	1 to 3	-	K/MP	3
Current Topics in	Lab 4	1 to 3	1 piece of	-	6

Appendix 1.24.a)	Compulsory modules – not applicable
Appendix 1.24.b)	Compulsory elective modules

Communication Systems - L			coursework		
Current Topics in Communication Systems S	Seminar 2	1 to 3	-	VbP (SE)	3
Current Topics in Communication Systems - P	Project 4	1 to 3	1 piece of coursework	-	6
Current Topics in Communication Systems - VS	Lecture 2 Seminar 2	1 to 3		K / MP / VbP (SE)	5
Total				0- 67	

Appendix 1.24.c)	Elective modules – not applicable
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Appendix 1.25:	Area of Expertise	<b>Robotics and</b>	Control Engineering
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Appendix 1.25.a)	Compulsory modules – not applicable
Appendix 1.25.b)	Compulsory elective modules

Module	Course	Semester	Coursewor k	Assessment	Credit points
Control in Robotics and Human-Robot Interaction	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Control Engineering I	Lecture 2 Tutorial 2	1 to 3	1 piece of coursework	к	5
Control Engineering II	Lecture 2 Tutorial 2	1 to 3	1 piece of coursework	к	5
Robotics I	Lecture 2 Tutorial 2	1 to 3	1 piece of coursework	к	5
Robotics II	Lecture 2 Tutorial 2	1 to 3	-	к	5
Current Topics in Robotics and Control Engineering - VÜ	Lecture 2 Tutorial 2	1 to 3	-	K/MP	5
Current Topics in Robotics and Control Engineering - VÜL	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Current Topics in Robotics and Control Engineering - VÜS	Lecture 2 Tutorial 1 Seminar 2	1 to 3	-	K / MP / VbP (SE)	7
Current Topics in Robotics and Control Engineering - V	Lecture 2	1 to 3	-	K/MP	3
Current Topics in Robotics and Control Engineering - L	Lab 4	1 to 3	1 piece of coursework	-	6
Current Topics in Robotics and Control Engineering - S	Seminar 2	1 to 3	-	VbP (SE)	3
Current Topics in Robotics and Control Engineering - P	Project 4	1 to 3	1 piece of coursework	-	6

Current Topics in Robotics and Control Engineering - VS	Lecture 2 Seminar 2	1 to 3	-	K / MP / VbP (SE)	5
Total					0- 67

## Appendix 1.25.c) Elective modules – not applicable

## Appendix 1.26: Area of expertise Studium Generale

## Appendix 1.26.a)Compulsory modules – not applicable

## Appendix 1.26.b) Compulsory elective modules

For the studium generale, students may select courses offered by the faculties of LUH, the Leibniz Language Centre and the Centre for Quality Enhancement in Teaching and Learning (ZQS). They may select only those courses offered by the Faculty of Electrical Engineering and Computer Science that are explicitly assigned to the area of expertise Studium Generale in the Computer Engineering module handbook. Students must complete the courses with an assessment/a piece of coursework in order to obtain credit points. Courses for which only attendance is confirmed cannot be credited.

Module	Courses	Semeste r	Coursewor k	Assessmen t	Credit points
Studium Generale	Courses offered by Leibniz University Hannover	1 to 3	At least 1 piece of coursework		3 to 6
Total					3 to 6

## Appendix 1.26.c) Elective modules – not applicable

## Appendix 1.27: Area of expertise Industrial Placement

Appendix 1.27.a) Compulsory modules – not applicable

- Appendix 1.27.b) Compulsory elective modules not applicable
- Appendix 1.27.c) Elective modules

The duration of the industrial placement is either 12 or 16 weeks. The rules for the industrial placement are laid down in the "Richtlinien für die berufspraktische Tätigkeit (Praktikum) im Masterstudiengang Technische Informatik" (Guidelines for career-oriented placements (placements) in the master's degree programme Computer Engineering) of the Faculty of Electrical Engineering and Computer Science.

Module	Course	Semester	Coursewor k	Assessmen t	Credit points
Industrial placement	Industrial placement	1 to 3	1 piece of coursework		15
Large Industrial Placement	Industrial Placement	1 to 3	1 piece of coursework		20
Total					15 to 20

## Appendix 1.28: Area of Expertise Fundamentals of Computer Engineering

Appendix 1.28.a)	Compulsory modules – not applicable
Appendix 1.28.b)	Compulsory elective modules – not applicable
Appendix 1.28.c)	Elective modules

Modules that were completed and credited in the bachelor's degree programme as part of the required number of credit points cannot be credited again in the master's degree programme.

Module	Course	Semester	Coursewor k	Assessme nt	Credit points
Operating System Construction	Lecture 2 Tutorial 2	1 to 3		K/MP	5
Data Science Foundations	Lecture 2 Tutorial 2	1 to 3		K/MP	5
Database Systems II	Lecture 2 Tutorial 2	1 to 3		K/MP	5
Introduction to Game Development	Lecture 2 Tutorial 1 Project 1	1 to 3		K/MP	5
Introduction to Empirical Methods of Human-Centered Computing	Lecture 2 Tutorial 2	1 to 3	-	K/MP	5
Ethical Hacking Lab	Lab 4	1 to 3	1 piece of coursework		5
Foundations of Information Retrieval	Lecture 2 Tutorial 2	1 to 3		K/MP	5
Introduction to Database Systems	Lecture 2 Tutorial 2	1 to 3		к	5
Foundations of IT Security	Lecture 2 Tutorial 2	1 to 3		к	5
Fundamentals of Medical Informatics	Lecture 2 Tutorial 2	1 to 3		K/MP	5
Introduction to Human Computer Interaction	Lecture 2 Tutorial 2	1 to 3		K/MP	5
Foundations of Modelling	Lecture 2 Tutorial 2	1 to 3		K/MP	5
Fundamentals of Computer Engineering	Lecture 2 Tutorial 2	1 to 3		к	5
Industrial Control Systems and Real Time Systems	Lecture 2 Tutorial 2	1 to 3		K/MP	5
Artificial Intelligence I	Lecture 2 Tutorial 2	1 to 3		K/MP	5
Lab: Control Systems	Lab 4	1 to 3	1 piece of coursework		5
Logic and Formal Systems	Lecture 2 Tutorial 2	1 to 3		к	5
Medical IT Applications	Lecture 2 Tutorial 2	1 to 3		K/MP	5
Programming Languages and Compilers	Lecture 2 Tutorial 2	1 to 3		к	5
Computer Architecture	Lecture 2 Tutorial 2	1 to 3		K/MP	5
Scientific Data Management	Lecture 2 Tutorial 2	1 to 3		K/MP	5
Software Quality	Lecture 2 Tutorial 2	1 to 3		K/MP	5
Dependable and Scalable Software Systems	Lecture 2 Tutorial 2	1 to 3		K/MP	5
Distributed Systems	Lecture 2 Tutorial 2	1 to 3		K/MP	5

Advanced Topics of	Lecture 2	1 to 2		K/MP/	F
Operating Systems	Tutorial 2	1 to 3		VbP (LÜ)	5
Propagation of Electromagnetic Waves	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Bipolar Devices	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Digital Image Processing	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Electronic Design Automation	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Supplementary Foundations of Electrical Engineering for Computer Science and Information Technology	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Formal Methods in Computer Engineering	Lecture 2 Tutorial 2	1 to 3		K/MP	5
Basics of Analog Integrated Circuits	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Basics of Quantum Mechanics for Engineers	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Semiconductor Technology	Lecture 2 Tutorial 2	1 to 3	1 piece of coursework	K/MP	5
Logic Design of Digital Systems	Lecture 2 Tutorial 2	1 to 3	1 piece of coursework	K/MP	5
MOS-Transistors and Memories	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Fundamentals of Natural Sciences -Physics	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	к	5
Source Coding	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Technology for Integrated Devices	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Current Topics in Fundamentals of Computer Engineering - VÜ	Lecture 2 Tutorial 2	1 to 3		K/MP	5
Current Topics in Fundamentals of Computer Engineering - VÜL	Lecture 2 Tutorial 1 Lab 1	1 to 3	1 piece of coursework	K/MP	5
Current Topics in Fundamentals of Computer	Lab 4	1 to 3	1 piece of coursework	-	5

Engineering - P Total					0-15
Current Topics in Fundamentals of Computer	Project 4	1 to 3	1 piece of coursework	-	5
Engineering - L					

## Appendix 1.29: Master's Thesis Module

The Master's Thesis Module comprises the master's thesis and an ungraded colloquium.

Module	Courses	Semeste r	Prerequisites for admission	Coursew ork	Assessme nt	Credit points
Master's thesis	-	4	60 ECTS		Master's thesis with colloquium	30
Total				30		

The master's thesis module includes one assessment.

## 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)

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

<sup>1</sup>Oral examinations are conducted privately in the presence of an observer who holds the qualification to be ascertained through said examination or an equivalent qualification. <sup>2</sup>The essential topics of the examination shall be recorded in the minutes of the assessment. <sup>3</sup>Students 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. <sup>4</sup>This permission does not extend to the consultations about the results and the announcement of the examination candidate's or candidates' results. <sup>5</sup>At the request of the examination candidate or candidates, the guests specified in sentence 3 must be excluded.

## Placement report (PB)

<sup>1</sup>A 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. <sup>2</sup>Topics include, for example, preparing and performing the placement as well as critical reflection on a predetermined subject.

## Project-related examination (PJ)

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

## Practical sports presentation (SP)

<sup>1</sup>A practical sports presentation comprises one or more assignments to prove the demonstration and movement skills of examination candidates in the subject of sports. <sup>2</sup>Skills 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. <sup>3</sup>The type of presentation in a particular case is determined by agreement. <sup>4</sup>The practical sports presentation is conducted before one examiner and one proficient observer. <sup>5</sup>The essential topics of the examination shall be recorded in the minutes of the assessment. <sup>6</sup>Students 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. <sup>7</sup>This permission does not extend to the consultations about the results and the announcement of the examination candidate's or candidates' results. <sup>8</sup>At the request of the examination candidate or candidates, the guests specified in sentence 6 must be excluded.

## Independent assignment (ST)

<sup>1</sup>In 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. <sup>2</sup>The scope of the work (in months or hours) specified in appendix 1 is binding. <sup>3</sup>The stipulations in section 5 of these examination regulations shall apply. <sup>4</sup>The topic of the independent assignment shall be determined by the examiner after hearing the examination candidate. <sup>5</sup>The 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. <sup>6</sup>The 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. <sup>7</sup>During 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. <sup>8</sup>The period from assignment of the topic of the independent assignment is six months. <sup>9</sup>The student may return the topic 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. <sup>11</sup>Evaluation of the independent assignment may also include consideration of the process of its preparation.

## Course-accompanying examination (VbP)

<sup>1</sup>A course-accompanying examination (VbP) addresses a topic relating to a specific course and is conducted continuously during the semester. <sup>2</sup>A VbP may comprise multiple examination components, which shall not exceed four components. <sup>3</sup>The 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. <sup>4</sup>For 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. <sup>5</sup>The relevant registration and examination periods for the VbP examinations can be found in appendix 3.1 of the examination regulations.

<sup>6</sup>A VbP may comprise the following assessment types:

## Written assignment (AA)

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

## **Documentation (DO)**

<sup>1</sup>A documentation comprises the analysis and presentation of an artistic, cognitive or action-oriented process. <sup>2</sup>Documentations can take the form of reports and plans that correspond to those used in professional practice. <sup>3</sup>Conditions 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. <sup>4</sup>Further materials may be appended to the report.

## Essay (ES)

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

## Colloquium (KO)

<sup>1</sup>A colloquium comprises an oral presentation with a subsequent discussion of the topic, methods and results of the paper. <sup>2</sup>The 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. <sup>3</sup>The essential topics of the assessment shall be recorded in the minutes of the assessment. <sup>4</sup>Students wishing to take the same examination at a later date or other members of the university who express legitimate interest must be permitted to observe the colloquium as guests. <sup>5</sup>This permission does not extend to the consultations about the results and the announcement of the examination candidate's or candidates' results. <sup>6</sup>At the request of the examination candidate or candidates, the guests specified in sentence 4 must be excluded.

## In-class test (KU)

<sup>1</sup>An 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)

<sup>1</sup>An 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. <sup>2</sup>The 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. <sup>3</sup>An artistic academic presentation is conducted as an individual examination before an examiner and a proficient observer. <sup>4</sup>The essential topics of the examination shall be recorded in the minutes of the assessment. <sup>5</sup>Students 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. <sup>6</sup>This permission does not extend to the consultations about the results and the announcement of the examination candidate's or candidates' results. <sup>7</sup>At the request of the examination candidates, the guests specified in sentence 5 must be excluded.

## Lab exercise (LÜ)

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

## Model (MO)

<sup>1</sup>Models are extensions of two-dimensional designs or plans and serve to illustrate a plan's spatial layout and to clarify planning issues. <sup>2</sup>They 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)

<sup>1</sup>The VbP component "musical performance" is conducted as an individual examination before two examiners or one examiner and one proficient observer. <sup>2</sup>The essential topics of the examination shall be recorded in the minutes of the assessment. <sup>3</sup>Students 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. <sup>4</sup>This permission does not extend to the consultations about the results and the announcement of the examination candidate's or candidates' results. <sup>5</sup>At

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)

<sup>1</sup>A portfolio documents the learning process concerning certain topics or assignments set by the examiners at the start of the course. <sup>2</sup>Students 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. <sup>3</sup>An optional supplementary interview may be conducted to discuss the portfolio. <sup>4</sup>Like the portfolio itself, the interview is competence-oriented.

## Concert with an educational focus (PK)

<sup>1</sup>The 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. <sup>2</sup>As a rule, it is presented in a school learning group.

## **Presentation (PR)**

<sup>1</sup>A presentation is an independent and in-depth analysis of a predetermined topic within the context of the course. <sup>2</sup>The work and results are presented orally and/or using electronic and other media, as well as in the subsequent discussion. <sup>3</sup>The examiner may require a written assignment. <sup>4</sup>The 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)

<sup>1</sup>A practical examination comprises one or more assignments to prove students' movement skills in the subject of sports. <sup>2</sup>Skills 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. <sup>3</sup>The type of presentation in a particular case is determined by agreement. <sup>4</sup>The ungraded practical examination is conducted by one examiner over the course of the semester.

## Project assignment (P)

<sup>1</sup>A project assignment involves addressing a predefined subject-specific or interdisciplinary topic in a theoretical, empirical, experimental, constructive, conceptual, applied artistic or documentary manner. <sup>2</sup>The results are presented in the form of a written and/or planning and/or artistic and/or electronic assignment. <sup>3</sup>The 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)

<sup>1</sup>A theatrical performance is the presentation of practical theatrical work before an audience, either in a process-oriented or product-oriented form. <sup>2</sup>The essential topics of the examination shall be recorded in the minutes of the assessment. <sup>3</sup>Students 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. <sup>4</sup>This permission does not extend to the consultations about the results and the announcement of the examination candidate's or candidates' results. <sup>5</sup>At the request of the examination candidate or candidates, the guests specified in sentence 3 must be excluded.

## Practical assessment (Ü)

<sup>1</sup>A practical assessment is an assessment conducted under supervision during a set time within the course schedule. <sup>2</sup>Following 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)

<sup>1</sup>As 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. <sup>2</sup>The lesson is reviewed and evaluated by a mentor and the seminar coordinator of the preparation seminar.

## Graphic representation (ZD)

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

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

<sup>3</sup>In 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. <sup>4</sup>Students may register for the bachelor's thesis, master's thesis and independent assignments (ST) outside of the periods stated. <sup>5</sup>Placement 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.

<sup>6</sup>Students 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				
Period for all assessment	15.05. – 31.05.	15.06. – 14.10.	15.11. – 30.11.	15.12. – 14.04.
types except VbP				
Period for	15.04. – 30.04.	01.05. – 31.08.	15.10. – 31.10.	01.11. – 28.02.
VbP assessment types				
Variant 2				
Period I for all assessment	15.05. – 31.05.	15.06. – 31.08.	15.11. – 30.11.	15.12. – 28.02.
types except VbP				
Period II for all assessment	16.09. – 23.09.	24.09. – 14.10.	16.03. – 23.03.	24.03. – 14.04.
types except VbP				
Period for	15.04. – 30.04.	01.05. – 31.08.	15.10. – 31.10.	01.11. – 28.02.
VbP assessment types				

## Appendix 3.2: Deadlines for Evaluation of Assessments

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

	Summer Semester	Winter Semester
Variant 1		
Period for all assessment	by 26.10.	by 26.04.
types except VbP		
Period for	by 15.09.	by 15.03.
VbP assessment types		
Variant 2		
Period I for all assessment	by 12.09.	by 12.03.
types except VbP		
Period II for all assessment		
types except VbP	by 26.10.	by 26.04.
Period for	by 15.09.	by 15.03.
VbP assessment types		

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

## Anlage 4: Nachweis der Prüfungsunfähigkeit

Proof of Incapacity to Take an Examination

## Anlage 4 a: Rücktritt wegen Krankheit: Nachweis der

Prüfungsunfähigkeit zur Vorlage beim Prüfungsausschuss (Prüfungen mit Prüfungstermin)

Withdrawal due to illness: proof of incapacity to take an examination for submission to the examination board (examinations with an exam date)

## Rücktrittserklärung wegen krankheitsbedingter Prüfungsunfähigkeit und ärztliches Attest

Declaration of withdrawal because of incapacity to take an examination due to illness and medical certificate

## Angaben der/des Studierenden:

Student's details:	
Nachname: Surname:	Vorname: First name:
Sumune.	Thsthume.
Geburtsdatum:	E-Mail-Adresse:
Date of birth:	Email address:
Telefonnummer:	Matrikelnummer:
Telephone number:	Enrolment number:
Studiengang:	
Degree programme:	

## Betroffene Prüfung:

Examination concerned:	
Modul/Prüfung:	Form der Prüfung:
Module/examination:	🗌 Klausur
	Written examination
	🔲 mündliche Prüfung
	Oral examination
Prüferin/Prüfer:	Prüfungstermin:
Examiner:	Date of examination

## Erläuterungen der/des Studierenden zur Prüfungsunfähigkeit:

Additional information (to be completed by the student):

Es wird empfohlen, zusätzlich zu den Angaben der/des behandelnden Ärztin/Arztes nähere Ausführungen zur Einschränkung zu machen. Bedenken Sie bitte, dass der Prüfungsausschuss nur anhand dieses Formulars in der Lage sein muss, eine Entscheidung zu treffen. \* We recommend that you provide a more detailed explanation of the limitations in addition to the information provided by your doctor. It is important to note that the examination board must be able to make a decision solely on the basis of this form. \*





\*Sollte der Platz für Ihre Ausführungen nicht ausreichen, fügen Sie bitte ein weiteres Blatt als Anlage bei.

\* If the space provided for your additional information is insufficient, please attach an additional sheet of paper.

## Erklärung der/des Studierenden:

Declaration (to be completed by the student):

1. Hiermit erkläre ich meinen Rücktritt von der o.g. Prüfung.

2. Die Datenschutzhinweise im Anhang habe ich zur Kenntnis genommen und auch meiner behandelnden Ärztin/meinem behandelnden Arzt zur Kenntnis gegeben.

Ärztin/meinem behandelnden Arzt zur Kenntnis gegeben.

3. Meine behandelnde Ärztin/mein behandelnder Arzt wird hiermit von der ärztlichen Schweigepflicht entbunden und ermächtigt, relevante Informationen im Zusammenhang dieses Antrags an die Leibniz Universität weiterzugeben.

1. I confirm my withdrawal from the abovementioned examination.

2. I acknowledge the enclosed data protection information and confirm that I have disclosed this information to my doctor.

3. I hereby release my doctor from the obligation to maintain medical confidentiality and authorise my doctor to disclose relevant information to Leibniz University Hannover in connection with this application.

Ort, Datum

Place, date

Unterschrift Signature

## Erläuterung für die behandelnde Ärztin/den behandelnden Arzt:

Wenn Studierende aus gesundheitlichen Gründen eine Prüfung versäumen oder von ihr zurücktreten, haben sie ihre krankheitsbedingte Prüfungsunfähigkeit glaubhaft zu machen. Dazu benötigen die Studierenden ein ärztliches Attest, das dem Prüfungsausschuss ermöglicht, aufgrund Ihrer Angaben als medizinischer Sachverständiger die Rechtsfrage zu beantworten, ob eine krankheitsbedingte Prüfungsunfähigkeit vorliegt. Dies erfordert Aussagen zu folgenden Punkten in dem ärztlichen Attest:

## 1. Den gesundheitlichen Beeinträchtigungen des Prüflings und 2. den sich daraus ergebenden Einschränkungen des Prüflings im Hinblick auf die betroffene Prüfung.

Bitte beachten:

Fuldausses den Änstindere Austere

Eine Diagnose wird explizit nicht abgefragt!

Die pauschale Bescheinigung von Arbeitsunfähigkeit oder Prüfungsunfähigkeit ist nicht ausreichend.

Studierende sind auf Grund ihrer Mitwirkungspflicht grundsätzlich dazu verpflichtet, zur Feststellung der Prüfungsunfähigkeit ihre Beschwerden offenzulegen und hierzu erforderlichenfalls den behandelnden Arzt von der Schweigepflicht zu entbinden. Im Rahmen der Aufgabenerfüllung notwendige personenbezogene Daten dürfen für diese Zwecke erhoben werden. (Anhang: Datenschutzhinweise nach Art. 13, 14 und 21 DSGVO)

Hinweis: Dieses Formular ist ein Muster. Das Attest kann auch formlos erstellt werden, soweit es die beiden oben genannten Punkte erhält.

Erklarung der Arztingdes Arztes.
<ol> <li>Meine heutige Untersuchung der Patientin/des Patienten</li></ol>
1. Die Gesundheitsstörung ist (bitte ankreuzen!)
🗌 auf Prüfungsstress zurückzuführen 🛛 dauerhaft, d.h. auf nicht absehbare Zeit 🗌 vorübergehend
(Hinweis: Examensängste und Prüfungsstress sind grundsätzlich keine Beeinträchtigung mit Krankheitswert, es sei denn, dass sie den Grad einer psychischen Erkrankung erreichen.)
2. Dauer der Krankheit:
von:bis:
3. 🗌 Die nachstehenden Datenschutzhinweise habe ich zur Kenntnis genommen. (Bitte ankreuzen!)

5. Datum, Unterschrift: \_\_\_\_\_

Praxisstempel

## Anlage 4 b: Verlängerung der Bearbeitungszeit:

Nachweis der Prüfungsunfähigkeit wegen Krankheit zur Vorlage beim Prüfungsausschuss

Appendix 4 b: Submission deadline extension:

proof of incapacity to take an examination due to illness for submission to the examination board

## Verlängerung der Bearbeitungszeit wegen krankheitsbedingter Prüfungsunfähigkeit und ärztliches Attest

Submission deadline extension because of incapacity to take an examination due to illness and medical certificate

## Angaben der/des Studierenden:

Student's details:	
Nachname:	Vorname:
Surname:	First name:
Geburtsdatum:	E-Mail-Adresse:
Date of birth:	Email address:
Telefonnummer:	Matrikelnummer:
Telephone number:	Enrolment number:
Studiengang:	
Degree programme:	

## Betroffene Prüfung:

Examination concerned:

Modul/Prüfung:	Form der Prüfung:
Module/examination:	Assessment type:
	🔲 Bachelorarbeit
	Bachelor's thesis
	🗌 Masterarbeit
	Master's thesis
	□
Prüferin/Prüfer:	Aktueller Abgabetermin:
Examiner:	Current submission deadline:
	Gab es bereits eine Verlängerung?
	Was the deadline extended previously?
	🗌 ja 🗌 nein
	Yes No
	Falls ja, ursprünglicher Abgabetermin:
	If yes, original submission deadline:

## Erläuterungen der/des Studierenden zur Prüfungsunfähigkeit:

Additional information (to be completed by the student):

Es wird empfohlen, zusätzlich zu den Angaben der/des behandelnden Ärztin/Arztes nähere Ausführungen zur Einschränkung zu machen. Bedenken Sie bitte, dass der Prüfungsausschuss nur anhand dieses Formulars in der Lage sein muss, eine Entscheidung zu treffen. \*

We recommend that you provide a more detailed explanation of the limitations in addition to the information provided by your doctor. It is important to note that the examination board must be able to make a decision solely on the basis of this form. \*



\*Sollte der Platz für Ihre Ausführungen nicht ausreichen, fügen Sie bitte ein weiteres Blatt als Anlage bei.

\* If the space provided for your additional information is insufficient, please attach an additional sheet of paper.

## Erklärung der/des Studierenden:

Declaration (to be completed by the student):

1. Hiermit beantrage ich die Verlängerung der Bearbeitungszeit der o.g. Arbeit.

2. Die Datenschutzhinweise im Anhang habe ich zur Kenntnis genommen und auch meiner behandelnden

Ärztin/meinem behandelnden Arzt zur Kenntnis gegeben.

3. Meine behandelnde Ärztin/mein behandelnder Arzt wird hiermit von der ärztlichen Schweigepflicht entbunden und ermächtigt, relevante Informationen im Zusammenhang dieses Antrags an die Leibniz Universität weiterzugeben.

1. I request an extension of the submission deadline for the abovementioned component.

2. I acknowledge the enclosed data protection information and confirm that I have disclosed this information to my doctor.

3. I hereby release my doctor from the obligation to maintain medical confidentiality and authorise my doctor to disclose relevant information to Leibniz University Hannover in connection with this application.

Ort, Datum Place, date

Unterschrift

Signature

## Erläuterung für die behandelnde Ärztin/den behandelnden Arzt:

Wenn Studierende aus gesundheitlichen Gründen eine Prüfung versäumen oder von ihr zurücktreten, haben sie ihre krankheitsbedingte Prüfungsunfähigkeit glaubhaft zu machen. Dazu benötigen die Studierenden ein ärztliches Attest, das dem Prüfungsausschuss ermöglicht, aufgrund Ihrer Angaben als medizinischer Sachverständiger die Rechtsfrage zu beantworten, ob eine krankheitsbedingte Prüfungsunfähigkeit vorliegt. Dies erfordert Aussagen zu folgenden Punkten in dem ärztlichen Attest:

## 1. Den gesundheitlichen Beeinträchtigungen des Prüflings und 2. den sich daraus ergebenden Einschränkungen des Prüflings im Hinblick auf die betroffene Prüfung.

Bitte beachten:

Fuldause den Änstin/des Auster

Eine Diagnose wird explizit nicht abgefragt!

Die pauschale Bescheinigung von Arbeitsunfähigkeit oder Prüfungsunfähigkeit ist nicht ausreichend.

Studierende sind auf Grund ihrer Mitwirkungspflicht grundsätzlich dazu verpflichtet, zur Feststellung der Prüfungsunfähigkeit ihre Beschwerden offenzulegen und hierzu erforderlichenfalls den behandelnden Arzt von der Schweigepflicht zu entbinden. Im Rahmen der Aufgabenerfüllung notwendige personenbezogene Daten dürfen für diese Zwecke erhoben werden. (Anhang: Datenschutzhinweise nach Art. 13, 14 und 21 DSGVO)

Hinweis: Dieses Formular ist nur ein Muster. Das Attest kann auch formlos erstellt werden, soweit es die beiden oben genannten Punkte erhält.

Erklarung der Arzun/des Arztes:
<ol> <li>Meine heutige Untersuchung der Patientin/des Patienten</li></ol>
3. Die Gesundheitsstörung ist (bitte ankreuzen!)
🗌 auf Prüfungsstress zurückzuführen 🛛 dauerhaft, d.h. auf nicht absehbare Zeit 🗌 vorübergehend
(Hinweis: Examensängste und Prüfungsstress sind grundsätzlich keine Beeinträchtigung mit Krankheitswert, es sei denn, dass sie den Grad einer psychischen Erkrankung erreichen.)
4. Dauer der Krankheit:
von: bis:
5. 🗌 Die nachstehenden Datenschutzhinweise habe ich zur Kenntnis genommen. (Bitte ankreuzen!)

5. Datum, Unterschrift: \_\_\_\_\_

Praxisstempel

26/2022



#### Anlage 4 c: Rücktrittserklärung/Verlängerung der Bearbeitungszeit: Verlängerung der Bearbeitungszeit aus wichtigen Gründen (nicht krankheitsbedingt)

<u>Appendix 4 c: Declaration of withdrawal/submission deadline extension:</u> <u>submission deadline extension due to valid reasons (not due to illness):</u>

## Rücktrittserklärung/Verlängerung der Bearbeitungszeit aus wichtigen Gründen (gem. § 15 Abs. 5 und 6 der Prüfungsordnung)

Declaration of withdrawal/submission deadline extension due to valid reasons (as per section 15 (5) and (6) of the examination regulations)

## Angaben der/des Studierenden:

Student's details:

Nachname:	Vorname:
Surname:	First name:
Geburtsdatum:	E-Mail-Adresse:
Date of birth:	Email address:
Telefonnummer:	Matrikelnummer:
Telephone number:	Enrolment number:
Studiengang:	
Degree programme:	

## Betroffene Prüfung:

Examination concerned:	
Modul/Prüfung:	Form der Prüfung:
Module/examination:	Assessment type:
	Klausur Written examination
	mündliche Prüfung Oral examination
	Bachelorarbeit Bachelor's thesis
	Masterarbeit Master's thesis
Prüferin/Prüfer:	Prüfungstermin/Aktueller Abgabetermin:
Examiner:	Date of examination/current submission deadline:
	Gab es bereits eine Verlängerung?
	Was the deadline extended previously?
	🔲 ja 🔲 nein
	Yes No
	Falls ja, ursprünglicher Abgabetermin:
	If yes, original submission deadline:

Erklärung der/des Studierenden (Zutreffende	
Declaration (to be completed by the student)	
Hiermit erkläre ich meinen Rücktritt von de	
l confirm my withdrawal from the abovement	
	r Bearbeitungszeit der o.g. Arbeit aus wichtigen Gründen.
	adline for the abovementioned component due to valid reasons.
Die wichtigen Gründe werden auf Seite 2 ausfi	ihrlich erläutert, ggf. notwendige Anlagen sind diesem Dokument
beigefügt.	
A detailed explanation of the reasons can be fo	und on page 2; any further necessary information is enclosed with this
document.	
	Unterschrift
Ort, Datum	Unterschillt
Place,date Ausführliche Erläuterung der für den Rücktri	tt/die Verlängerung geltend gemachten wichtigen Gründe: en for withdrawal/submission deadline extension:
Place,date Ausführliche Erläuterung der für den Rücktri	Siganture tt/die Verlängerung geltend gemachten wichtigen Gründe:
Place,date Ausführliche Erläuterung der für den Rücktri	Siganture tt/die Verlängerung geltend gemachten wichtigen Gründe:
Place,date Ausführliche Erläuterung der für den Rücktri	Siganture tt/die Verlängerung geltend gemachten wichtigen Gründe:
Place,date Ausführliche Erläuterung der für den Rücktri	Siganture tt/die Verlängerung geltend gemachten wichtigen Gründe:
Place,date Ausführliche Erläuterung der für den Rücktri	Siganture tt/die Verlängerung geltend gemachten wichtigen Gründe:
Place,date Ausführliche Erläuterung der für den Rücktri	Siganture tt/die Verlängerung geltend gemachten wichtigen Gründe:
Place,date Ausführliche Erläuterung der für den Rücktri	Siganture tt/die Verlängerung geltend gemachten wichtigen Gründe:

## Anhang: Datenschutzhinweise nach Art. 13, 14 und 21 DSGVO

Annex: Data protection information in accordance with articles 13, 14 and 21 of the EU General Data Protection Regulation (GDPR)

## Datenschutzhinweise nach Art. 13, 14 und 21 DSGVO

Wir verarbeiten Ihre personenbezogenen Daten (im Folgenden "Daten") gemäß den gesetzlichen Vorgaben und möchten dies in transparenter Weise gestalten. Wir informieren Sie hiermit, welche Daten wir verarbeiten, und zu welchen Zwecken und auf welcher Rechtsgrundlage dies erfolgt. Zudem erhalten Sie Auskunft über Ansprechpartner sowie Ihre Rechte in Zusammenhang mit der Datenverarbeitung.

## Name und Kontaktdaten des Verantwortlichen:

Gottfried Wilhelm Leibniz Universität Hannover vertreten durch den Präsidenten Welfengarten 1 30167 Hannover

#### Kontaktdaten des Datenschutzbeauftragten:

Gottfried Wilhelm Leibniz Universität Hannover - Stabsstelle Datenschutz – Königsworther Platz 1 30167 Hannover E-Mail: datenschutz@uni-hannover.de

#### Zwecke und Rechtsgrundlagen der Datenverarbeitung:

Wir verarbeiten die in diesem Formular abgefragten Daten für die Wahrnehmung unserer im öffentlichen Interesse liegenden Aufgabe, das Verfahren zur Abnahme von Hochschulprüfungen ordnungsgemäß durchzuführen. Insbesondere die Verarbeitung von Gesundheitsdaten ist für die Ausübung des Rechts der/des Studierenden zum Prüfungsrücktritt erforderlich, weil ansonsten nicht festgestellt werden kann, ob die Voraussetzungen für einen wirksamen Prüfungsrücktritt aus triftigen Gründen erfüllt sind. Die Rechtsgrundlage für diese Verarbeitung ergibt sich aus:

- § 3 S. 1 Nr. 1 Niedersächsisches Datenschutzgesetz (NDSG),

- Art. 6 Abs. 1 S. 1 Buchstabe e, Abs. 2 und 3; Art. 9 Abs. 2 Buchstabe f Datenschutzgrundverordnung (DSGVO) i. V. m.
- § 17 Abs. 1 S. 1 Niedersächsisches Hochschulgesetz (NHG) und

- der jeweils einschlägigen Prüfungsordnung der Gottfried Wilhelm Leibniz Universität Hannover.

#### Allgemeine Informationen:

Dieses Originalformular einschließlich des beinhalteten ärztlichen Attests wird Bestandteil Ihrer geführten Prüfungsakte. Mit regulärer Aussonderung und Vernichtung Ihrer Prüfungsakte nach Abschluss Ihres Studiums wird dieses Originalformular ebenfalls vernichtet werden. Im Rahmen der weiteren Verfahrensbearbeitung erhalten nur die Angehörigen des Akademischen Prüfungsamtes, die Mitglieder der für die Entscheidung gemäß der einschlägigen Prüfungsordnung zuständigen Prüfungsorgane sowie –soweit erforderlich– Angehörige des Justitiariats der Hochschule Kenntnis von diesem Originalformular und dessen Inhalten. Die Beteiligten sind zur Verschwiegenheit und vertraulichen Behandlung verpflichtet.

Wir möchten Sie darüber informieren, dass die Bereitstellung Ihrer Daten weder gesetzlich noch vertraglich vorgeschrieben ist. Sofern die Daten nicht bereitgestellt werden, hat dies zur Folge, dass nicht festgestellt werden kann, ob die Voraussetzungen für einen wirksamen Prüfungsrücktritt aus triftigen Gründen erfüllt sind. Eine automatisierte Entscheidungsfindung einschließlich Profiling i. S. d. Art. 22 Abs. 1 und 4 DSGVO findet nicht statt.

#### Ihr Recht auf Widerspruch gem. Art. 21 DSGVO:

Sie haben das Recht, aus Gründen, die sich aus Ihrer besonderen Situation ergeben, jederzeit gegen die Verarbeitung Sie betreffender personenbezogener Daten Widerspruch einzulegen. In diesem Fall verarbeiten wir diese Daten nicht mehr, es sei denn, wir können zwingende schutzwürdige, Ihre Interessen, Rechte und Freiheiten überwiegende Gründe für die Verarbeitung nachweisen, oder die Verarbeitung dient der Geltendmachung, Ausübung oder Verteidigung von Rechtsansprüchen.

#### Ihre weiteren Rechte:

Sie haben das Recht, von uns Auskunft über die Verarbeitung Sie betreffender Daten zu verlangen. Dieses Auskunftsrecht umfasst neben einer Kopie der Daten auch die Zwecke der Datenverarbeitung, die Datenempfänger sowie die Speicherdauer. Sollten unrichtige Daten verarbeitet werden, können Sie von uns unverzüglich die Berichtigung dieser Daten verlangen. Liegen die gesetzlichen Voraussetzungen nach Art. 17 bzw. 18 DSGVO vor, steht Ihnen zudem grundsätzlich das Recht auf unverzügliche Löschung oder auf Einschränkung der Verarbeitung der Daten zu.

Bitte beachten Sie, dass eine eingeschränkte Verarbeitung der Daten unter Umständen nicht möglich ist.

Zur Ausübung Ihrer oben genannten Rechte wenden Sie sich bitte – vorrangig an die/den für Ihren Studiengang zuständige/n Sachbearbeiter/in im Akademischen Prüfungsamt – im Übrigen an:

Gottfried Wilhelm Leibniz Universität Hannover; Akademisches Prüfungsamt; Welfengarten 1; 30167 Hannover; E-Mail: <u>studium@uni-hannover.de</u>

Bei weiteren Fragen berät Sie gerne unser Datenschutzbeauftragter.

#### Mit datenschutzrechtlichen Beschwerden wenden Sie sich bitte an:

Die Landesbeauftragte für den Datenschutz Niedersachen; Prinzenstraße 5; 30159 Hannover; E-Mail: poststelle@lfd.niedersachsen.de

26/2022

Data protection information in accordance with articles 13, 14 and 21 of the EU General Data Protection Regulation (GDPR)

We process your personal data (hereafter referred to as "data") in accordance with legal requirements and aim to do so in a transparent manner. In the following, we inform you what data we process for what purposes and the legal basis for doing so. We also provide information on contact persons, as well as your rights in relation to data processing.

Name and contact details of the data controller: Gottfried Wilhelm Leibniz Universität Hannover vertreten durch den Präsidenten Welfengarten 1 30167 Hannover Contact details of the Data Protection Officer: Gottfried Wilhelm Leibniz Universität Hannover - Stabsstelle Datenschutz -Königsworther Platz 1 30167 Hannover Email: datenschutz@uni-hannover.de

## Purposes and legal basis for data processing:

We process the data requested in this form in order to perform our duty – which is in the public interest – to properly implement the procedure for conducting university examinations. Specifically, processing data on health is necessary for students to exercise their right to withdraw from an examination, as otherwise it cannot be established whether the prerequisites for withdrawing from an examination for valid reason have been met. The legal basis for processing this data is:

- Section 3 1 1 of the Lower Saxony regulations governing data protection (Niedersächsisches Datenschutzgesetz – NDSG),

- Article 6 (1) 1 (e), (2) and (3) GDPR; Article 9 (2) (f) GDPR in conjunction with

- Section 17 (1) sentence 1 of the Lower Saxony Higher Education Act (Niedersächsisches Hochschulgesetz NHG) and
- the applicable examination regulations of Gottfried Wilhelm Leibniz Universität Hannover.

#### General information:

The original of this form – including the accompanying medical certificate – shall form part of your examination records. As part of the regular process of deleting and destroying your examination file after you have completed your degree programme, the original form will also be destroyed. With respect to the further processing of the case, only the members of the examination office, the members of the examination bodies responsible for the decision as per the relevant examination regulations and – if necessary – members of the university's legal department will be given access to this original form and its contents. Those involved are obliged to maintain secrecy and confidentiality.

Please be advised that you are not required by law or contract to provide your data. If no data is provided, consequently it will not be possible to determine whether the prerequisites for withdrawing from an examination for valid reasons have been met. An automated decision-making process, including profiling, within the meaning of Article 22 (1) and (4) GDPR shall not occur.

#### Right to objection as per Article 21 GDPR:

You have the right, for reasons resulting from your particular situation, to object to the processing of personal data concerning you at any time. In this case, we will then stop processing your data, unless legitimate grounds exist to continue that override your interests, rights and freedoms, or where processing serves to assert, exercise or defend legal claims.

#### Your other rights:

You have the right to obtain information from us about the processing of data concerning you. This comprises access to a copy of this data as well as information on the purposes of processing, the recipients and the duration of storage. If inaccurate personal data is processed, you have the right to request the recification of this data without undue delay. If the legal requirements stipulated in Article 17 or Article 18 GDPR are met, you also have the right to erasure of data without undue delay or restriction of processing thereof.

Please note that in certain circumstances, it is not possible to restrict processing of data.

In order to exercise the abovementioned rights, please primarily contact the member of the examination office responsible for your degree programme, otherwise contact:

Gottfried Wilhelm Leibniz Universität Hannover, Akademisches Prüfungsamt, Welfengarten 1, 30167 Hannover; email: <u>studium@uni-hannover.de</u>

Our data protection officer will gladly provide advice regarding any further questions.

#### For any data protection complaints, please contact:

Landesbeauftragte für den Datenschutz Niedersachen, Prinzenstraße 5, 30159 Hannover; email: poststelle@lfd.niedersachsen.de