Examination Regulations of the University of Mannheim
for the Master’s Program “Mannheim Master in Data Science” (M.Sc.)

as at 20 April 2011

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I. General Provisions

Section 1 – Purpose of the Degree Course

1 The master’s examination marks the proper completion of the master’s program “Mannheim Master in Data Science” (Master of Science). 2 The completion of the master’s examination constitutes the second professional qualification (consecutive degree). 3 It proves that the student has acquired in-depth knowledge regarding the analysis and management of complex data. 4 In addition, it serves to demonstrate whether the student has the ability to apply scientific methods and findings adequately in order to ensure a successful transition into research or the labor market.

Section 2 – Graduation

1 Based on the completion of the master's examination, the School of Business Informatics and Mathematics of the University of Mannheim awards the academic degree “Master of Science” (M.Sc.). 2 In accordance with section 28, the academic degree shall only be used after having received the diploma.

Section 3 – Required Coursework and Examinations, Structure, and Language of Instruction and Examination

(1) 1 The coursework and examinations within the master's program, including the completion of the master's thesis, total at least 120 ECTS credits in accordance with the respective regulations for the areas outlined below:

1. Fundamentals (0 to 14 ECTS credits)
2. Data Management (24 to 36 ECTS credits),
3. Data Analytics Methods (30 to 54 ECTS credits),
4. Projects and Seminars (12 to 16 ECTS credits),
5. Master’s Thesis (30 ECTS credits).

The detailed rules and regulations on the required ECTS credits are specified in the attachment. 3 One ECTS credit corresponds to a workload of 25 to 30 hours.

(2) 1 The degree course has a modular structure. 2 A course usually includes technical, topical and coherent units of instruction (modules); the Master’s Thesis module does not include a course. 3 The individual modules are organized by superordinate units (areas). 4 The composition of the areas is specified in the attachment of these Examination Regulations; course contents are stated in the current version of the University of Mannheim's module catalog for the “Mannheim Master in Data Science” (M.Sc.); the committee on student affairs and teaching of the School of Business Informatics and Mathematics approves the module catalog. 5 If the Examination Regulations or the module catalog refer to other examination regulations or module catalogs, the rules and regulations of said examination regulations and module catalogs apply in line with the rules and regulations of these Examination Regulations.

(3) 1 As a rule, all courses are taught in English; some courses may also be taught in German. 2 Sentence 1 applies for taking examinations and completing coursework. 3 The decisions according to sentences 1 and 2 are taken by the examiner, as indicated in the module catalog. 4 The master’s thesis shall be written in English only.

Section 4 – Standard Period of Study, Maximum Period of Study

(1) The period of study for the master's program, during which all coursework and examinations required to pass the master's examination are to be completed, is four semesters (standard period of study).
II. Organization and Administration of Examinations, Recognition of Coursework and Examinations

Section 5 – Examination Committee

(1) An examination committee is formed for the “Mannheim Master in Data Science” (M.Sc.) program of the University of Mannheim. It is composed of three university teachers or senior academic staff members (Privatdozenten) of the School of Business Informatics and Mathematics, who are eligible to vote, and a student member exercising an advisory function. The members of the examination committee are appointed by the school council.

(2) The term of office of members who are eligible to vote is three years. The student member's term of office is one year. All members can be reappointed. The committee members' term of office starts on 1 August of each year. If a member of the examination committee retires from his or her position before the end of the term of office, a successor is appointed for the remaining term of office.

(3) The examination committee appoints one of its members as chair and one as deputy chair for the term of office. The chair manages the examination committee.

(4) The examination committee has a quorum if the chair or the deputy chair and at least one other member are present. Decisions require a simple majority of votes from the members present. In the event of a tie, the vote of the chair shall decide the matter.

(5) The members of the examination committee are obliged to exercise discretion. If they are not employed in the public service, they shall be obliged to exercise discretion by the chair of the examination committee in writing. This obligation applies to all examination-related facts and matters

1. that the members were informed about in a non-public meeting and/or that happened to be discussed,
2. that are to be kept secret by law,
3. that were ordered or decided to be kept secret for the public good or in order to protect the legitimate interests of an individual,
4. or that are to be kept secret by their nature.

The obligation to exercise discretion continues after the term of office and includes discussion-related documents.

Section 6 – Competences of the Examination Committee

(1) The examination committee makes all decisions regarding these Examination Regulations if no other entity is responsible. The examination committee enforces the Examination Regulations. It regularly reports on the developments of the study and examination periods as well as on the development of the exam results. The report shall be published in an appropriate manner by the university. It may entrust the chair with certain tasks the committee is normally in charge of.
Section 7 – Examiners and Observers

(1) Only university teachers, auxiliary professors (außerplanmäßige Professoren), honorary professors and senior academic staff members (Privatdozenten) as well as those academic members of staff who have been appointed by the President's Office in accordance with section 52 subsection 1(5, 6) LHG are authorized to administer coursework and examinations. Section 15 subsection 2(1) remains unaffected. A person may only function as an observer if he or she has at least successfully completed a master's degree or an equivalent degree at a higher education institution or is state-certified in the field that the assessed examination relates to.

(2) The examination committee appoints the examiners and observers. It may entrust its chair with the appointment.

(3) Observers have an advisory role in the examination processes.

(4) For oral examinations, the examiner responsible shall bring in a person familiar with the field of study as secretary to take the minutes. The secretary may act as an observer at the same time.

(5) Usually, the responsible teacher of each course is appointed as examiner. Section 15 subsection 2(2) remains unaffected. The examination committee shall decide on exceptions.

(6) Every examiner may make use of one or several assistants for the correction of examinations; he or she ensures competent evaluation.

(7) Examiners, observers, and assistants for the correction of examinations are obliged to exercise discretion in accordance with section 5 subsection 5.

Section 8 – Competences of the Student Services

(1) The Student Services are in charge of the administration of the examinations.

(2) In particular, the Student Services

1. determine and announce registration deadlines, examination dates and rooms,
2. announce the names of the examiners and notify them about the examination,
3. receive applications for admission to examinations and registrations for examinations and re-sit examinations from students; section 15 subsection 4 remains unaffected,
4. maintain student examination records,
5. enforce the deadlines specified in these Examination Regulations,
6. are in charge of technical administration of all examinations and coordination of supervision for written examinations,
7. provide examination results to students, and
8. issue and hand out official documents, degree certificates and confirmations on coursework and examinations along with attachments.

Section 9 – Recognition of Coursework and Examinations

(1) Coursework and examinations as well as periods of study obtained in degree courses at official or officially recognized higher education institutions in Germany or abroad as well as at public universities of cooperative education (Berufsakademien) of the Federal Republic of Germany are recognized, provided there is no significant difference between the competences obtained and the coursework or examinations to be substituted.

(2) For the recognition of coursework, examinations and semesters completed abroad, agreements between the Federal Republic of Germany and other countries need to be taken into account, such as agreements on equivalencies in higher education (equivalency agreements) and agreements within the framework of university partnerships and double degree programs (cooperation agreements). Furthermore, in cases of doubt regarding the equiv-
alency of qualifications, the Central Office for Foreign Education (Zentralstelle für ausländisches Bildungswesen - ZAB) can be consulted.

(3) Skills and qualifications obtained outside of the higher education sector shall be recognized if
1. the requirements for admission to a higher education institution are fulfilled at the time of recognition,
2. the skills and qualifications to be recognized are equivalent to the coursework and examinations to be substituted in terms of content and level, and
3. the criteria for recognition were examined as part of an accreditation.

For recognition, the applicant has to prove that the competences he or she acquired outside of the higher education sector are comparable to the coursework and examinations to be substituted in terms of content.

For the decision on the recognition, the form of instruction shall be considered as well.

Skills and qualifications obtained outside of the higher education sector may substitute 50 percent of the master's program at most.

The regulations for the recognition of coursework and examinations at public universities of cooperative education (Berufsakademien) in Germany remain unaffected.

(4) The examination committee decides on the recognition upon written request. It is the student's responsibility to provide the examination committee with the necessary documents for the recognition of coursework and examinations.

(5) If credits are recognized and the grading systems are similar, the grades shall be transferred according to these Examination Regulations and considered for calculation of the final grade. In order to guarantee a consistent procedure, the examination committee can pass general regulations for the conversion of grades obtained abroad within the limits of the legal provisions. If conversion is impossible because the grading systems differ or the coursework was not graded, the work is simply marked “passed” (“bestanden”). In this case, the coursework or examination will not be included in the final grade. The recognition is indicated in the degree certificate and in the Transcript of Records.

In case the student takes part in an examination at the University of Mannheim even though he or she already obtained the respective qualification elsewhere, he or she automatically waives the right to have the previous qualification recognized.

### III. Examination Process

#### Part 1: Coursework and Examinations

**Section 10 – General Provisions; Coursework and Examinations**

(1) The examinations that are to be completed as part of the master’s examination, excluding the master’s thesis, are assigned to the individual courses within the modules. The type, form, scope and duration of the coursework or examinations are specified in the attachment and in the module catalog. If there are several types and styles of examinations available, the examiner responsible is to decide the type and form in which the examination in question is to take place in the respective semester. The decision according to sentence 3 is announced by the examiner using appropriate means in due time before the examination, usually at the beginning of the lecture period for the respective semester. The examiner is also to communicate this decision to Student Services.

(2) An examination as defined in these Examination Regulations usually involves completing one or several tasks; the details are determined in the attachment. In contrast to sentence 1, the examinations for courses in modules offered by the School of Social Sciences of the University of Mannheim, which are labeled “Tutorial” or “Übung” (exercise course), are substituted by coursework.

(3) The module catalog may include requirements to be fulfilled (in the form of coursework and / or examinations) in order to be admitted to an examination held by the School of Business Informatics and Mathemat-
Section 11 – Registration and Admission to Examinations; Examination Dates

(1) Registration is obligatory for all examinations. It is the student’s responsibility to register for the regular examination date.

(2) It is to be done strictly within one of the registration periods set by Student Services before taking the examination; section 15 subsection 4 remains unaffected. Student Services can extend the registration period (late registration). After the registration period has closed, registration for the respective examination attempt can only be withdrawn during the period determined by Student Services (withdrawal); section 15 subsection 7 remains unaffected.

(3) If an examination is comprised of several pieces of coursework or examinations and if, by way of derogation from subsection 2(1), it is not possible for students to register for the examination at the Student Services prior to completing the first component, the student is considered registered as soon as the examiner has registered the student’s wish to take the examination. Once students have registered, they may only withdraw the registration within a limited period of time set by the examiner. Once the deadline mentioned above has lapsed, the registration for the examination attempt is binding.

(4) A student is only admitted to an examination if he or she
1. is enrolled in the “Mannheim Master in Data Science” degree program,
2. has not lost his or her eligibility to take examinations in this subject or in another Diplom, Magister, bachelor’s or master’s program in a similar field of study, and
3. meets the requirements for the examination in question, having successfully completed any preliminary coursework.

(5) The regular examination dates for supervised examinations shall be at the start of the semester break. The alternate examination dates shall be before the following lecture period begins or during the first week at the latest. There shall be at least three weeks between announcing results from the examinations taken on the regular dates and the alternate examination dates. In accordance with sentence 1, the alternate examination dates count for the semester in which the regular dates occurred.

(6) If a student’s de-registration or absence is approved or in case a student fails an examination attempt, he or she will be registered for the next possible examination date, provided that he or she is eligible. Section 15 subsection 4(1) and subsection 11(1 and 2) remain unaffected.

Section 12 – Type and Form of Coursework and Examinations

(1) Examinations and coursework are:
1. Examinations as defined in these Examination Regulations are individual tasks that are graded by the examiner with a grade in line with section 16 subsection 2.
2. Coursework as defined in these Examination Regulations is an individual task that is graded by the examiner as either “passed” or “failed”.

(2) The types and forms of coursework and examinations are usually:
1. written tasks in the form of examinations, term papers, project reports, master’s thesis;
2. oral tasks in the form of presentations, participation and oral examinations;
3. electronic tasks in form of programming exams or programming projects.

Obligatory attendance of courses and studies may also be defined as coursework if the respective course objectives and certain communicative tasks require a minimum number of participants to be present.

Section 13 – Oral Examinations

(1) Oral examinations are usually conducted by the examiners as an individual assessment; as a rule, oral examinations shall last at least 15 and no more than 45 minutes per candidate. In exceptional cases, oral examinations can be conducted as a group assessment; it shall be ensured that each candidate is assessed for at least 15 minutes and no more than 45 minutes. Regarding sentence 2, the examiner makes a decision. If necessary, the examiner may ask an observer to be present.

(2) If an oral examination is the last available attempt at an examination for a student, he or she can submit a written request asking for the presence of a competent observer. A request in accordance with sentence 1 shall be submitted to the examination committee in due time before the beginning of the examination in question.

(3) Minutes from the examination (Ergebnisprotokoll) are to be taken during the main course of the oral examination. The result from this examination, which is to be communicated to the student shortly after its completion, is to be recorded in the minutes. The minutes are to be signed by the examiner, the secretary and the observer (in accordance with subsection 1(4) and subsection 2) and to be put on file.

Section 14 – Written Examinations

(1) Written examinations shall last at least 30 and no more than 180 minutes.

(2) As a rule, written examinations shall not be conducted in the form of multiple-choice examinations. In exceptional cases with valid reasons, written examinations may be conducted completely or in part as multiple-choice examinations. Should a complete examination be conducted as multiple-choice, the tasks should allow for reliable examination results. When designing the examination, the examiner shall determine which answers are accepted as correct and how the scoring system works. If, during the assessment of the examination, it turns out that single exercises do not lead to reliable results, they shall not be considered for the calculation of the examination's result. The minimum passing score is to be adjusted accordingly; lowering the passing score shall not have negative implications for candidates. The examination is passed if a student achieves at least the minimum passing score determined before the exam. If a student does not achieve the minimum passing score, he or she might still pass the exam provided his or her performance was good enough to be among the set minimum rate of students that will pass the exam regardless of the results (pass rate; pass rate + failure rate = 100%). If the examination is only partly multiple-choice, the regulations of this section apply to that part respectively.

(3) Each written examination shall be recorded in the minutes by the examination supervisor. The minutes have to be signed and filed unless the type of examination is not suitable for minutes.

(4) When evaluating term papers or similar pieces of work for academic performance, the examiner is to ascertain the quality of research. Section 15 subsection 10 applies accordingly.

(5) When grading term papers or an equivalent, the examination committee and examiners are authorized to use software to detect plagiarism. For the grading of their work, students shall submit a digital data file and a hard copy of their work to the examiners. In accordance with section 3 subsection 6 of the Data Protection Act of the Land of Baden-Württemberg, the work must be anonymized before using the plagiarism software. When submitting coursework as defined in sentence 1, the student shall submit the following signed declaration:

"I hereby declare that the paper presented is my own work and that I have not called upon the help of a third party. In addition, I declare that neither I nor anybody else has submitted this paper or parts of it to obtain credits elsewhere before. I have clearly marked and acknowledged all quotations or references that have"
Section 15 – Master’s Thesis

(1) In writing the master's thesis, the student shall prove that he or she has acquired the skills and proficiency to work independently on a problem of his or her field of study employing the scientific methods available within a limited period of time. Group work is not permitted.

(2) Only university teachers, auxiliary professors (außerplanmäßiger Professor), honorary professors and senior academic staff members (Privatdozent) are permitted to act as examiners for master’s theses. The person who assigned the topic of the master's thesis to the student shall be the examiner. The examiner may assign further persons as supervisors. Supervisors advise students on any questions to do with the production of the master's thesis; the individual performance and the students' self-reliance for the thesis shall be maintained.

(3) To be permitted to write the master’s thesis, the student is to obtain at least 60 ECTS credits in the areas according to section 3 subsection 1(1) numbers 1-4; section 10 subsection 3 remains unaffected. The student is responsible for providing the examiner with the information required; in particular, a Transcript of Records is to be submitted. The examiner ensures that this requirement has been fulfilled before allocating a topic to the student.

(4) It is the student's responsibility to register his or her master's thesis with the examiner each time he or she attempts to complete it. Once the topic has been issued, registration is binding and the student is admitted to write his or her thesis. Late registration or de-registration after being admitted to write the thesis is not possible. Section 7 remains unaffected.

(5) The examiner determines and allocates the topic to the student. The student shall be granted the chance to put forward suggestions for a topic. However, no legal right arises to be assigned the suggested topic. The topic for the master's thesis must be set in such a way that allows it to be completed within the preparation period.

(6) As a rule, the time to complete the master’s thesis is six months. The preparation period begins once the topic of the master's thesis has been given to the student. In case of valid reasons and upon written request from a student, which is submitted in due time, the examination committee shall grant individual extensions based on case by case decisions. Extensions shall only be granted with the consent of the examiner. A request in accordance with sentence 3 shall be made to the examination committee immediately once the student is aware of the circumstances justifying an extension and is only possible within the preparation period. Should the request not be made in due time within the meaning of sentence 4, the circumstances justifying an extension are considered irrelevant for the examination attempt concerned. Sections 22 and 23 remain unaffected.

(7) The topic of the master's thesis may be changed once and only during the first five weeks of the preparation period. In this case, the examination attempt does not count as having been taken.

(8) The student shall submit a declaration according to section 14 subsection 5 when submitting his or her master's thesis.

(9) The master's thesis shall be submitted in due time to the examiner in duplicate as a hard copy and as a digital data file. If the master's thesis is not submitted in due time, it will be graded “failed” (“nicht bestanden”).

(10) When evaluating the master’s thesis for academic performance, the examiner is to ascertain the quality of research. If data and implementations are to be submitted, the student must provide them to the examiner in a suitable form when submitting the master’s thesis; the examiner informs the student of their requirement no later than when the topic is allocated. The student is responsible for providing the required information outlined in sentence 2.
(11) ¹If the master's thesis is failed, it may be redone once. ²Under no circumstances may the master's thesis be redone twice. ³If the repeat attempt at the master's thesis is graded “failed” (“nicht ausreichend”), it shall be passed on to a second examiner, in accordance with subsection 2(1), for grading. ⁴If, in the case mentioned in sentence 3, the grades given by the two examiners differ, the grade awarded for the master's thesis shall be the grade as defined in section 16 subsection 2 which comes closest to the arithmetic average of both individual grades. If in doubt, the better of the two grades is to be awarded. ⁵If the calculated average in line with sentence 4 is 4.1 or worse, the master's thesis is graded “failed” (“nicht ausreichend”).

(12) ¹If the student fails his or her first attempt at the thesis, he or she must begin writing the new thesis on a different topic within six months after the results from the first attempt were announced. ²It is the student’s responsibility to register with the examiner in due time for the repeat attempt at the thesis. ³Sentences 1 and 2 shall apply if a request for de-registration is granted or the topic of the thesis is changed.

(13) The topic of the master's thesis, the date on which the student was issued a topic, the end of the preparation period and the date on which the thesis is to be submitted are to be put on record by Student Services.

(14) The master’s thesis shall be graded within a period of two months.

Section 16 – Grading of Examinations and Coursework, Calculation of Grades for Individual Examinations and Coursework and Module Grades

(1) ¹According to section 12 subsection 1, the grades for individual examinations and coursework are determined by the respective examiner; section 15 subsection 11(3-5) remain unaffected. ²Assessment is to be completed within four weeks; section 15 subsection 14 remains unaffected.

(2) ³The following grades may be assigned:

1.0 = very good (“sehr gut”) = an excellent performance;
2.0 = good (“gut”) = a performance which substantially exceeds the average requirements;
3.0 = satisfactory (“befriedigend”) = a performance corresponding to the average requirements;
4.0 = fair (“ausreichend”) = a performance which, in spite of its flaws, suffices to meet the requirements;
5.0 = failed (“nicht ausreichend”) = a performance which does not meet the requirements due to considerable flaws.

³Grades may be differentiated by adding or subtracting 0.3. ⁴The grades 0.7, 4.3, 4.7 and 5.3 shall not be assigned. ⁵The grading system of coursework and examinations from other schools may differ from this system.

(3) If an examination comprises only one component, the overall examination grade equals the grade of the component. Section 15 subsection 11(3-5) remain unaffected.

(4) ¹If an examination comprises several components, the overall examination grade equals the grade closest to the weighted average grade calculated using the grades of the components. ²The weighted average grade is calculated to one decimal place; all further decimal places are excluded without rounding. ³The examination grades according to their weighted average are:

- from 1.0 to 1.1 = 1.0
- from 1.1 up to and including 1.5 = 1.3
- from 1.5 up to and including 1.8 = 1.7
- from 1.8 up to and including 2.1 = 2.0
- from 2.1 up to and including 2.5 = 2.3
- from 2.5 up to and including 2.8 = 2.7
- from 2.8 up to and including 3.1 = 3.0
- from 3.1 up to and including 3.5 = 3.3
- from 3.5 up to and including 3.8 = 3.7
- from 3.8 up to and including 4.0 = 4.0
4 If the grade calculated in accordance with sentences 1 and 2 equals 4.1 or worse, the grade 5.0, “failed”, is awarded. 5 The weighting of individual examination and coursework components for the calculation of the respective grade are determined in the module catalog.

(5) The module grade equals the examination grade.

Section 17 – Passing Examinations and Modules, Obtaining ECTS Credits

(1) An examination comprising only one component is passed where the grade 4.0, “fair”, or better is awarded.

(2) An examination comprising several components is passed if the examination grade calculated in line with section 16 subsection 4 equals 4.0, “fair”, or better.

(3) A module is passed if the respective module examination is passed.

(4) The module examination must be passed for ECTS credits to be awarded.

Section 18 – Failing and Redoing Coursework or Retaking Examinations (including Examinations and Preliminary Coursework), Failing the Final Examination Attempt

(1) Failed pieces of coursework or examinations are those which have been graded “5.0” “failed” (“nicht bestanden”, “nicht ausreichend”) or which are considered to be graded “5.0” “failed” (“nicht bestanden”, “nicht ausreichend”).

(2) 1 If an examination consists of one piece of coursework or one examination, it is considered “failed” (“nicht bestanden”, “nicht ausreichend”) if said piece of coursework or examination has been failed. 2 If an examination consists of several pieces of coursework or examinations, it is considered “failed” (“nicht bestanden”, “nicht ausreichend”) if the assigned grade calculated in line with section 16 subsection 4 is “5.0” “failed” (“nicht bestanden”, “nicht ausreichend”).

(3) 1 Coursework or examinations which were done as a preliminary requirement for an examination and subsequently failed may be repeated. 2 Failing a related examination in the same semester usually means that the preliminary coursework must be redone and passed. 3 The examiner of the retake examination decides on exceptions upon request of a student. 4 In accordance with sentence 3, the request is to be submitted in due time and before the examination concerned takes place, otherwise the preliminary coursework is to be redone.

(4) 1 Failed examinations may generally be retaken once. 2 If the second examination attempt is not successful (re-sit examination), the student can take a second re-sit examination on two occasions at the most during his or her master’s program (extra chance). 3 Module examinations for the area “Projects and Seminars” as well as the master’s thesis are excluded from the regulation in sentence 2.

(5) When retaking an examination consisting of several components, all examination components are to be retaken.

(6) The failure of an examination is final if the last available attempt at the examination was not passed. In this case, an official notification shall be issued by the examination committee.

(7) It is not possible to retake an examination that has already been passed.

Section 19 – Breaches of Procedure

(1) 1 The examination committee may remedy disturbances of the examination procedure or other breaches of procedure by virtue of office or upon request from a student by deciding on appropriate measures or orders. 2 In particular, the examination committee may order that coursework or examinations shall be retaken by all or by individual students or, in case the principle of equal opportunities was violated, grant an extension or impose another appropriate measure of compensation.
(2) Any disturbances are to be reported immediately by the affected student during a written or oral examination:

1. in case of a written examination to the supervisor,
2. in case of an oral examination to the examiner and
3. in case of any other type of examination to the responsible examiner.

Any other kinds of breaches of procedure are to be reported by the affected student in due time as soon as the student acknowledges a particular breach of procedure. The reports according to sentences 1 and 2 shall be entered into the examination minutes. If the disturbances of the examination procedure or any other kind of breaches of procedure relevant to the evaluation of the respective examination are not reported in due time, they are deemed insignificant.

(3) If the examination committee did not take measures of compensation in accordance with subsection 3 for a disturbance that occurred during an examination and was reported without delay or for other breaches of procedure, or those measures were inadequate, the student shall address his or her request for the necessary measures of compensation to the examination committee in writing immediately after the examination. If the examination consisted of several parts, the request shall be made immediately after the relevant part of the examination. The request shall not contain any conditions. If the disturbances of the examination procedure or any other kind of breaches of procedure relevant to the evaluation of the respective examination are not reported in due time, they are deemed insignificant.

Section 20 – Access to Examination Records

(1) Provided that the examination papers have not been returned to the respective student, he or she shall be granted access to his or her written examinations upon written request submitted within an appropriate period of time. This includes the master's thesis, the respective evaluation(s) of the examiner(s) and the minutes of each examination.

(2) The request has to be submitted to the chair or the Student Services within one year after having received the result of the respective examination. They decide on the time and place for accessing the examination records.

Part 2: Disadvantage Compensation

Section 21 – Extension of Examination Deadlines

(1) The examination deadlines as well as the deadlines to take examinations and complete coursework in order to complete the program shall be extended by the examination committee upon written request from a student, which is submitted in due time, if the respective student is in need of an extension due to special conditions he or she is not responsible for. The examination committee shall grant individual extensions based on case by case decisions.

(2) In particular, this applies to students

1. with children, or
2. with a relative in need of care within the meaning of section 7 subsection 3 of the Caregiver-Leave Act (PflegeZG), and to students
3. with a disability, or
4. with a chronic illness

if the situation resulting from the aforementioned special conditions requires an extension of the examination deadlines. The same applies to students who are eligible for periods of protection in accordance with the respective section 3 subsection 1, section 6 subsection 1 of the Maternity Protection Act (MuSchG).
(3) 1A request in accordance with subsection 1 shall be promptly submitted as soon as the student is aware of the circumstances demanding an extension of examination deadlines. 2If the request is not made in due time in accordance with sentence 1, the extension shall only be granted if additional requirements according to section 32 of the Administrative Procedure Act of Baden-Württemberg (LVwVfG) are met.

(4) 1The student requesting the extension is responsible for producing adequate proof. 2If there are significant changes to the personal situation of the student, particularly any changes that would result in a lapse of entitlement to the extension, the student is obliged to inform the examination committee without delay.

(5) 1The extension of deadlines to take examinations, re-sit examinations or complete coursework shall not exceed a total of two semesters in any case. 2The extension of the deadline to complete the program shall not exceed the standard period of study provided there are no legal regulations indicating otherwise.

(6) 1The extension of examination deadlines, the preparation period and submission deadlines for coursework, particularly a term paper or master's thesis, are not covered by the subsections listed above. 2The option of requesting disadvantage compensation in accordance with section 22 remains unaffected.

(7) When calculating the examination deadlines, section 32 subsection 6 of the Act on Higher Education of the Land of Baden-Württemberg (LHG) shall be taken into consideration.

Section 22 – Disadvantage Compensation

(1) 1If students, as a result of a special condition or situation within the meaning of section 21 subsection 2, cannot take the respective examination or complete a piece of coursework, in particular due to the form of examination, they can request disadvantage compensation. Students are obliged to submit the request for disadvantage compensation in due time and in writing. In coordination with the respective examiners, the examination committee grants the appropriate disadvantage compensation in order to adhere to the principle of equal opportunities. 2Disabled students or students with a chronic illness shall submit their request for disadvantage compensation to the Commissioner and Counselor for disabled students and students with chronic illnesses. The examination committee is obliged to take the recommendation of the Commissioner and Counselor for disabled students and students with chronic illnesses into account in their decision making process.

(2) 1A request as outlined in subsection 1 is to be made in due time before the coursework or examination concerned is started. Where it is the responsibility of the student to register for coursework or an examination, the request is to be submitted by the end of the registration period at the latest. 2If the request is not made in due time in accordance with sentence 1, the extension shall only be granted if additional requirements according to section 32 of the Administrative Procedure Act of Baden-Württemberg (LVwVfG) are met. 3If students fail to submit the request for disadvantage compensation in due time, in accordance with sentences 1 or 2, the special circumstances will not be considered for the evaluation of the respective coursework or examination. 4The possibility to withdraw or de-register from an examination or piece of coursework with a valid reason remains in effect.

(3) 1It is the student's responsibility to provide sufficient proof of his or her special circumstances upon filing the request for disadvantage compensation. 2If there are significant changes to the special circumstances of the student before or during the claim for disadvantage compensation, particularly any changes that would result in a lapse of entitlement, the student is obliged to inform the examination committee without delay and in writing.

Section 23 – De-registration and Absence

(1) 1An examination for which a student is registered is graded “failed” (5.0) (“nicht bestanden”) if the student de-registers from the examination without a valid reason (de-registration) or if he or she does not attend (absence). 2The same applies to written pieces of coursework or examinations that are not completed within the given period of time.

(2) 1The relevant reasons for de-registration or absence, and the relevant proof, must be submitted in writing to the Student Services immediately; the examination committee is responsible for taking decisions. 2If de-
registration is approved, the examination shall be deemed not taken and it will be mandatory for the student to register for the next possible examination date. If an examination comprises several components, a request as outlined in sentence 1 can only be submitted for the examination.

(3) In case of illness of the student, of a child the student has custody of or of a relative in need of care, a medical certificate shall be submitted. If the student de-registers or is absent due to an illness, the medical certificate shall include the required medical results confirming that the student is not able to take the examination.

(4) It shall not be possible to assert a valid reason if the student took an examination whilst being aware of an illness or on the basis of negligent lack of knowledge of an illness. In particular, the criteria for negligent lack of knowledge are met if symptoms of health problems were not taken care of as soon as possible.

(5) Should the student not be able to take a compulsory examination for which he or she is registered due to a period of study at a university abroad, this, in particular, will be recognized as a valid reason.

(6) De-registration is ruled out if the examination result has been published, unless valid proof could not be provided earlier by the student due to reasons beyond his or her control.

(7) The student may de-register from so-called required preliminary coursework, which is coursework that needs to be completed for admission to an examination, without providing proof of a valid reason. In such cases, admission to the examination shall be ruled out for the semester in question, unless, upon request from the student, the examiner responsible allows the completion of different preliminary coursework as an alternative. The request is to be granted if, upon consideration, the significance of preliminary coursework is relative to the reasonable interests of the student. Section 22 remains unaffected.

Part 3: Master’s Examination

Section 24 – Master’s Examination, Additional Modules

(1) The master’s examination is passed if all of the required examinations for the modules in the areas have been passed. The detailed rules and regulations on the modules required to pass the master’s examination, particularly the modules available and the respective type of examination for each area, are specified in the attachment and the module catalog.

(2) To select a module in the areas named in section 3 subsection 1(1) numbers 1-4, students must register for the first attempt at the examination in that module. Students can only change a module twice and upon request if their withdrawal or absence was approved or in case they failed an examination attempt. The request must be submitted to the examination committee in due time and it must also be linked with a request to deduct the number of examination attempts made to date for the new module. The request has to be made no later than by the time of registration for the first examination in the module to which the student would like to change. If the request is granted and was submitted before the registration period for the examination in the module in question, it is mandatory for the student to register for the examination attempt in accordance with section 11 subsection 6. The approval of the request ends the examination process in the module from which the student has changed.

(3) If examinations in modules totaling the required minimum number of credits for each area outlined in section 3 subsection 1(1) are passed, and, if by completing a module, a student meets or exceeds the required 120 ECTS credits, the additional remaining completed modules are not taken into account for the successful completion of the master’s examination, or the calculation of the area grades and the final grade. Only the examinations in modules that the student took first are considered. The modules considered when determining whether the master’s examination has been passed, as outlined in sentence 1, are taken into account in the area grades. The area which corresponds to each module can be found under the “Area Overviews” in the attachment. The modules which are not considered when determining whether the master’s examination has been passed (additional modules), as outlined in sentence 1, are listed on the Transcript of Records along with the grade achieved.
Section 25 – Calculation of the Area Grade, Grading of the Master’s Examination (Final Grade)

(1) The area grade is calculated using the grades achieved in modules belonging to an area, weighted according to the number of ECTS credits allocated to the module. Additional modules are not taken into consideration when calculating area grades. If only one module is passed in area “1. Fundamentals”, the grade achieved in this module is also the grade for this area. If no module is passed in this area, then no area grade is awarded. No area grade is awarded for area “5. Master’s Thesis”.

(2) The overall grade of the master’s examination is calculated from the average of the area grades weighted in ECTS credits. Additional modules are not taken into account in the calculation of the overall grade.

(3) For the area grades in line with subsection 1(1) and the final grade, only the first decimal place shall be of importance; all other decimal places shall be eliminated without rounding up or down.

   in case of an average grade of 1.5 or better = “very good” (“sehr gut”);
   in case of an average grade from 1.6 to 2.5 = “good” (“gut”);
   in case of an average grade from 2.6 to 3.5 = “satisfactory” (“befriedigend”);
   in case of an average grade from 3.6 to 4.0 = “fair” (“ausreichend”).

(4) In case the final grade is 1.2 or better, the student graduates “with honors” (“mit Auszeichnung bestanden”).

(5) In addition to the overall grade, a relative grade according to the following system may be given in the Diploma Supplement:

   A  for the best 10%
   B  for the next 25%
   C  for the next 30%
   D  for the next 25%
   E  for the next 10%

The calculation of the relative grade is based on the previous three classes that have graduated. The chair of the examination committee decides for each class whether or not a relative grade is given. He or she may decide to take further classes into account for the calculation. The number of classes taken into consideration for the calculation of the relative grade is indicated.

(6) Students may request a Transcript of Records with a provisional average grade be drawn up prior to receiving their final grade as soon as they have completed 30 ECTS credits. The provisional average grade derives from the average of all completed and graded modules weighted according to the ECTS credits at the time of the request. Subsection 3 applies respectively.

Section 26 – Failure of the Master’s Examination, Confirmation

(1) The master's examination is failed with no option to re-sit, if

   1. a final attempt at an examination or piece of coursework, which these Examination Regulations and the respective attachment have highlighted as being required, has been failed, or
   2. an examination deadline has been exceeded unless the student is not responsible for having exceeded this time limit.

(2) In case of failure of the master's examination and upon request by the student, the Student Services issue a confirmation listing all completed modules and the respective grades as well as all modules which have not been completed. The confirmation clearly states that the failure of the degree is final.

Section 27 – Master’s Thesis

(1) After successful completion of the master's examination, the student is issued a degree certificate. This comprises:
1. the areas in section 3 subsection 1(1) numbers 2-4, and, provided that modules have been passed, the area named in section 3 subsection 1(1) number 1; areas are listed with the corresponding number of ECTS credits and the area grade (in words and figures);

2. the topic of the master’s thesis and the name of the examiner;

3. the grade awarded for the master’s thesis (in words and figures);

4. the final grade (in words and figures);

5. if applicable, the honors (“mit Auszeichnung bestanden”).

The certificate dates back to the day of completion of the last examination. If it is not possible to determine this date, the last day of classes of the respective semester shall serve as the date of completion. The certificate shall be signed by the chair or deputy chair of the examination committee.

Section 28 – Diploma

Along with the master's degree certificate, the student receives a diploma certifying the conferment of the academic degree and comprising the final grade of the degree and/or the honors (“mit Auszeichnung bestanden”) according to section 25 subsection 4. The diploma bears the date of the master's degree certificate. The diploma is signed by the dean of the school or his or her deputy and bears the seal of the university.

Part 4: Violation of the Examination Regulations

Section 29 – Cheating and other Misconduct

(1) If the student manipulates or tries to manipulate his or her examination by cheating or using unauthorized resources or by influencing the examiner or supervisor in favor of himself or herself or a third person, the respective examination or further examinations may be graded “failed” or the student may be excluded from the examination depending on the severity of violation. In especially severe cases, the student shall be excluded without the option to retake the examination. It is also considered cheating according to sentence 1 if coursework or examinations contain quotations or references from the works of others which have not been indicated as such by the student.

(2) If a student tries to have coursework and / or examinations completed abroad recognized on the basis of false information, the coursework or examinations they are to substitute are graded “failed”. In case of mandatory courses, the coursework or examinations to be substituted shall be submitted or taken on the next possible date at the University of Mannheim.

(3) A student who violates the examination regulations severely, in particular, if he or she disturbs the proper course of an examination, may be excluded from the examination by the examiner or the supervisor. In such cases, the relevant coursework or examination is graded “failed”. In severe cases, the examination committee may exclude the student from taking any further examinations.

Section 30 – Voidness of the Master's Examination

(1) In case the student has manipulated an examination by cheating and this fact is revealed after the student has received his or her master's degree certificate, the examination committee may revise the result or the respective grade retroactively and declare the examination as completely or partially failed. If the comple-
tion of the master's examination is affected by this, the examination committee may revoke the respective ECTS credits and, if necessary, declare the master's examination as failed.

(2) ¹If the requirements to be admitted to an examination were not met without the candidate's intent to disguise this fact and if this fact is revealed after the student has received his or her master's degree certificate, this defect is remedied by having passed the examination. ²If the student attained his or her admission illegitimately on purpose, the examination and consequently the degree completion may be considered “failed” (“nicht bestanden”).

(3) The person in question shall be granted the chance to comment on the issue prior to the decision.

(4) ¹Inaccurate master's degree certificates shall be recalled. ²Where applicable, new master's degree certificates shall be issued. ³Along with the inaccurate master's degree certificates, the respective diploma shall be recalled if changes to the final grade have to be made or failure of degree completion was declared. ⁴After a period of five years starting from the issuance date of the original master's degree certificate, a decision in accordance with subsection 1 or subsection 2 (2) is no longer possible.

(5) The revocation of the degree complies with the legal rules and regulations.

IV. Final Provisions

Section 31 – Commencement, Scope, Transitional Provisions

(1) These Examination Regulations become effective on 1 February 2017.

(2) ¹By way of derogation from section 5 subsection 2(3), the term of office for the first members of the examination committee, who shall be appointed once these Examination Regulations have become effective, starts on the day of their appointment; the term of office for the non-student and student members ends on 31 July 2017. ²The examination committee for the program “Business Informatics” in accordance with its examination regulations as at 7 March 2013 in the respective valid version conducts the affairs of the examination committee for this program temporarily until members are appointed according to section 5 subsection 1 of these Examination Regulations.
Attachment: Area Components

1. Fundamentals (0 to 14 ECTS credits)

<table>
<thead>
<tr>
<th>Module Name</th>
<th>Coursework (Composition and Type)</th>
<th>ECTS Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 450 Programming Course</td>
<td>Two pieces of coursework (electronic): programming exam (180 min.) and programming project</td>
<td>6</td>
</tr>
<tr>
<td>CS 460 Database Technology</td>
<td>One piece of coursework (oral or written): oral exam (30 min.) or written exam (90 min.)</td>
<td>6</td>
</tr>
<tr>
<td>Multivariate Analyses</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Tutorial Multivariate Analyses</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Datenerhebung</td>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>

2. Data Management (24 to 36 ECTS credits)

<table>
<thead>
<tr>
<th>Module Name</th>
<th>Coursework (Composition and Type)</th>
<th>ECTS Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 560 Large Scale Data Management</td>
<td>One piece of coursework (written): exam (90 min.)</td>
<td>6</td>
</tr>
<tr>
<td>IE 663 Information Retrieval and Web Search</td>
<td>Three pieces of coursework (two written, one oral): exam (90 min.), project report and presentation</td>
<td>6</td>
</tr>
<tr>
<td>IE 650 Semantic Web Technologies</td>
<td>Three pieces of coursework (two written, one oral): exam (90 min.), project report and presentation</td>
<td>6</td>
</tr>
<tr>
<td>CS 530 Datenbanksysteme II</td>
<td>One piece of coursework (written): exam (90 min.)</td>
<td>6</td>
</tr>
<tr>
<td>IE 630 Anfrageoptimierung</td>
<td>One piece of coursework (oral): oral exam (30 min.)</td>
<td>6</td>
</tr>
<tr>
<td>CS 500 Advanced Software Engineering</td>
<td>One piece of coursework (written): exam (90 min.)</td>
<td>6</td>
</tr>
<tr>
<td>CS 600 Model-driven Development</td>
<td>One piece of coursework (written): exam (90 min.)</td>
<td>6</td>
</tr>
<tr>
<td>CS 550 Algorithmik</td>
<td>One piece of coursework (written): exam (90 min.)</td>
<td>6</td>
</tr>
<tr>
<td>IE 670 Web Data Integration</td>
<td>Three pieces of coursework (two written, one oral): exam (90 min.), project report and presentation</td>
<td>6</td>
</tr>
</tbody>
</table>

3. Data Analytics Methods (30 to 54 ECTS credits),
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<table>
<thead>
<tr>
<th>Module Name</th>
<th>Coursework (Composition and Type)</th>
<th>ECTS Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IE 500 Data Mining I</td>
<td>Three pieces of coursework (two written, one oral): exam (90 min.), project report and presentation</td>
<td>6</td>
</tr>
<tr>
<td>IE 672 Data Mining II</td>
<td>Three pieces of coursework (two written, one oral): exam (90 min.), project report and presentation</td>
<td>6</td>
</tr>
<tr>
<td>IE 673 Data Mining and Matrices</td>
<td>One piece of coursework (oral or written): oral exam (30 min.) or written exam (90 min.)</td>
<td>6</td>
</tr>
<tr>
<td>IE 674 Hot Topics in Machine Learning</td>
<td>One piece of coursework (oral or written): oral exam (30 min.) or written exam (90 min.)</td>
<td>6</td>
</tr>
<tr>
<td>IE 671 Web Mining</td>
<td>Three pieces of coursework (two written, one oral): exam (90 min.), project report and presentation</td>
<td>6</td>
</tr>
<tr>
<td>IE 661 Text Analytics</td>
<td>One piece of coursework (written): exam (90 min.)</td>
<td>6</td>
</tr>
<tr>
<td>MAC 502 Computational Finance</td>
<td>One piece of coursework (oral): oral exam (30 min.)</td>
<td>5</td>
</tr>
<tr>
<td>MAC 505 Mathematische Visualisierung</td>
<td>One piece of coursework (oral or written): oral exam (30 min.) or written exam (90 min.)</td>
<td>8</td>
</tr>
<tr>
<td>MAC 504 Mathematics and Information</td>
<td>One piece of coursework (oral or written): oral exam (30 min.) or written exam (90 min.)</td>
<td>8</td>
</tr>
<tr>
<td>MAC 508 Algebraische Statistik</td>
<td>One piece of coursework (oral or written): oral exam (30 min.) or written exam (90 min.)</td>
<td>8</td>
</tr>
<tr>
<td>MAC 404 Optimization</td>
<td>One piece of coursework (oral or written): oral exam (30 min.) or written exam (90 min.)</td>
<td>8</td>
</tr>
<tr>
<td>IE 560 Decision Support</td>
<td>Two pieces of coursework (written): exams (45 min. each)</td>
<td>6</td>
</tr>
<tr>
<td>MAC 507 Non-linear Optimization</td>
<td>One piece of coursework (oral or written): oral exam (30 min.) or written exam (90 min.)</td>
<td>6</td>
</tr>
<tr>
<td>Cross Sectional Data Analysis: Lecture</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Cross Sectional Data Analysis: Exercise Course</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Quantitative Methods: Lecture</td>
<td>1</td>
<td>6</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Module Name</th>
<th>Coursework (Composition and Type)</th>
<th>ECTS Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Quantitative Methods: Tutorial</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Longitudinal Data Analysis: Lecture</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Longitudinal Data Analysis: Exercise Course</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Research Design: Lecture</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Research Design: Exercise Course</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

### 4. Projects and Seminars (12 to 16 ECTS credits),

The examination in either the “Team Project” module or the “Individual Project” module, as well as the examination in one of the modules listed are to be passed in this area.

<table>
<thead>
<tr>
<th>Module Name</th>
<th>Coursework (Composition and Type)</th>
<th>ECTS Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team Project</td>
<td>Three pieces of coursework (one written, two oral): project report, presentation (15-30 min.), and participation</td>
<td>12</td>
</tr>
<tr>
<td>or Individual Project</td>
<td>Two pieces of coursework (one written, one oral): Project report and presentation (15-30 min.)</td>
<td>8</td>
</tr>
<tr>
<td>CS 704 Master Seminar Artificial Intelligence</td>
<td>Three pieces of coursework (one written, two oral): term paper, presentation and participation</td>
<td>4</td>
</tr>
<tr>
<td>CS 705 Datenbankseminar</td>
<td>Three pieces of coursework (one written, two oral): term paper, presentation and participation</td>
<td>4</td>
</tr>
<tr>
<td>CS 707 Seminar Data and Web Science</td>
<td>Three pieces of coursework (one written, two oral): term paper, presentation and participation</td>
<td>4</td>
</tr>
<tr>
<td>CS 708 Seminar Software Engineering</td>
<td>Two pieces of coursework (one written, one oral): term paper and presentation</td>
<td>4</td>
</tr>
<tr>
<td>CS 709 Seminar Prof. Ponzetto</td>
<td>Three pieces of coursework (one written, two oral): term paper, presentation and participation</td>
<td>4</td>
</tr>
</tbody>
</table>

### 5. Master's Thesis (30 ECTS credits).

<table>
<thead>
<tr>
<th>Module Name</th>
<th>Coursework (Composition and Type)</th>
<th>ECTS Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master's Thesis</td>
<td>One piece of coursework (written): master’s thesis</td>
<td>30</td>
</tr>
</tbody>
</table>
1The coursework which belongs to this module is stipulated in the subject-specific attachment, “Political Science”, which accompanies the current version of the joint Examination Regulations for the Master of Arts (M.A.) in Political Science and the Master of Arts (M.A.) in Sociology at the School of Social Sciences at the University of Mannheim in combination with the current version of the module catalog for this program.

2The coursework which belongs to this module is stipulated in the current version of the Examination Regulations for the Bachelor of Arts (B.A.) in Political Science at the School of Social Sciences at the University of Mannheim in combination with the current version of the module catalog for this program.

3The coursework which belongs to this module is stipulated in the subject-specific attachment, “Sociology”, which accompanies the current version of the joint Examination Regulations for the Master of Arts (M.A.) in Political Science and the Master of Arts (M.A.) in Sociology at the School of Social Sciences at the University of Mannheim in combination with the current version of the module catalog for this program.