

Examination regulations for the Master course in Applied Economics and Data Science at the University of Oldenburg

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- Unofficial Version -

*This is an unofficial English translation, based on the German
"Prüfungsordnung für den Masterstudiengang „Applied Economics and Data Science“
an der Carl von Ossietzky Universität Oldenburg"
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The School Council of School II - Computing Science, Business Administration, Economics and Law adopted the following amendment to the examination regulations for the Master's degree programme in Applied Economics and Data Science (M.Sc.) at the University of Oldenburg in the version of 06.08.2021 on 11.05.2022. The amendment was approved by the Presidential Board on 11.07.2022 in accordance with Section 37.1.5b of the Lower Saxony Higher Education Act (NHG).

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Section 1

Learning outcomes

- (1) On this degree programme, students build upon their existing knowledge of economics and computing science and develop advanced skills in both areas. The interdisciplinary nature of these subjects leads to an economically grounded, empirically-oriented overall qualification.
- (2) Throughout the degree programme, students learn how to work on their own in both practical and academic settings. They also learn how to acquire scientific knowledge of the above-mentioned disciplines independently and in cooperation with others. By the end of the programme, they are able to recognise the significance of that knowledge for society and professional practice. By selecting suitable study material, students develop a critical understanding of scientific methods. They acquire the necessary knowledge and skills to be able to carry out cross-disciplinary and problem-solving activities and research in these fields.
- (3) Students learn to analyse complex economic problems related to market regulations using empirical and analytical methods and theoretical models in order to understand, evaluate and design state intervention in markets.

Section 2

University degree

After successfully completing all the required examinations, the School of Computing Science, Economics and Law (School II) of the University of Oldenburg awards the degree of Master of Science (M.Sc.). The University of Oldenburg also issues a Master's degree certificate (Appendix 2), which is also issued in English (Appendix 2a).

Section 3

Purpose and scope of the Master's examination

- (1) The Master's degree is an advanced qualification based on a previous, successfully completed Bachelor's degree in economics or another relevant subject, and qualifies students for professional activity.
The purpose of the module examinations and the Master's thesis are to establish whether the student has gained sufficient specialised knowledge to enter into professional practice, has a good grasp of subject-related contexts and possesses the ability to successfully apply academic knowledge in practice and work in an academic manner. The Master's degree programmes are concluded with the Master of Science degree examinations, which qualify graduates for professional activity in Applied Economics and Data Science. The examination requirements ensure a high standard of education in view of the standard period of study as well as the current state of academic knowledge and the requirements of professional practice. By successfully completing these examinations, graduates demonstrate that they understand the economic interrelationships of state market regulation, that they are able to apply scientific methods and knowledge and that they have acquired the specialist knowledge required for the transition to professional practice or further academic studies.

- (2) The examinations are designed in such a way that they serve to assess whether the student has achieved the learning outcomes stipulated in Section 1.

Section 4

Duration and structure of the degree programme, part-time study

- (1) A Master's degree programme must be completed in four semesters, i.e. two academic years (standard period of study).
- (2) The degree programme has a workload of 120 credit points according to the European Credit Transfer and Accumulation System (ECTS). Six credit points are awarded for each module successfully

completed with an examination; 30 credit points are awarded for the final Master's module. Twenty-four credit points are allocated for writing the Master's thesis and six for the associated colloquium. The degree programme is structured in such a way that, as a rule, 30 credits can be obtained per semester, with one credit being the equivalent of an average student workload of 30 hours. Students can apply to follow the degree programme in a part-time variant in accordance with the regulations governing part-time study at the University of Oldenburg. In the case of part-time study, the standard period of study is extended accordingly.

(3) The content of the degree programme is taught in 15 compulsory and elective modules, as listed in the overview of modules in Appendix 1. The economic foundations of market regulation are covered in the two compulsory modules Advanced Microeconomics and Industrial Organisation. Students have the opportunity to further deepen their knowledge of economics in the Economics track, in which they have to choose three additional economics modules. As part of the research-oriented compulsory module Applied Economics, students are then expected to apply and test the empirical knowledge they have acquired by carrying out their own research project. In the compulsory module "Econometrics of Policy Evaluation" and the two elective modules in Empirical Methods, students learn advanced methods in the areas of econometrics, statistics and simulation. In the three elective modules in Data Science, students are taught the latest methods of data management, machine learning and deep learning. They learn how to use these techniques to perform economic analyses. The Specialisation elective modules give students the opportunity to develop their own individual specialisation profile. The relevant options are listed in Appendix 1, Section 4.

Section 5

Examination components

(1) The following types of examinations may be used for module examinations:

Seminar paper (5.3)

Formal presentation with written elaboration and discussion (5.4)

Written examination (5.5)

Oral examination (5.6)

Portfolio (5.7)

project thesis (5.8)

(2) Examinations can also be completed in the form of group work, as specified by the person responsible for the module. In such cases, the contribution of each individual group member to be assessed must meet the requirements set for the examination and be clearly recognisable, defined and assessable as an individual examination, e.g. based on chapters, page numbers or other objective criteria.

(3) A seminar paper is an in-depth written assignment, which students complete on their own, that is either of an interdisciplinary nature or specific to their degree programme, which includes and evaluates appropriate literature. The text should be between 30,000 and 45,000 characters long, including spaces (approx. 15–20 pages). Students are given the opportunity to come up with their own suggestions for the assignment.

(4) A formal presentation consists of an independent, written analysis of a scientific problem from the context of the course unit, including and evaluating appropriate literature, and an oral presentation (max. 45 minutes) and corresponding analytical discussion.

(5) In a written examination, students must demonstrate that they can identify a problem and find a solution in a limited period of time and while under supervision, using the resources provided and in accordance with the current methods applicable for the subject area. The duration of a written

examination is usually between 60 minutes and 120 minutes. A written examination can also be completed as two partial exams, while adhering to the above-mentioned total duration.

(6) An oral examination is designed in such a way that students can demonstrate their ability to grasp economic problems from the content of the course unit, to develop scientifically relevant and practical solutions and to explain and substantiate these solutions in an understandable way. The oral examination takes place as an individual examination or as a group examination with up to three students in front of an examiner and a co-examiner. The examiner must consult the co-examiner before deciding the final grade. Oral examinations last between 15 and 60 minutes per student. The main subjects of the examination, the assessment/grading of the examination performance and the considerations on which the assessment is based must be recorded in a report. This must be signed by the examiners and co-examiners.

(7) A portfolio comprises up to five interrelated assignments (e.g. a report, handout, review, learning diary, short presentation, exercises, short written test) on the subject area of a module. Taken together, the portfolio assignments may not exceed the standard scope of examination components pursuant to Section 5 paragraphs 3 to 6. Portfolios are assessed as a whole.

(8) A project report comprises the elaboration of a larger partial contribution to an overall project of all participants of the module based on the discussion in the module events, which serves, for example, the publication of the essential module results (scientific report).

The performance includes up to three further partial performances (e.g. protocol, thesis paper, review, learning diary), including a presentation. Electronic publication of the results can be made possible as well.

Section 6 Performance of examinations

(1) Students must complete throughout the course of studies at least three different types of module examinations in accordance with Section 5.

(2) Students can apply to take module examinations in writing or electronically. Such requests must be made in good time before the date on which the examination is to take place. Students must register for written examinations at least one week before the examination is scheduled to take place. Students may withdraw from a written examination without stating reasons up to one week before the date on which the examination is scheduled to take place. After that, withdrawal is only possible if valid reasons are given and accepted.

Section 7 Support measures, protective provisions

(1) If the student demonstrates that they are unable to take examinations in the prescribed form, either entirely or in part (for example due to prolonged illness or permanent physical circumstances, e.g. a disability), the student, upon application, may be granted appropriate measures to compensate for the disadvantage.

In particular, such measures may include a change in the external examination conditions, an extension of the processing time, the performance of the examination in another equivalent form, as well as the provision of technical aids.

(2) If the student demonstrates that they are unable to take examinations fully or partially in the planned manner, form or time due to caring for close relatives or looking after their own child, the examination committee may grant appropriate measures to compensate for disadvantages upon request.

The protective provisions of the Maternity Protection Act and the Federal Parental Allowance and Parental Leave Act remain unaffected.

(3) The student may be required to submit a medical certificate to substantiate the claim in accordance

Section 8

Resitting examination components, free attempt

- (1) Failed module examinations can be retaken twice. At the latest, the first resit takes place in the semester following the semester in which the examination was first offered. The free-attempt regulations do not apply.
- (2) Within the standard period of study, examinations taken and already passed on the first possible date in two modules of the entire degree programme can, upon request, be retaken once within one year as a free attempt to improve grades. Each time, the best result will count. If no date is offered in that year, the next possible date will apply. Students are not entitled to a free attempt to improve their grade in the case of resits.

Section 9

Registering for and admission to the Master's thesis

- (1) Students usually register for the Master's thesis in the fourth semester.
- (2) For admission to the Master's thesis, students must be enrolled in the Applied Economics and Data Science Master's programme at the University of Oldenburg and have proved that they have the necessary knowledge to undertake the Master's thesis by successfully completing modules counting for at least 2 ECTS.
- (3) Students must submit the following documents when applying for admission to the Master's thesis:
 - a proposal for the two examiners
 - a proposal submitted by one of the proposed examiners regarding the topic of the thesis
 - a declaration as to whether a Master's examination or parts of such an examination or another examination in the same subject area at a university or equivalent institution for higher education in Germany or another European country has been definitively failed or whether the student is currently involved in an examination procedure.
- (4) Admission will be denied if
 1. the admission requirements are not met
 2. the documents provided are incomplete
 3. the Master's examination or another examination in one of the chosen subjects has been definitively failed within the same degree programme at another university or equivalent institution for higher education in Germany or another European country

Section 10

Final Master's module

- (1) The Master's thesis must show that the student is capable of working independently on a scientific problem using practical and scientific methods. The topic of the Master's thesis must allow the student to demonstrate their in-depth knowledge of economics as well as their ability to carry out independent, empirical work. It must also allow students to prove that they have mastered scientific methods. The Master's thesis should not exceed 200,000 characters, including spaces (approx. 80 pages without appendices).
- (2) The Master's thesis is accompanied by a research colloquium, the purpose of which is to deepen the student's scientific methodological skills. The research colloquium is a compulsory component, but it is not graded; it is assessed as "passed" or "failed".
- (3) Students have five months in which to complete the Master's thesis. A topic can only be returned once, and only within the first four weeks. Students may submit a well-founded request to the Examining Board to extend the period available for completing the Master's thesis by up to four weeks.

(4) The topic of the Master's thesis can be chosen and supervised by authorised examiners in accordance with Section 13. The first examiner then sets the topic of the Master's thesis after consulting with the student. At least one examiner must be a professor or university lecturer or an private lecturer in the relevant subject.

(5) The Master's thesis must be written in English. Any exceptions are decided upon by the Examining Board at the request of the student and with the consent of the supervisor of the thesis.

(6) The Master's thesis must be submitted to the Examinations Office in paper and electronic form by the deadline. The time of submission must be recorded. The electronic version of the thesis is used to perform an electronic plagiarism scan. If the deadline is missed, the thesis will be assessed as "insufficient" by the Chair of the Examining Board, taking into account Section 16.

(7) The Master's thesis must be assessed by the appointed examiners within six weeks of submission. If an examiner is unable to assess the examination, the Examining Board will appoint a new examiner. The student may submit a proposal to this effect.

(8) If the difference between the grades awarded by two examiners is not more than 2.0, the arithmetic mean is taken to calculate the grade. In the event of major discrepancies or if, in the case of a grade difference of 1.7, the thesis has been assessed as "insufficient", the Examining Board shall appoint an additional examiner. The grade is then determined by calculating the average of the two best assessments. In this case, the Master's thesis is only regarded as passed if at least two examiners have graded the thesis as at least "sufficient".

(9) If a Master's thesis counts or is assessed as a fail, students can resubmit the thesis once with a new topic. A second resubmission is not possible. If a student has to resit the Master's thesis, a Master's thesis topic may only be changed if the original topic for the first attempt was not changed.

Section 11 Results of the Master's examination

Students pass the Master's examination if they have obtained 120 credit points and completed all module examinations in their chosen subjects as well as the final Master's module.

Section 12 Examining Board, Examinations Office

(1) An Examining Board is formed that organises the examinations and undertakes the tasks specified in these examination regulations. The Examining Board decides on all matters relating to examinations, unless otherwise stipulated in these examination regulations, and in particular ensures that the provisions of the Lower Saxony Higher Education Act (NHG) and these examination regulations are complied with. The Examining Board is administratively supported by the Examinations Office in fulfilling its tasks; the Examinations Office shall in particular keep the examination files.

(2) The members of the Examining Board and their deputies are appointed by the School Council of School II - Computing Science, Business Administration, Economics and Law.

(3) The Examining Board comprises:

- three professors or university lecturers,
- a member of academic staff involved in teaching,
- and a student of this degree programme

as well as one deputy for each of the above.

An employee of the Examinations Office shall also attend the meetings of the Examining Board as an advisory member.

A subject representative from any subject in question may be consulted in an advisory capacity on subject-related issues. The subject representative is a person to be designated by the Examining Board who belongs to the respective subject, is professionally competent and has a qualification that is at least equal or equivalent to the qualification established by the examination (Section 15.4 Higher

Education Framework Act). In appeals procedures pursuant to Section 22, it is compulsory to call upon a subject representative, unless a member of the Examining Board with voting rights already has the respective qualification of a subject representative.

In recognition or credit transfer procedures as defined in Section 8, the Examining Board may delegate decision-making powers, in individual cases or for the duration of its term of office, to a subject representative from the subject in which the recognition or credit transfer is to be decided upon in terms of content (subject representative for questions of recognition and credit transfer).

(4) Members (and their deputies) of the Examining Board are appointed for a period of two years, apart from student members (and their deputies) who are appointed for one year. The term begins on 1 April of each year.

(5) The professors/university lecturers who are members of the Examining Board shall appoint the Chair, and the professors/university lecturers or academic staff who are members of the Examining Board shall appoint the Deputy Chair.

(6) The Examining Board may transfer powers, which can be revoked at any time, to the Chair or Deputy Chair.

(7) Minutes are taken at the meetings of the Examining Board. These minutes record the main topics of discussion and the decisions taken by the Examining Board.

(8) The Examining Board takes decisions by a majority of valid votes cast. Abstentions do not count as votes cast. In the event of a tied vote, the Chair has the casting vote. Student members only have an advisory role in decisions regarding the assessment or recognition of examinations or the accreditation of skills acquired outside higher education. The Examining Board may take decisions if the majority of its members, including the Chair or Deputy Chair, are present. At least two of the members present must be professors or university lecturers.

(9) The members of the Examining Board have the right to visit examinations as an observer.

(10) Examining Board meetings are not public. Members of the Examining Board and their representatives are bound to secrecy concerning their office. Insofar as they are not in public service, they are obliged to secrecy by the Chair.

Section 13 Examiners and co-examiners

(1) The module examinations are assessed by subject specialists who are qualified and competent in the subject covered in the relevant module, as well as members of the teaching staff at this or another university. Professors, junior professors, academic and artistic staff, teaching staff appointed to carry out special tasks, guest lecturers and lecturers can be appointed as examiners. Examinations may be conducted by retired professors or professors who have dispensation. Individuals with experience in professional practice and education may also be appointed as examiners.

(2) Examiners are appointed by the responsible School Council when the module is approved.

(3) Examiners must have a qualification that is at least equal or equivalent to the qualification established by the examination. The Examining Board ensures that the examiners are qualified to teach the relevant module.

(4) As a rule, module examinations are assessed by one examiner; the Master's thesis is assessed by two examiners. Co-examiners may be invited to attend oral examinations, but they do not have the right to assess the examination or ask questions. Co-examiners must have a qualification that is at least equal or equivalent to the qualification established by the examination. Students may only be appointed as a co-examiner if they are employed by the university.

Section 14

Recognition of examinations and accreditation of skills acquired outside higher education

- (1) The competent Examining Board shall decide on the recognition of examinations or accreditation of skills acquired outside higher education at the request of the student. The request must be made to the Examinations Office. Section 12.3.6 shall remain unaffected.
- (2) Examinations in the same or a related degree programme at a university or equivalent institution for higher education in Germany or in the European Higher Education Area will be recognised without a special equivalence assessment.
- (3) Examinations in another degree programme shall be recognised provided there are no substantial differences in terms of the skills acquired. The overall situation must be taken into account in deciding whether modules are to be recognised. The level, scope, quality, profile and learning results must be assessed as part of the recognition. Fundamental differences must be verified by the university.
- (4) Knowledge, skills and competencies acquired outside university degree programmes can be accredited provided that they are adequately demonstrated and are equivalent in terms of content and level to the skills objectives of the study modules against which they are to be credited. It is also possible to partially accredit further and advanced qualifications based on quality-assured equivalence assessments. Up to 50% of the credits to be acquired may be awarded in this manner.
If it is not possible to sufficiently determine the equivalence of the knowledge, skills and/or competences with regard to the relevant competence objectives on the basis of the evidence submitted, a reasonable review (typically 15 to 20 minutes) of the knowledge, skills and/or competences to be accredited can be carried out by a module coordinator to allow the examination committee to reach a decision with reference to the documents submitted. The review can relate to several modules if the accreditation of several content-related modules has been requested.
- (5) For recognised or accredited examinations, the grades are adopted, provided that the grade systems are comparable. Grades from an incomparable grade system are converted according to the Bavarian formula. If it is not possible to convert examination results achieved elsewhere, the examination will be recognised or credited with a "pass", notwithstanding Section 16. Recognised or accredited examinations will be included in the academic transcript. Additional factual and legal information can be obtained from the information portal for the recognition of foreign educational attainments (anabin). Deviating provisions based on agreements with foreign universities shall remain unaffected.

Section 15

Absence, withdrawal, fraud, infringement of regulations

- (1) An examination shall be deemed failed if the student misses a binding examination date without a valid reason or if the student aborts an examination that they have started without a valid reason. The same shall apply if a written examination is not taken within the specified period available.
- (2) The Examining Board must be notified without delay of any valid reasons for withdrawal or absence, in writing and together with satisfactory evidence. Otherwise, the examination component concerned will be assessed as a fail. De-registration and a leave of absence are not considered valid reasons. In the event of illness, a doctor's note must be submitted; in case of uncertainty, an official medical certificate must be submitted. If the reason or reasons given are accepted, a new deadline will be set. As a rule, this will be the next regular examination date. In this case, examination results already obtained will remain valid.
- (3) If a student attempts to influence the result of their performance in a module examination by means of fraud or by using unauthorised means, the examination will be graded as a fail. Individuals who have violated the examination regulations may be barred from continuing the examination component concerned. In that case, the examination component in question will be graded as a fail. Before a decision is taken by the Examining Board in accordance with sentences 1 and 2, the student will have the opportunity to be heard. The student will continue the examination until the Examining Board has taken a decision, unless the invigilator decides that temporary exclusion of the student is necessary for the proper conduct of the examination. The Examining Board may decide that the student may retake the

module in which the fraud or attempted fraud took place; however, the number of resits may be reduced in deviation from Section 8 of these regulations. In serious cases of fraud, the Examining Board may bar the student from the examination procedure. In repeated cases of fraud, the student will, as a rule, be barred from continuing the examination procedure. In such instances, students will automatically be awarded a fail for the programme's Master's examination.

Section 16 Assessment of examinations and calculation of the grade

(1) Each module examination, each assessed component of a module and the Master's thesis are assessed and, as a rule, graded in accordance with Section 16.4.

(2) Students pass a module examination or assessed component of a module if they attain at least a "sufficient". If a module examination consists of partial examinations, then the module examination is deemed to have been passed if all of the required partial examinations have been passed. Examiners must complete their assessment and communicate the grades they award to the Examinations Office within four weeks.

(3) If an examination component is not graded, it must be assessed as a pass or a fail.

(4) The following scale must be used for grading:

1 = very good	= an outstanding performance
2 = good	= an above-average performance
3 = satisfactory	= an average performance
4 = sufficient	= the requirements have been met but with a number of shortcomings
5 = insufficient	= a performance that does not meet the requirements due to notable shortcomings

For a differentiated assessment, grades may be rounded up or down by 0.3 (the grades 0.7, 4.3, 4.7 and 5.3 are not permitted).

(5) The examination is considered to have been passed if at least the grade "sufficient" has been awarded by each examiner. If the examination is assessed by several examiners, the grade is calculated based on the arithmetic average of the grades awarded by the individual examiners. Only the first two decimal places are taken into account; other places are deleted without being rounded up or down. If a module examination consists of multiple partial examinations, the overall module grade is the weighted arithmetic average of grades for the partial examinations. If there are no specifications regarding the weighting of partial examinations, the partial examinations will be weighted in equal parts. If requested by the student, an explanation must be given of the assessment of the examination, with reference to the considerations on which the assessment is based. Justification for the grade must be included in the examination records along with the thesis.

(6) The overall grade for all modules is determined as follows: Module grades are included in the calculation of the overall grade with one digit after the decimal point. The grade for the module examination is multiplied by the corresponding credit points. The products of all grades multiplied by credit points are added together. The sum is divided by the total number of credit points obtained on the basis of graded examinations. Non-graded examinations are not taken into account. When calculating the overall grade, only the first two decimal places after the decimal point are taken into account; other places are deleted without being rounded up or down. Overall grades have two digits after the decimal point.

(7) The overall grades for the Master's examination are assigned the following designations:

for an average of up to 1.50	sehr gut	very good
for an average of over 1.50 and up to 2.50	gut	good
for an average of over 2.50 and up to 3.50	befriedigend	satisfactory
for an average of over 3.50 and up to 4.00	ausreichend	sufficient
for an average of over 4.00	nicht ausreichend	insufficient

(8) The overall grade is supplemented by an ECTS grade; the ECTS grade demonstrates how a student has performed in relation to other students in the same degree programme. Successful students receive the following ECTS grades:

- A the top 10%
- B the next 25%
- C the next 30%
- D the next 25%
- E the next 10%

The relevant grades awarded during the previous six semesters (cohort) before the date of the degree examination form the basis for the ECTS grade. An ECTS grade is issued if there are at least 30 graduates in the cohort.

Section 17 **Good academic practice**

When submitting written work, including the Master's thesis, students must give written assurances that they produced and designed the work independently without using any sources and aids other than those stated, and that they worked in accordance with the general principles of academic work and publications as laid down in the regulations for safeguarding good academic practice at the University of Oldenburg. Written examinations are exempt from this rule.

Section 18 **Transcript, Master's degree certificate, diploma supplement and confirmation**

(1) A transcript (Appendix 3) must be issued as soon as the student has successfully completed the Master's examination; this transcript can also be issued in English on request (Appendix 3a).

(2) The transcript for the Master's examination includes the topic and the grade awarded for the thesis, the grades achieved for module examinations taken as part of the degree programme and the overall grade for the Master's examination, including the ECTS grade.

(3) In addition to the transcript, the student is also awarded a Master's degree certificate. The transcript and certificate bear the date of the last examination passed. The degree awarded is stated on the certificate. In addition, a Diploma Supplement shall be provided.

(4) If a Master's programme is definitively failed, the Chair of the Examining Board will issue a document to this effect.

(5) If a student leaves the university or switches to a different degree programme, a certificate will be provided that shows the examination components passed and the grades and credits obtained. In the case of para. 4, a certificate will be issued stating that the master's examination in this degree programme has been definitively failed.

Section 19 **Additional examinations**

Students may take examinations for modules other than those required for the Master's degree programme (additional examinations). Upon request, the results of the additional examinations will be included in the transcript, but they will not be taken into account when calculating the final overall grade.

Section 20

Invalidity of the Master's examination

- (1) If a student has committed fraud during an examination and this does not become known until after a transcript has been issued, the Examining Board may adjust the grades retroactively for the examinations concerned and declare the examination totally or partly failed.
- (2) If the prerequisites for admission to an examination were not fulfilled without the student attempting to deceive, and if this fact only emerges after the transcript has been issued, this shortcoming will be corrected by passing the examination. If the student gained admission through intentionally deceitful means, the examination may be declared "insufficient" and the student will then fail the Master's examination.
- (3) The student will have the opportunity to make a statement to the Examining Board before a decision is taken.
- (4) The incorrect examination certificate will be revoked and replaced by a correct transcript or certificate. If an incorrect examination certificate is to be revoked, the Master's degree certificate will also be revoked if the examination is graded as a fail on the grounds of fraud.

Section 21

Access to examination records

On request, after completing each examination component that forms part of the degree programme, a student is entitled to view the written examination papers, the examiner's comments and the examination records. Such a request must be made to the Examining Board within a year of the examination certificate being awarded, or of the notification that the student has failed the examination. The Examining Board will determine the place and time of the student's access to their records. If a student is offered a date to view a written examination, this should be given priority. In this case, the submission of a request is not required.

Section 22

Appeal procedure

- (1) An appeal can be made against a decision based on the assessment of an examination component (assessment decision) within one month of notification of the corresponding examination decision according to Section 68 ff. of the Administrative Procedures Code (VwGO).
- (2) The Examining Board will make a decision on the appeal. Before taking a decision, the Examining Board will inform the examiner of the appeal so that they can review the grading. If the examiner changes the grade as a result of the appeal, the Examining Board will uphold the appeal. Otherwise, the Examining Board will review the assessment decision on the basis of the examiner's opinion, in particular to see whether
 1. the examination was conducted in a proper manner,
 2. the grading was based on incorrect information,
 1. general marking principles were adhered to
 2. an acceptable solution substantiated by consistent and sound arguments was judged to be wrong, or whether
 3. the examiner was influenced by irrelevant considerations.

The same procedure applies if an appeal is lodged against an assessment by more than one examiner.

- (3) The competent Examining Board may appoint a reviewer to carry out the review in accordance with para. 2 sentence 4. The reviewer must have a qualification that is at least equal or equivalent to the qualification established by the examination.
- (4) The Examining Board shall appoint another person authorised to conduct examinations pursuant to Section 13 and not previously involved in the assessment of this examination to reassess the examination component if

- the competent Examining Board
 - finds a breach according to para. 2 sentence 4
 - and
 - has not already upheld the appeal at this stage of the proceedings
 - and
 - the examiner does not change their assessment decision accordingly.

If the type of examination does not allow for a reassessment, the examination shall be retaken.

(5) An appeals procedure cannot lead to a lowering of the examination grade.

Appendix 1

Modules for the Master's degree programme in Applied Economics and Data Science

(1) Economics modules

Module name/code	Module type	Type and number of classes/lectures	CP	Type and number of module examinations
wir874 Advanced Microeconomics	Compulsory	1 lecture 1 exercise	6	1 seminar paper or 1 formal presentation or 1 written examination or 2 partial written examinations or 1 oral examination or 1 portfolio or 1 project report
Wir895 Industrial Organization	Compulsory	1 lecture 1 exercise	6	1 seminar paper or 1 formal presentation or 1 written examination or 1 oral examination or 1 portfolio or 1 project report
wir873 Applied Economics	Compulsory	1 lecture 1 seminar	6	1 seminar paper or 1 formal presentation or 1 written examination or 1 oral examination or 1 portfolio or 1 project report
wir889 Applied Environmental Economics	Elective	2 lectures	6	1 seminar paper or 1 formal presentation or 1 written examination or 1 oral examination or 1 portfolio or 1 project report
wir893 Development Economics	Elective	1 lecture 1 seminar	6	1 seminar paper or 1 formal presentation or 1 written examination or 1 oral examination or 1 portfolio or 1 project report
wir821 International Trade, Production and Change	Elective	1 lecture 1 seminar	6	1 seminar paper or 1 formal presentation or 1 written examination or 1 oral examination or 1 portfolio or 1 project report
wir823 International Finance and Exchange Rate Economics	Elective	1 lecture 1 seminar	6	1 seminar paper or 1 formal presentation or 1 written examination or 1 oral examination or 1 portfolio or 1 project report
wir922 Topics in Industrial Organization	Elective	1 lecture 1 seminar	6	1 seminar paper or 1 formal presentation or 1 written examination or 1 oral examination or 1 portfolio or 1 project report

wir901 Environmental Economics	Elective	1 lecture 1 exercise	6	1 seminar paper or 1 formal presentation or 1 written examination or 1 oral examination or 1 portfolio or 1 project report
wir890 Climate Economics	Elective	1 lecture 1 seminar	6	1 seminar paper or 1 formal presentation or 1 written examination or 1 oral examination or 1 portfolio or 1 project report
wir878 Public Economics and Market Design	Elective	1 lecture 1 seminar	6	1 seminar paper or 1 formal presentation or 1 written examination or 1 oral examination or 1 portfolio or 1 project report
wir876 Topics in Economic Research	Elective	Two courses from the follow- ing course types: lecture, exercises, semi- nar, tutorial, practical course	6	1 seminar paper or 1 formal presentation or 1 written examination or 1 oral examination or 1 portfolio or 1 project report
Total			36	

(2) Empirical Methods modules

Module name/code	Module type	Type and number of classes/lectures	CP	Type and number of module examinations
wir894 Econometrics of Policy Evaluation	Com- pul- sory	2 lectures	6	1 seminar paper or 1 formal presentation or 1 written examination or 1 oral examination or 1 portfolio or 1 project report
wir875 Forecasting Methods	Elec- tive	1 lecture 1 exercise	6	1 seminar paper or 1 formal presentation or 1 written examination or 1 oral examination or 1 portfolio or 1 project report
wir892 Computational Economics	Elec- tive	1 lecture 1 seminar	6	1 seminar paper or 1 formal presentation or 1 written examination or 1 oral examination or 1 portfolio or 1 project report
wir897 Spatial Econometrics	Elec- tive	1 lecture 1 seminar	6	1 seminar paper or 1 formal presentation or 1 written examination or 1 oral examination or 1 portfolio or 1 project report
wir888 Applied Econometrics Using GIS Tech- niques	Elec- tive	1 lecture 1 seminar	6	1 seminar paper or 1 formal presentation or 1 written examination or

				1 oral examination or 1 portfolio or 1 project report
wir887 Advanced Econometrics	Elective	1 lecture 1 seminar	6	1 seminar paper or 1 formal presentation or 1 written examination or 1 oral examination or 1 portfolio or 1 project report
wir891 Complex Data Analysis	Elective	1 lecture 1 seminar	6	1 seminar paper or 1 formal presentation or 1 written examination or 1 oral examination or 1 portfolio or 1 project report
Total			18	

(3) Data Science modules

Module name/code	Module type	Type and number of classes/lectures	CP	Type and number of module examinations
inf604 Business Intelligence I	Elective	Classes/lectures according to the relevant information in the examination regulations for Master's degree programmes offered by the Department of Computing Science, Appendix 2	6	Examination components according to the relevant information in the examination regulations for Master's degree programmes offered by the Department of Computing Science, Appendix 2
inf607 Business Intelligence II	Elective	Classes/lectures according to the relevant information in the examination regulations for Master's degree programmes offered by the Department of Computing Science, Appendix 2	6	Examination components according to the relevant information in the examination regulations for Master's degree programmes offered by the Department of Computing Science, Appendix 2
inf535 Computational Intelligence I	Elective	Classes/lectures according to the relevant information in the examination regulations for Master's degree programmes offered by the Department of Computing Science, Appendix 2	6	Examination components according to the relevant information in the examination regulations for Master's degree programmes offered by the Department of Computing Science, Appendix 2
inf536 Computational Intelligence II	Elective	Classes/lectures according to the	6	Examination components according to the relevant

		relevant information in the examination regulations for Master's degree programmes offered by the Department of Computing Science, Appendix 2		information in the examination regulations for Master's degree programmes offered by the Department of Computing Science, Appendix 2
inf980 Introduction to Computer Science for Natural Science Students	Elective	Classes/lectures according to the relevant information in the BPO regulations, Appendix 3a area of specialisation	6	Examination components according to the relevant information in the examination regulations for Master's degree programmes offered by the Department of Computing Science, Appendix 2
inf501 Environmental Information Systems	Elective	Classes/lectures according to the relevant information in the examination regulations for Master's degree programmes offered by the Department of Computing Science, Appendix 2	6	Examination components according to the relevant information in the examination regulations for Master's degree programmes offered by the Department of Computing Science, Appendix 2
Total			18	

(4) Specialisation modules

For the Specialisation area, students may take other modules from the Economics, Empirical Methods and Data Science tracks or modules from the following list.

Credits obtained during a period of study abroad can be recognised under the Specialisation category in the modules wir751, wir752, and wir753, provided that they are related to the fields of Economics, Empirical Methods, Data Science, or Business Administration and there is no significant overlap with any compulsory modules which the student has already studied or is still required to study.

Students must earn 18 credit points from Specialisation modules.

Module name/code	Module type	Type and number of classes/lectures	CP	Type and number of module examinations
wir896 Operations Management	Elective	1 lecture 1 exercise	6	1 seminar paper or 1 formal presentation or 1 written examination or 1 oral examination or 1 portfolio or 1 project report
wir899 Supply Chain Management	Elective	1 lecture 1 exercise	6	1 seminar paper or 1 formal presentation or 1 written examination or 1 oral examination or 1 portfolio or 1 project report

wir921 Sustainable Supply Chain Management	Elective	1 lecture 1 seminar	6	1 seminar paper or 1 formal presentation or 1 written examination or 1 oral examination or 1 portfolio or 1 project report
wir898 Strategic Sustainability Management	Elective	1 lecture 1 seminar	6	1 seminar paper or 1 formal presentation or 1 written examination or 1 oral examination or 1 portfolio or 1 project report
wir842 Banking	Elective	2 lectures or 1 lecture and 1 exercise	6	1 seminar paper or 1 formal presentation or 1 written examination or 1 oral examination or 1 portfolio or 1 project report
wir843 Financial Risk Management	Elective	2 lectures or 1 lecture and 1 exercise	6	1 seminar paper or 1 formal presentation or 1 written examination or 1 oral examination or 1 portfolio or 1 project report
wir886 Digital Transformation: Strategies and Sustainability	Elective	Two courses from the following course types: lecture, exercises, seminar	6	1 seminar paper or 1 formal presentation or 1 written examination or 1 oral examination or 1 portfolio or 1 project report
inf007 Information Systems I	Elective	Classes/lectures according to the relevant information in the examination regulations for Master's degree programmes offered by the Department of Computing Science, Appendix 2	6	Examination components according to the relevant information in the examination regulations for Master's degree programmes offered by the Department of Computing Science, Appendix 2
inf008 Information Systems II	Elective	Classes/lectures according to the relevant information in the examination regulations for Master's degree programmes offered by the Department of Computing Science, Appendix 2	6	Examination components according to the relevant information in the examination regulations for Master's degree programmes offered by the Department of Computing Science, Appendix 2
inf109 Information Systems III	Elective	Classes/lectures according to the relevant information in the examination	6	Examination components according to the relevant information in the examination regulations for Master's degree

		regulations for Master's degree programmes offered by the Department of Computing Science, Appendix 2		programmes offered by the Department of Computing Science, Appendix 2
inf510 Energy Information Systems	Elective	Classes/lectures according to the relevant information in the examination regulations for Master's degree programmes offered by the Department of Computing Science, Appendix 2	6	Examination components according to the relevant information in the examination regulations for Master's degree programmes offered by the Department of Computing Science, Appendix 2
wir806 Information Technology Law	Elective	1 lecture 1 seminar	6	1 seminar paper or 1 formal presentation or 1 written examination or 1 oral examination or 1 portfolio or 1 project report
wir751 Study Abroad I	Elective	According to the regulations of the foreign university	6	According to the regulations of the foreign university
wir752 Study Abroad II	Elective	According to the regulations of the foreign university	6	According to the regulations of the foreign university
wir753 Study Abroad III	Elective	According to the regulations of the foreign university	6	According to the regulations of the foreign university

(5) Final Master's module

Module name/code	Module type	Type and number of classes/lectures	Credit points	Type and number of module examinations
mam Final Master's module	Compulsory	1 colloquium	6	Research colloquium
	Compulsory	-	24	Master's thesis
Total			30	

Appendix 2

Carl von Ossietzky Universität Oldenburg

– Fakultät für Informatik, Wirtschafts- und Rechtswissenschaften –

Master-Urkunde

Frau/Herr*)
geboren am in
hat den

Masterstudiengang Applied Economics and Data Science

an der Carl von Ossietzky Universität Oldenburg mit der Gesamtnote erfolgreich abgeschlossen.
Ihr/Ihm*) wird der Hochschulgrad

“Master of Science (M.Sc.)”

verliehen.

Siegel	Oldenburg, den
.....
Die Dekanin/der Dekan*)	Die/Der*) Vorsitzende des Prüfungsausschusses

*) Nicht Zutreffendes bitte streichen.

Appendix 3

Carl von Ossietzky Universität Oldenburg
– Fakultät für Informatik, Wirtschafts- und Rechtswissenschaften –
Zeugnis

Frau/Herr*)
geboren am in

hat den **Masterstudiengang Applied Economics and Data Science** an der Carl von Ossietzky Universität Oldenburg mit der Gesamtnote erfolgreich abgeschlossen.

Die Master Thesis mit dem Thema
.....
wurde mit bewertet.

Folgende Module wurden belegt und wie folgt bewertet:

Modultyp	Modulbezeichnung	Note
-----------------	-------------------------	-------------

Siegel Oldenburg, den
.....
Die/der*) Vorsitzende des Prüfungsausschusses

Notenskalen:

1,0 bis 1,5 = sehr gut
über 1,5 bis 2,5 = gut
über 2,5 bis 3,5 = befriedigend
über 3,5 bis 4,0 = ausreichend

*) Nicht Zutreffendes bitte streichen.

Appendix 3 a

**Carl von Ossietzky University of Oldenburg
– School of Computing Science, Business Administration, Economics and Law –
Report**

Ms/Mr*)
date of birth place of birth

has successfully completed his/her* studies in the **MA Programme Applied Economics and Data Science** and achieved the grade

The Master's thesis on the subject
was graded with

The following modules have been completed and graded as shown below:

Type of module	Title of module	Grade
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seal Oldenburg (date)
.....
The Chairperson of the Assessment Committee.

Grading scales:

1.0 up to 1.5 = very good
above 1.5 up to 2.5 = good
above 2.5 up to 3.5 = satisfactory
above 3.5 up to 4.0 = sufficient

*) please cross out as appropriate