

Revised version of the regulations on content and examinations for the doctoral degree programmes and structured doctoral programmes of School V – Mathematics and Natural Sciences, School VI – Medicine and Health Sciences, and the Department of Computing Science of School II – Computing Science, Economics and Law in the Graduate School of Natural Sciences, Medicine and Technology of the University of Oldenburg

of 21/07/2022

On 23 March 2022, in accordance with Section 44 (1) (2) of the Lower Saxony University Act (NHG), the School Councils of School II – Computing Science, Economics and Law, School V – Mathematics and Natural Sciences and School VI – Medicine and Health Sciences of the University of Oldenburg resolved the following revised version of the Regulation on Content and Examinations for the doctoral degree programmes and structured doctoral programmes of School V – Mathematics and Natural Sciences, School VI – Medicine and Health Sciences and the Department of Computing Science (Dfl) of School II – Computing Science, Economics and Law in the Graduate School Natural Sciences, Medicine and Technology of the University of Oldenburg. The regulation was approved by the Presidential Board on 4 July 2022 in accordance with Section 44 (1) (3) NHG.

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Preamble

The purpose of establishing a multidisciplinary Graduate School for Science, Medicine and Technology is to prepare the graduates of doctoral degree programmes and structured doctoral programmes, as well as Research Training Groups from various disciplines of School V - Mathematics and Science and School VI – Medicine and Health Sciences of the University of Oldenburg for professional practice by offering them a cross-disciplinary network. This is not only supposed to enhance their professional qualifications at an international level, but also to enable them to acquire other skills that will allow them to compete successfully in professional life. The doctoral degree programmes and structured doctoral programmes also contain structures and opportunities which encourage women to continue an academic career.

Section 1

Scope of application

(1) Based on the associated "Regulations on Special Admission Requirements", these regulations also govern the goals, content, structure and final degree for the doctoral degree programmes and structured doctoral programmes of the Graduate School Natural Sciences, Medicine and Technology. Currently these are the doctoral degree programmes "Neurosensory Science and Systems", "Molecular and Nanoscale Science" and "Environmental Sciences and Biodiversity" up to and including the summer semester 2022, and the doctoral degree programmes "Renewable Energy", "Mathematics and Fundamental Physics", "Medicine and Health Sciences" and "Environmental Sciences and Biodiversity" as from the winter semester 2022/23. By means of a resolution by the responsible School Councils, the scope of application of these regulations can also be extended to other doctoral degree programmes and structured doctoral programmes.

(2) This part of the regulations determines all the general regulations that apply for the doctoral degree programmes and structured doctoral programmes of the Graduate School.

(3) The specific appendices for the doctoral degree programmes and structured doctoral programmes contain additional, special regulations for the individual programmes.

(4) The applicable regulations for the structure of doctoral programmes are the joint Doctoral Degree Regulations of School II – Computing Science, Economics and Law (for the Department of Computing Science), School V – Mathematics and Natural Sciences and School VI – Medicine and Health Sciences.

Section 2

Learning objectives

The aim of doctoral studies that accompany the work of doctoral students on their thesis is to promote their advanced development in the disciplines and methods of the Graduate School of Science, Medicine and Technology and its fields of application. As recommended by the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany, in their Framework for Qualification (KMK, 21 April 2005), the degree programmes and structured doctoral programmes offer advanced opportunities for doctoral students to enhance their qualifications in the area of Deeper and Broader Knowledge and to help them develop better skills in the acquisition of knowledge. The doctoral students learn to identify scientific questions on their own, to design and carry out projects, and to present the results of their research. They are expected to learn to apply and expand the relevant hypotheses and theories of the field of study. In addition, their capacity for critical analysis and the development and synthesis of new ideas is to be fostered. The interdisciplinary nature of the programmes is intended to ensure that doctoral students will understand the wider societal ramifications of their own scientific research as well as its potential risks. All elements of the programme should work together and be used in such a way as to support the early scientific independence of the doctoral students. The international nature of the scientific community requires the active command of at least one foreign language (in practice this is usually English). The doctoral students need to gain confidence in discussions on scientific topics with their professional colleagues, but also with laypersons. Success in their careers will depend on their capacity to think in a structured manner, driven by hypotheses, their communication and leadership skills and their ability to work effectively in international teams. The modules in the doctoral degree and structured doctoral programmes are designed to ensure students attain these goals.

Section 3

Purpose of the module examinations

(1) The module examinations determine whether the doctoral student has gained the skills necessary for the transition to professional work. These skills include in-depth knowledge and practical skills, the ability to recognise connections within the field and the ability to successfully apply scientific insights to practical applications as well as to perform independent scientific work.

(2) The examinations in the doctoral degree programme or structured doctoral programme provide evidence of the additional qualification attained beyond the thesis to be presented. 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.

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Certificate of the doctoral degree programme and the structured doctoral programme, award of the university degree

(1) In addition to the doctoral degree certificate, the School responsible for the doctoral degree programme or the structured doctoral programme issues a certificate (Appendices 7 and 8) referring to the examination results attained in the doctoral degree programme or structured doctoral programme as well as a certificate of successful passing of the degree. The degree programme or the structured doctoral programme is completed if the requirements of Section 19 have been fulfilled.

(2) The award of the doctoral degrees Doctor of Natural Sciences (Doctor rerum naturalium, Dr. rer. nat), Doctor of Engineering Sciences (Dr. Ing.), Doctor of Philosophy (Doctor philosophiae, Dr. phil.), Doctor of Philosophy (Ph.D.), Doctor of Health Sciences (Dr. rer. medic.) as well as Medical Doctor – Doctor of Philosophy (MD-Ph.D.) following successful final evaluation of the doctorate by the responsible doctorate committee is regulated by the valid doctoral degree regulations of School V Mathematics and Natural Sciences, School VI Medicine and Health Sciences or other Schools of the University of Oldenburg. The doctoral degree regulations also regulate the issue of the doctoral certificate.

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Duration, scope and structure of doctoral studies

(1) The standard period of study is six semesters (three years of study). The doctoral degree programme and structured doctoral programme require 30 credit points (CP). The Admissions Committee may require doctoral students who want to enter a new area of specialization in their doctoral studies to do supplementary course work to learn the basics of the doctoral degree programme or the structured doctoral programme. The additional lectures may not exceed a maximum of 30 credit points and are determined by the Admissions Committee.

(2) The modules on offer in the doctoral degree programme comprise three areas:

a) Expansion and deepening of specialist knowledge

The main focus in this area is the acquisition of both general and specific knowledge in a particular field required for the doctoral thesis. This involves regular participation in colloquia, conferences and summer schools. In lectures of the University of Oldenburg and other universities and institutions that focus specifically on the subject area concerned (e.g. workshops for learning certain techniques), students achieve a systematic understanding of the research field and the relevant methods, in line with the qualification framework for German university degrees. In laboratory visits abroad and by attending international conferences, the doctoral students establish international contacts and thus expand their professional network. The tables in the specific Appendixes on the doctoral degree programmes and structured doctoral programmes provide an overview of the corresponding modules in the respective doctoral degree programmes. Modules totalling at least **12 CP** must be taken from the area of Broader and Deeper Knowledge.

b) Communication and knowledge transfer

The second area is about the acquisition of communication and teaching skills, which includes teaching at a university. The doctoral students acquire and apply knowledge and experience regarding the transfer of knowledge. The teaching activities comprise lectures, discussions and exercises on, for instance, advanced presentation techniques, scientific publishing, German and English as scientific languages and teaching methods in higher education. Above all, the modules in this area foster the communicative competences mentioned in the qualification framework for German university degrees at the PhD level. The tables in the specific Appendixes on the doctoral degree programmes and structured doctoral programmes provide an overview of corresponding modules in the various doctoral degree programmes and structured doctoral programmes. Students must collect at least **6 CP** in modules from the area of Communication and Knowledge Transfer.

c) Interdisciplinary competencies

The third area includes, especially, general skills (not specific to the field of studies) that support the development of the candidates' scientific careers. These include, for example, the drawing up of structured research plans, the drafting of grant applications (e.g. for scholarships) and exercises in scientific publishing. Using a manuscript of their own as

working material, students learn about publishing in internationally reviewed journals. Other modules in this area include training for job applications and the acquisition of other soft skills such as discussion, moderation and leadership, all of which are of paramount importance to career development. The listed modules strengthen the skills of doctoral candidates in the systemic and instrumental competences mentioned in the qualification framework for German university degrees at the doctoral level. The tables in the specific Appendixes on the doctoral degree programmes and structured doctoral programmes provide an overview of the corresponding modules in the respective doctoral degree programmes and structured doctoral programmes. Candidates must take modules with a total of at least **six CP** from the area of Interdisciplinary Competences.

(3) Study abroad. In order to best prepare for the international job market, candidates must get to know diverse research cultures and traditions. Therefore, at least one long or several shorter project-related research stays in laboratories outside the University of Oldenburg, preferably abroad, are recommended. A stay at a laboratory should be no shorter than three weeks.

(4) Support body, Thesis Committee: The substantive supervision of the doctoral students is the responsibility of a support body called the Thesis Committee. Pursuant to Section 9 of the Joint Doctoral Degree Regulations of School II - Computing Science, Business Administration, Economics and Law (for its Department of Computing Science), School V - Mathematics and Science and School VI - Medicine and Health Sciences, the members of the Thesis Committee are the principal supervisor and two other members, of whom at least one must be an external scientist. Usually, one of the members is the second assessor, in accordance with Section 11 of the doctoral degree regulations. Normally, the other member should have a doctorate. With the consent of the doctoral student, a fourth person can be added to the Thesis Committee. The composition of this body is agreed by the main supervisor and the doctoral student. Pursuant to Section 5 (5), the main supervisor will conclude a Supervision Agreement with the doctoral student as part of a doctoral degree programme or a structured doctoral programme.

(5) Supervision agreement: A supervision agreement aims to make the relationship between doctoral students and their supervisors transparent in terms of content and time. Employment and scholarship contracts remain unaffected by a Supervision Agreement. The planning and implementation of the doctoral project is to be designed independently by the structured cooperation between supervisors and doctoral students, in such a way that the high-quality project is completed within a reasonable period. A Supervision Agreement specifies, at the minimum, the parties involved, the subject or working title of the thesis, a time and work schedule, as well as the rights and obligations of the doctoral student and the supervisor. Regulations must also be established to ensure that the doctoral candidate is integrated in a research group or research network, that the candidate is assigned an appropriately equipped workplace, that the principles of good academic practice are adhered to and that regulations are in place that allow a balance of family and scientific activities.

Section 6 Examining Board

(1) For the organisation of the examinations and to fulfil the tasks specified in these requirements, members of School V or School VI of the University of Oldenburg will form a separate Examining Board for each doctoral degree programme and each structured doctoral programme. It will have five members, three from the professors' group, one lecturer from the academic staff group who is teaching primarily or full-time, and one member from the students' group of the doctoral degree programme/structured doctoral programme. The members of the Examining Board and their permanent deputies will be elected by the respective group representatives in the Faculty Council of School V and School VI. The chair and vice-chair are elected by the Examination Committee from among its members. The chair must be a member of the group of professors. The member from the students' group will not attend meetings that deal with assessment or the award of credits for examinations and other accomplishments.

(2) The Examining Board will ensure that the examinations are conducted. It will also ensure compliance with the provisions of the Lower Saxony University Act (NHG) and with these Regulations. The Examining Board is supported by the Academic Examinations Office of the University of Oldenburg, which also keeps the examination records. It will report regularly to School V - Mathematics and Science and School VI - Medicine and Health Sciences on the development of exams and periods of study. In this regard, special attention must be paid to compliance with the standard period of study and assessment deadlines, and to the distribution of individual and overall grades. (3) The Examining Board takes decisions according to the 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. The Examining Board has a quorum when three members, of which two are members of the group of professors, are present.

(4) The term of office of the members of the Examining Board is two years, and one year for the student member.

(5) Otherwise, the General Terms and Conditions of the University of Oldenburg apply. A record is to be kept of the meetings of the Examining Board. The record will contain the main subjects of discussion and the resolutions of the Examining Board.

(6) The Examining Board can revocably transfer authorities to the Chair or the Deputy Chair. The Chair will prepare and carry out the decisions of the Examining Board. The Chair will regularly report about these activities to the Examining Board.

(7) 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.

(8) The Examining Board informs the doctoral students appropriately and in writing about the main examination conditions that apply to them. (9) The Examining Board can resolve that decisions and other measures taken according to these Regulations, in particular registration and examination dates, examination deadlines and examination results are published within the university. In doing so, data protection regulations must be observed.

Section 7 Examiners

(1) The module examinations are conducted by members of the University of Oldenburg or members of another university who are authorised to teach independently in the respective examination subject or a partial area of the subject. The Examining Board establishes that the examiners are authorised to teach independently in the respective examination subject or a partial area of the subject.

(2) Section 6, subs. 8 applies to the examiners correspondingly.

(3) The examination of a module should be conducted by teachers of the module who are authorized examiners according to (1). As a rule, the module examinations are evaluated by an examiner.

(4) The School Council of School V – Mathematics and Natural Sciences or School VI – Medicine and Health Sciences appoints the examiners.

Section 8 Credits for course work and examinations

(1) On application by the doctoral student, study periods, professional activities and examination results in comparable study programmes at a university in Germany or in European or non-European educational systems are recognised as long as there are no substantial differences regarding the competencies acquired. The overall situation must be taken into account in deciding whether modules are to be credited. The level, scope, quality, profile and learning results must be assessed. If there is a significant difference, the burden of evidence is on the University. The documents required for this investigation will be submitted by the doctoral student in German or English.

In order to clarify the factual and legal situation, the Central Office for Foreign Education (ZAB) may be consulted. Rules for credit transfer based on agreements with foreign universities (cooperation agreements, university partnerships) will remain unaffected.

(2) Extracurricular achievements (e.g. professional activities, examinations in related study programmes) can be recognised as long as the necessary scientific foundations and equivalence apply. If there is insufficient evidence, a knowledge test may be required.

(3) If the requirements under (1) and (2) are met, the candidate has a right to recognition. At the request of the doctoral candidate, the Examining Board will decide on the application.

(4) Recognition according to (2) can confer up to a maximum of 15 credit points (CP).

(5) For recognition of study and examination performance, the credit points - in as far as the credit point systems are comparable - are accepted as "passed".

Section 9

Admission to modules and module examinations

(1) Doctoral students who are registered in the respective doctoral degree programme or structured doctoral programme of the Graduate School and doctoral students registered in doctoral degree programmes or structured doctoral programmes at other universities which have a cooperation agreement with the University of Oldenburg can sit modules. Students who sit a module are admitted to all examinations related to this module.

(2) Registration for a module examination must be submitted in writing close to the date of the examination.

(3) Performance in each module will be evaluated. Examinations take place specifically for the modules and in parallel with the study programme. They should be completed at the end of the semester in which the last class/lecture of a module took place.

Section 10

Types of module examinations

(1) The type and number of module examinations and/or partial module examinations are determined by the examiners according to the regulations in Section 5 and doctoral candidates are informed accordingly in the module descriptions.

(2) Module examinations in the form of appropriate co-work by two people will be generally permitted. The contribution of each doctoral candidate which is to be evaluated as the examination performance must meet the requirements of the examination and be clearly separable and capable of individual evaluation on the basis of sections, page numbers or other objective criteria.

(3) The School provides teaching courses which ensure that students are capable of passing the module examinations.

(4) If a student credibly argues that they are unable to sit for module examinations in whole or in part in the required manner due to a prolonged or permanent physical complaint or disability, or due to the need to look after a child living in their household, the Examining Board may allow the student to sit for equivalent module examinations in another form. The student may be required to submit a medical certificate.

Section 11

Absence, withdrawal and fraud, breach of the regulations

(1) An examination is evaluated as 'failed' if the doctoral student, without reasonable grounds, 1. does not appear for the examination, or 2. withdraws from the examination after it has started.

(2) The student must submit to the Examining Board without delay and in writing the grounds for the withdrawal or absence and argue the case convincingly; otherwise the examination is evaluated as 'failed'. An exmatriculation and a leave of absence are not in themselves valid excuses. In the case of illness, a medical certificate must be presented, unless the illness is manifest. The Examining Board may require the submission of a certificate by a public health officer. If the excuse is accepted, a resit will be scheduled, usually at the next regular exam date. In this case any already passed examination components will be recognised.

(3) If a doctoral student attempts to influence the result of an examination by fraud or use of prohibited aids, the examination is evaluated as 'failed'. Individuals who have violated the examination regulations may be barred from continuing the examination component concerned. In this case, the relevant examination is evaluated as 'failed'. Decisions as in Sentences 1 and 2 shall be taken by the Examining Board after hearing the doctoral student. Pending the decision of the Examining Board, the doctoral student shall continue the examination, unless the supervisor of the examination decides that the provisional exclusion of the doctoral student is essential for the proper continuation of the examination. In particularly serious cases of fraud, the Examining Board can exclude the doctoral student from the continuation of the examination and performance of the examination components.

(4) If the student fails to comply with a deadline for submission of an examination component without reasonable grounds, the examination component is evaluated as 'failed'. Paragraph 2, Sentences 1 to 4 will apply accordingly. In cases in which there are reasonable grounds for missing the deadline, the Examining Board decides whether the deadline for the examination component can be extended, taking into consideration the principles of equality of opportunity and the prioritisation of scientific achievement over procedural regulations.

Section 12

Assessment of examinations

(1) Module examinations are generally not awarded grades but evaluated as 'passed' or 'failed'. The examiners evaluate the results and pass them on to the responsible Examinations Office within three weeks.

(2) If a module examination is graded, the following grade system is used:

1= very good, outstanding performance

2= good, above average performance,

3= satisfactory, average performance in all respects

4= sufficient, the basic standards have been met but with a number of shortcomings

5 = failed, an inadequate performance with considerable flaws.

The grades can be raised or lowered by 0.3 for more differentiated marking, but the grades 0.7, 4.3, 4.7 and 5.3 are excluded. A student is considered to have passed a graded module examination if they were awarded the grade sufficient or higher.

(3) In the case of graded module examinations, these grades are not considered in the evaluation according to Section 4.

(4) The doctoral thesis is evaluated according to the valid doctoral degree regulations of the Schools of the University of Oldenburg.

Section 13

Resits of module examinations

(1) Failed module examinations can be repeated twice. If the third examination is evaluated as 'failed' and if it cannot be repeated according to 2), the examination is finally evaluated as failed.

(2) A resit examination takes place in the form of an individual examination before at least one examiner and one observer. The observer must hold at least the title Dr. rer. nat., Dr. Ing., Dr. phil. Ph.D., Dr.rer.medic., MD/Ph.D., or a comparable or higher title. The main topics of the examination, the assessment of the exam performance and the main considerations of the assessment decision shall be recorded in a report to be signed by the examiner and the co-examiner. Resits of examinations and repetitions of module exam assignments are to be held within an appropriate period. They should be held at the latest within one academic year. All module examinations should be passed at the latest 4 years after enrolment in the doctoral degree programme or structured doctoral programme.

(3) If the doctoral student does not complete the required modules or credit points before submission of the thesis, this does not affect the course of the doctorate according to the doctoral degree regulations of the relevant School. The titles Doctor of Natural Sciences (Dr. rer. nat.), Doctor of Engineering Sciences (Dr. Ing.), Doctor of Philosophy (Dr. phil.), Doctor of Philosophy (Ph.D.), Doctor of Health Sciences (Dr. rer. medic.) and Medical Doctor – Doctor of Philosophy (MD-Ph.D.) of the University of Oldenburg can be awarded even without passing the doctoral degree programme or structured doctoral programme. However, in this case no certificate is issued for the additional qualifications acquired in the doctoral degree programme or structured doctoral programme.

Section 14

Diplomas and certificates

(1) The certificate for the additional qualifications acquired in the doctoral degree programme or structured doctoral programme is presented together with the doctoral certificate. The date of the certificate is the date of the thesis defence.

(2) If students leave the University or change their degree programme or structured doctoral programme, a certificate will be issued on request, listing the examination results and, if applicable, their grades. On request and for the purposes of a job application, a provisional certificate of the examination performance achieved can be issued.

Section 15 Invalidity of examination results

(1) if a student has committed fraud and this is only discovered after the certificate is presented, the Examining Board can subsequently amend the grades for the examination components for which the fraud was committed and declare the examination fully or partly 'failed'.

(2) If the conditions for admission to an examination were not met without any intention by the doctoral student to deceive, and if this fact only emerges after presentation of the certificate, the passing of the examination rectifies the fault. If the student intentionally gained admission fraudulently, the Examining Board will make its decision taking into account the statutory conditions on the withdrawal of unlawful administrative acts.

(3) The doctoral student will be given the opportunity to present his case to the Examining Board before a decision is reached.

(4) The incorrect examination certificate will be withdrawn and replaced by a correct certificate or a certificate according to Section 15. With the incorrect examination certificate, the diploma must also be withdrawn if the student was declared to have failed the examination due to fraud. A decision according to Subsections 1 and 2, sentence 2 is no longer possible after a period of five years following the date of the examination certificate.

Section 16 Access to examination records

(1) The doctoral student can request information about partial results before the examination.

(2) After every examination, the doctoral candidates can request access to their written examination work, the remarks made by the examiners and the examination records.

(3) The request must be submitted to the chair of the Examination Board at the latest within one year of announcement of the examination result. The chair will determine the place and time of the inspection. The Examining Board can transfer tasks according to sentence 1 and 2 to the examiners.

Section 17 University-wide announcements by the Examining Board

(1) The Examining Board announces these regulations publicly within the university and informs the doctoral candidates in a suitable way of the examination regulations that apply to them.

(2) The Examining Board can decide that the decisions and other measures taken according to these regulations, especially admission to an examination, refusal of admission, registration and examination dates and deadlines and examination results are announced within the university in a locally usual manner. In doing so, data protection regulations must be observed. This decision shall be announced within the University in the customary manner.

Section 18 Decisions on exceptional cases, appeal procedure

(1) For rejections and other negative administrative acts which are issued under these regulations, grounds must be given in writing, including a notice of the appeal procedure, and announced according to Section 41 Administrative Procedure Act. In accordance with Sections 68 ff. of the Administrative Court Regulations (VwGO), within one month after receipt of notification, the student may appeal to the Examining Board against an exam decision based on an assessment of the student's performance.

(2) The Examining Board decides on the appeal.

(3) The Examining Board passes on the appeal to the examiner for examination and comment. If the examiner changes the grade as a result of the appeal, the Examining Board will uphold the appeal. Otherwise, the Examining Board will examine the decision on the basis of the comments of the examiner, paying particular attention to the following matters: 1. whether the examination procedure was carried out properly, 2. whether the assessment was based on incorrect information, 3. whether common assessment principles were observed, 4. whether an acceptable answer, reasonably substantiated by weighty arguments, was judged incorrect, 5. whether the examiner was guided by extraneous considerations. The same procedure applies if an appeal is lodged against an assessment by more than one examiner.

(4) On request by the doctoral student, the Examining Board appoints an assessor for the appeal procedure. This assessor must possess the qualifications stated in Section 7 (1). The doctoral student and the assessor must be given the opportunity to comment before the decision mentioned in (2) and (6) is taken.

(5) If the Examining Board establishes that the evaluation is incorrect according to Subsection 3 and the examiner does not alter their decision accordingly, examination performance is re-evaluated by other examiners who have previously not been involved in evaluating this examination, or these examiners repeat the oral examination.

(6) The appeal decision must be reached within one month of submission of the appeal grounds. If the appeal is not upheld, the refusal must be substantiated in writing and options for legal remedy must be indicated.

(7) The appeal may not lead to a worsening of the examination grade.

Section 19 **Completion of doctoral degree programmes** **and structured doctoral programmes**

The doctoral degree programme or structured doctoral programme is completed after successful completion of modules totalling at least 30 credit points in the ratio described in Section 5 (2), when all requirements of the Admissions Committee have been met and the doctoral degree procedure has been initiated through submission of the thesis to a School of the University of Oldenburg.

Section 20 **Admission to the doctorate**

Admission to the doctorate is granted according to the doctoral degree regulations of the School to which the request for admission has been submitted.

Section 21 **Entry into force**

(1) These regulations enter into force following approval by the Presidential Board of the University of Oldenburg on the day after publication in the university's Official Notices and replaces the existing Regulations on the Content and Examinations of Doctoral Degree Programmes and Structured Doctoral Programmes of School V - Mathematics and Science and School VI - Medicine and Health Sciences in the Graduate School for Science, Medicine and Technology of the University of Oldenburg of 18 August 2009 (Official Notices 2/5009, p. 259 ff.), last revised on 30/11/2019 (Official Notices 082/2019).

(2) On request, doctoral students who are in a higher semester at the time of entry into force of this regulation can be examined according to the previously valid regulations

Appendices to the Regulations:

- Appendix 1: Special features of the doctoral degree programme "Neurosensory Science and Systems"
- Appendix 2: Special features of the doctoral degree programme "Molecular and Nanoscale Science"
- Appendix 3: Special features of the doctoral degree programme "Environmental Sciences and Biodiversity"
- Appendix 4: Special features of the structured doctoral programme "Renewable Energy"
- Appendix 5: Special features of the structured doctoral programme "Mathematics and Fundamental Physics"
- Appendix 6: Special features of the structured doctoral programme "Medicine and Health Sciences"
- Appendix 7: Special features of the structured doctoral programme "Environmental Sciences and Biodiversity"
- Appendix 8: Certificate of Doctoral Studies in German
- Appendix 9: Certificate of Doctoral Studies in English

Appendix 1: Special features of the doctoral degree programme in Neurosensory Science and Systems

Re Section 5 (1)

Supplementary information for doctoral students of the doctoral degree programme "Auditory Sciences" (Joint Research Academy (JRA), Cluster of Excellence Hearing4all):

A menu of course offerings at three locations will be assembled, from which participants of the doctoral programme in Auditory Sciences can choose. The locations are the Joint Research Academy at the University of Oldenburg, the Hannover Medical School and Leibniz University, Hannover.

To achieve the necessary number of credit points in the doctoral degree programme, students must attend the three compulsory courses of the doctoral degree programme "Neurosensory Science and Systems" and usually at least four optional compulsory courses from the doctoral degree programme "Auditory Sciences" (JRA curriculum). They can choose from the range of courses offered by both the doctoral course and the doctoral degree programme.

Note on the type and number of module examinations

* Active participation means regular, active and documented participation in courses (workshops, internships, exercises, seminars, excursions). This includes, for example, the regular submission of exercises, the preparation of solutions for exercise assignments, the logging of the various experiments and practical work sessions, the presentation and discussion of seminar papers or presentations of tasks or contents in the course in the form of short reports. These requirements are specified in the module descriptions.

Table 1): Modules in the area of Broader and Deeper Knowledge

At least 12 CP must be achieved in this subject area.

Module name	Code	Type	Credit points	Type and number of module examinations
olt201 Summer school/congress	A-1	Optional compulsory	2-6	Active participation (summer school) or presentation and/or poster presentation (congress)
olt202 Lab visit abroad	A-2	Optional compulsory	2-6	Oral report and/or minutes
olt203 Special techniques in Neurosensory Sciences and Systems	A-3	Optional compulsory	3-12	Active participation
olt204 Medical basics of Neurosensory Sciences and Systems	A-4	Optional compulsory	3-6	Active participation
Olt 209 Laboratory Animal Science		Optional compulsory	3	Web-based written examination and active participation in practical part of the module
olt205 Data analysis using Matlab	A-5	Optional compulsory	3	Active participation
olt206 Journal club	A-6	Optional compulsory	3	Active participation and seminar lecture
olt207 Colloquium Neurosensory Science and Systems	A-7	Compulsory	3	Active participation and/or seminar lecture
olt208 Additional module "Specific knowledge"	A-8	Optional compulsory	1-6	Module examination depending on the module

Upon request, the person responsible for the degree programme can acknowledge additional work in the area of Broader and Deeper Knowledge in module olt208.

Table 2) Modules in the area of Communication and Knowledge Transfer

At least 6 CP must be achieved in this subject area.

Module name	Code	Type	Credit points	Type and number of module examinations
olt231 Advanced presentation techniques	B-1	Optional compulsory	3	Active participation and two presentations
olt232 Summer school/congress	B-2	Compulsory	2-4	Active participation (summer school) or presentation and/or poster presentation (congress)
olt133 Language courses	B-3	Optional compulsory	1-6	Active participation
olt233 Didactics	B-4	Optional compulsory	1-6	Active participation, active teaching unless this has already been achieved in the course of an employment contract
olt134 Additional module "Communication"	B-5	Optional compulsory	1-6	Module examination depending on the module

On request, the person responsible for the degree programme can acknowledge further achievements in the area of Communication and Knowledge Transfer in the module olt134.

Table 3) Modules in the area of Interdisciplinary Competences

At least 6 CP must be achieved in this subject area.

Module name	Code	Module type	Credit points	Type and number of module examinations
olt261 Basics in distribution-free statistics	C-1	Optional compulsory	3	Active participation
olt262 Experimental design and variance analysis	C-2	Optional compulsory	3	Active participation
olt263 Numeric and computer skills	C-3	Optional compulsory	3	Active participation
olt264 Scientific publishing	C-4	Compulsory	6	Graded manuscript or active participation in a workshop and published article
olt161 Transferable skills/Scientific career	C-5	Optional compulsory	1 - 9	Active participation
olt164 Mentoring	C-6	Optional compulsory	6	Active participation
olt165 Additional module "Transferable Skills"	C-7	Optional compulsory	1- 6	Module examination depending on the module

The person responsible for the degree programme can, on request, acknowledge further accomplishments in the area of Interdisciplinary Competences in the module olt165.

Re: Section 6 Examining Board

Re: Subsection 1: The Examining Board is composed of members of School V (Mathematics and Natural Sciences) and/or School VI (Medicine and Health Sciences) of the University of Oldenburg and the Research Centre Neurosensory Science.

Re: Subsection 2: The Examining Board reports to School V, School VI and the Research Centre for Neurosensory Sciences.

Appendix 2: Special features of the doctoral degree programme in Molecular and Nanoscale Science

Re Section 5 (1)

In addition to the general qualification goals, doctoral students are expected to acquire the following skills and qualification attributes:

- Graduates of the degree programme have a systematic understanding of interfaces, the preparation especially of functional interfaces, even within nanoscale molecular interfaces and materials with controllable and switchable properties, their use in technical applications such as energy conversion, catalysis and photonics, including biological and biomimetic interfaces. They are familiar with relevant methods and have the skills to apply them independently. Furthermore, they have extensive knowledge of the relevant scientific literature.
- The graduates have an overview of the neighbouring disciplines.
- They can conceptually develop, design and implement a research project.
- As part of their doctoral work, they have expanded the boundaries of knowledge through a substantial research contribution that largely meets the standards of national and international peer-reviewed publications and goes significantly beyond the reproduction of what is already known.
- The graduates are capable of critical analysis, evaluation and synthesis of new and complex ideas.
- The graduates have the appropriate professional and interdisciplinary qualifications to enable them to work inside and outside the university.
- The graduates are able to deliberately and actively promote the societal, scientific and technical progress of the scientific community.
- The graduates are able to assess the implications of their research results for society.
- The graduates are able to communicate about their field of work and its outcomes in their own narrow scientific environment, in the wider scientific community, and in society at large.

The modules offered in the degree programme serve to achieve these goals. They include socially, ecologically and economically relevant aspects of interfaces and the materials and applications that are based on these aspects, as well as interdisciplinary teaching contents. Further aspects of interfaces which are examined in the CIS and at cooperating institutes can also be integrated in the study programme.

Note on the type and number of module examinations

* Active participation means regular, active and documented participation in courses (workshops, internships, exercises, seminars, excursions). This includes, for example, the regular submission of exercises, the preparation of solutions for exercise assignments, the logging of the various experiments and practical work sessions, the presentation and discussion of seminar papers or presentations of tasks or contents in the course in the form of short reports. These requirements are specified in the module descriptions.

Table 1): Modules in the area of Broader and Deeper Knowledge

At least 12 CP must be achieved in this subject area.

Module name	Code	Type	Credit	Type and number of module examinations
olt301 Solid-gas Interfaces in Theory and Application	A-1-1-	Optional compulsory	3	Oral examination, max. 45 mins.
olt302 Integrated Chemical Systems	A-1-2	Optional compulsory	3	Oral examination, max. 30 mins.
olt303 Art of synthesis	A-1-3	Optional compulsory	6	Oral presentations at the board with discussion and minutes
olt304 Practice of synthesis (iSynthesis)	A-1-4	Optional compulsory	6	Oral presentations at the board with discussion and minutes
olt306 Biological membranes and cellular signalling	A-1-6	Optional compulsory	3	Presentation in the seminar and active participation
olt307 Many-body theory	A-1-7	Optional compulsory	6	written examination (2 hours) or 30-minute oral examination
olt308 Quantum solar energy conversion	A-1-8	Optional compulsory	3	Oral examination, max. 45 mins.
olt309 Radiation propagation in small-scale structured matter	A-1-9	Optional compulsory	3	Oral examination, max. 45 mins.
olt310 Molecular reaction dynamics	A-1-10	Optional compulsory	6	written examination (2 hours) or 30-minute oral examination
olt311 Introduction to quantum chemistry	A-1-11	Optional compulsory	3	written examination (2 hours) or 30-minute oral examination
olt312 Micro-robotics II	A-1-12	Optional compulsory	6	Active participation, oral examination, exercises
olt313 Fundamentals of nanostructured matter	A-1-13	Optional compulsory	3	Oral examination, max. 30 mins.
olt314 Applied nanotechnology	A-1-14	Optional compulsory	2	Presentation in the seminar and active participation
olt315 Laser physics	A-1-15	Optional compulsory	2	Oral examination, max. 30 mins.
olt316 Ultrafast optics and spectroscopy	A-1-16	Optional compulsory	3	Oral examination, max. 30 mins.
olt317 Modern techniques of optics and spectroscopy	A-1-17	Optional compulsory	3	Oral examination, max. 30 mins.
olt318 Synthesis and characterisation of catalysts	A-1-18	Optional compulsory	3	Oral examination, max. 30 mins.
olt319 Special topics in Interface Science	A-2	Optional compulsory	1 - 9	Depending on course, oral examination (max. 45 mins.), written examination, max. 135 mins., written report and experimental protocols

Module name	Code	Module type	Credit	Type and number of module examinations
olt320 GDCh/Chemistry/Physics Colloquia Series	A-3	Compulsory	3	Participation in 30 classes/lectures
olt321 Aspects of modern inorganic chemistry	A-4-1	Optional compulsory	3	Seminar lecture, preparation, participation in 14 classes/lectures
olt322 Modern Electrochemistry	A-4-2	Optional compulsory	1-2	Active participation and seminar lecture in native or foreign language
olt323 Retrosynthesis and synthesis planning (iSynthesis)	A-4-3	Optional compulsory	3	Evaluation of exercises, oral presentations at the board with discussion
olt324 Temporary embedding in other working groups	A-5	Optional compulsory	2-6	written report
olt325 Introduction to new working area	A-6	Optional compulsory	6 - 24	Module examination depending on the course
olt326 Temporary embedding in enterprises outside the university	A-7	Optional compulsory	2-6	written report
olt327 Additional module Specific knowledge	A-8	Optional compulsory	3-6	Module examination depending on the course
olt328 Modern aspects of organic chemistry	A-4-4	Optional compulsory	3	Evaluation of lectures and exercises
olt329 Modern theoretical chemistry	A-4-5	Optional compulsory	2	Lecture (not graded)
olt330 Modern aspects of industrial chemistry	A-4-6	Optional compulsory	2	Lecture (not graded)
Olt305 Subject-related colloquium	A-3	Optional compulsory	3	Active participation and/or seminar lecture (e.g. in seminar of the research group)

In the modules olt319, olt326, olt326 and olt327, credit can be awarded for company courses, summer courses of other graduate schools and summer courses in the framework of European education and networking initiatives. Their acknowledgement in the framework of the doctoral degree programme will depend on the duration of the courses and proof of success.

Upon request, the person responsible for the degree programme can acknowledge additional work from the area of Broader and Deeper Knowledge in module olt327.

Table 2) Modules in the area of Communication and Knowledge Transfer

At least 6 CP must be achieved in this subject area.

Module name	Code	Type	Credit points	Type and number of module examinations
olt331 Congress	B-1	Optional compulsory	1-10	Presentation or poster presentation
olt332 Scientific publishing	B-2	Optional compulsory	1-6	scientific article
olt333 Special topics in communication and imparting of knowledge	B-3	Optional compulsory	6 - 10	depending on module
olt334 Motivation and imparting of knowledge	B-4	Optional compulsory	1-12	Written report
olt231 Advanced presentation techniques		Optional compulsory	3	Active participation and two presentations
olt133 Language courses		Optional compulsory	3-6	Active participation
olt335 Additional module "Communication"	B-5	Optional compulsory	0.5 - 6	Module examination depending on the module

On request, the person responsible for the degree programme can acknowledge further achievements in the area of Communication and Knowledge Transfer in the module olt335.

Table 3) Modules in the area of Interdisciplinary Competences

At least 6 CP must be achieved in this subject area.

Module name	Code	Type	Credit points	Type and number of module examinations
olt161 Transferable skills/Scientific career	C-1	Optional compulsory	0.5 - 12	Module examination depending on the module
olt162 Foundation of an enterprise	C-2	Optional compulsory	2	Written exam (90 min.) or creation of a business plan
olt164 Mentoring	C-3	Optional compulsory	6	Active participation
olt165 Additional module "Transferable Skills"	C-4	Optional compulsory	0.5 - 6	Module examination depending on the module

The person responsible for the degree programme can, on request, acknowledge further accomplishments in the area of Interdisciplinary Competences in the module olt165.

Re: Section 6 Examining Board:

Re: Subsection 1: The Examining Board is composed of members of School V Mathematics and Natural Sciences of the University of Oldenburg and the Center of Interface Science.

Appendix 3: Special features of the doctoral degree programme in Environmental Sciences and Biodiversity

The doctoral degree programme "Environmental Sciences and Biodiversity" will be terminated as of the winter semester 2022/23 and be replaced by a doctoral degree programme (Appendix 7). Enrolment in this degree programme is still possible for the summer semester 2022. Supervision is ensured for all doctoral candidates already enrolled in this programme up to 31 March 2029.

Note on the type and number of module examinations

* Active participation means regular, active and documented participation in courses (workshops, internships, exercises, seminars, excursions). This includes, for example, the regular submission of exercises, the preparation of solutions for exercise assignments, the logging of the various experiments and practical work sessions, the presentation and discussion of seminar papers or presentations of tasks or contents in the course in the form of short reports. These requirements are specified in the module descriptions.

Table 1): Modules in the area of Broader and Deeper Knowledge

At least 12 CP must be achieved in this subject area.

At least one module must be completed from the module groups A 1 and A 2.

Module name	Code	Type	Credit points	Type and number of module examinations
olt401 Summer school/congress/workshop	A-1	Compulsory	3-9	oral report and/or minutes and/or discussion of the poster and/or evaluation of a trial lecture
olt402 Lab visit abroad/field work	A-2	Optional compulsory	6 - 9	oral or written report
olt403 Special techniques in "Environmental Sciences and Biodiversity"	A-3	Optional compulsory	3-9	oral or written report or written exam
olt404 International Colloquium	A-4	Optional compulsory	3	Active participation and discussion contributions
olt405 Subject-related colloquium	A-5	Compulsory	3	Active participation and/or seminar lecture
olt406 Additional module "Subject-specific knowledge"	A-6	Optional compulsory	3-6	Module examination depending on the module
olt408 Thesis Committee meetings	A-7	Compulsory	3 - 4	at least two "Thesis Committee meetings" per year, minutes of the thesis Committee meeting

Upon request, the person responsible for the degree programme can acknowledge additional work in the area of Broader and Deeper Knowledge in module olt406.

Table 2): Modules in the area of Communication and Knowledge Transfer

At least 6 CP must be achieved in this subject area.

Module name	Code	Type	Credit points	Type and number of module examinations
olt431 Didactics /supervision of students	B-1	Optional compulsory	3-6	Development of an internship experiment and/or a didactic concept in the respective field and/or report and/or supervision of doctoral students
olt432 PhD forum	B-2	Compulsory	3	Organisation and active participation and seminar lecture
olt131 Advanced presentation techniques	B-3	Optional compulsory	3	Oral report and/or evaluation of a poster and/or evaluation of a test lecture
olt133 Language courses	B-4	Optional compulsory	2-6	Active participation
olt134 Additional module "Communication"	B-5	Optional compulsory	0.5 - 6	Module examination depending on the module

On request, the person responsible for the degree programme can acknowledge further achievements in the area of Communication and Knowledge Transfer in the module olt134.

Table 3) Modules in the area of Interdisciplinary Competences

At least 6 CP must be achieved in this subject area.

Module name	Code	Type	Credit points	Type and number of module examinations
olt461 Scientific publishing	C-1	Optional compulsory	2-6	Peer-reviewed manuscript (submitted to international scientific journal)
olt161 Transferable skills/Scientific career	C-2	Optional compulsory	3-9	Active participation
olt463 Good scientific practice	C-3	Compulsory	0.5	Active participation
olt464 Scientific writing	C-4	Compulsory	1-2	Concept for a publication
olt163 Fundraising /project management	C-5	Optional compulsory	2	Concept for a research application
olt164 Mentoring	C-6	Optional compulsory	6	Active participation
olt165 Additional module "Transferable Skills"	C-7	Optional compulsory	0.5 - 6	Module examination depending on the module

The person responsible for the degree programme can, on request, acknowledge further accomplishments in the area of Interdisciplinary Competences in the module olt165.

Re: Section 6 Examining Board

Re: Subsection 2: The Examining Board reports to School V Mathematics and Natural Sciences of the University of Oldenburg and the institutes with a focus on environmental sciences. The Examining Board is composed of members of School V and other scientific departments of the university that focus on environmental sciences.

Appendix 4: Special features of the structured doctoral programme in Renewable Energy

Re Section 5 (1)

The "Renewable Energy" structured doctoral programme requires 30 credit points. At the request of the doctoral candidate, external activities from the period of doctoral studies can be acknowledged for the structured doctoral programme. The request must contain the title, scope and course certificate of the course.

Note on the type and number of module examinations

* Active participation means regular, active and documented participation in courses (workshops, internships, exercises, seminars, excursions). This includes, for example, the regular submission of exercises, the preparation of solutions for exercise assignments, the logging of the various experiments and practical work sessions, the presentation and discussion of seminar papers or presentations of tasks or contents in the course in the form of short reports. These requirements are specified in the module descriptions.

Table 1): Modules in the area of Broader and Deeper Knowledge

At least 12 CP must be achieved in this subject area.

Module name	Code	Type	Credit points	Type and number of the module examinations
olt502 Conference	A-2	Compul- sory	1 -6	Active participation with poster or presentation
olt503 Research stay	A-3	Optional compul- sory	1 - 9	Presentation and/or minutes and/or report
olt508 Workshop/Summer School	A-4	Optional compul- sory	1 -6	Active participation and/or presenta- tion of own research
olt505 Subject-oriented tech- niques/knowledge	A-5	Optional compul- sory	1 - 9	Module examination depending on the module
olt506 Colloquia	A-6	Optional compul- sory	1-3	Active participation and/or presenta- tion of own research
olt507 Additional module "Specific knowledge"	A-7	Optional compul- sory	0.5 - 6	Module examination depending on the module

Upon request, the person responsible for the degree programme can acknowledge additional work in the area of Broader and Deeper Knowledge in module olt507.

Table 2) Modules in the area of Communication and Knowledge Transfer

At least 6 CP must be achieved in this subject area.

Module name	Code	Type	Credit points	Type and number of the module examinations
olt531 Didactics and communication	B-1	Optional compulsory	1-6	Active participation or teaching course
olt532 Doctorates and master students forum	B-2	Optional compulsory	1-3	Organisation and/or presentation
olt533 Scientific publishing		Compulsory	1-6	Manuscript submitted to a conference or a journal
olt131 Advanced presentation techniques	B-3	Optional compulsory	1-3	Active participation
olt534 Intercultural communication/ gender competence	B-4	Optional compulsory	1-3	Active participation
olt133 Language courses	B-5	Optional compulsory	1-3	Active participation and/or examination
olt134 Additional module "Communication"	B-6	Optional compulsory	0.5 - 6	Module examination depending on the module

Upon request, the person responsible for the degree programme can acknowledge further accomplishments in the area of Communication and Knowledge Transfer in module olt134.

Table 3) Modules in the area of Interdisciplinary Competences

At least 6 CP must be achieved in this subject area.

Module name	Code	Type	Credit points	Type and number of the module examinations
olt561 Steps to scientific publishing	C-1	Optional compulsory	1-6	Manuscript submitted to a conference or a journal
olt161 Transferable skills/Scientific career	C-2	Optional compulsory	1 – 6	Active participation
olt164 Mentoring	C-3	Optional compulsory	1-6	Active participation
olt165 Additional module "Transferable Skills"	C-4	Optional compulsory	0.5 - 6	Module examination depending on the module

The person responsible for the degree programme can, on request, acknowledge further accomplishments in the area of Interdisciplinary Competences in the module olt165.

Appendix 5: Special features of the structured doctoral programme in "Mathematics and Fundamental Physics"

Re Section 5 (1)

For doctoral students of the Research Training Group 1620 Models of Gravity, the curriculum that was countersigned in the Supervision Agreement applies. All Graduate School events (colloquia, peer groups, journal clubs, workshops and winter schools) are compulsory. Activities of doctoral centres of the external universities and institutes participating in the Research Training Group are recognized.

Note on the type and number of module examinations

* Active participation means regular, active and documented participation in courses (workshops, internships, exercises, seminars, excursions). This includes, for example, the regular submission of exercises, the preparation of solutions for exercise assignments, the logging of the various experiments and practical work sessions, the presentation and discussion of seminar papers or presentations of tasks or contents in the course in the form of short reports. These requirements are specified in the module descriptions.

Table 1): Modules in the area of Broader and Deeper Knowledge

At least 12 CP must be achieved in this subject area.

Module name	Type	Credit points	Type and number of the module examinations
olt601 Workshop	Optional compulsory	1-9	Presentation
olt602 National or international conference	Compulsory	1-9	Presentation and/or poster presentation
olt603 Research visit abroad	Optional compulsory	1-12	Presentation and/or report
olt604 Core lectures	Compulsory	1-18	Active participation
olt605 Winter School / Summer School	Optional compulsory	1-9	Active participation
olt606 Colloquia	Compulsory	1 -3	Active participation
olt607 Additional module "Special Knowledge"	Optional compulsory	0.5 - 12	Module examination depending on the module

Upon request, the person responsible for the degree programme can acknowledge additional work in the area of Broader and Deeper Knowledge in module olt607.

Table 2) Modules in the area of Communication and Knowledge Transfer

At least 6 CP must be achieved in this subject area.

Module name	Type	Credit points	Type and number of the module examinations
olt131 Advanced presentation techniques	Optional compulsory	1-3	Active participation and a presentation
olt631 Didactics	Optional compulsory	1-6	Module examination depending on the module
olt632 PhD student's seminar	Optional compulsory	1-3	Active participation in a peer-group seminar
olt633 Scientific publishing	Optional compulsory	1-6	Article submitted to peer-reviewed journal
olt133 Language course	Optional compulsory	1-6	Active participation
olt634 Journal club	Optional compulsory	1-3	Active participation
olt134 Additional module "Communication"	Optional compulsory	0.5-3	Module examination depending on the module

Upon request, the person responsible for the degree programme can acknowledge further accomplishments in the area of Communication and Knowledge Transfer in module olt134.

Table 3) Modules in the area of Interdisciplinary Competences

At least 6 CP must be achieved in this subject area.

Module name	Type	Credit points	Type and number of the module examinations
olt661 Good Scientific Practice	Compulsory	0.5-1	Active participation
olt662 Scientific Writing	Optional compulsory	1-3	Active participation
olt663 Enterprise start-up	Optional compulsory	1-2	Active participation
olt161 Transferable skills/Scientific career	Optional compulsory	0.5-12	Module examination depending on the module
Olt163 Fund-raising and project management	Optional compulsory	1-2	Active participation and/ or submitted application for third-party funding
olt664 Management Skills	Optional compulsory	1-6	Active participation
olt164 Mentoring	Optional compulsory	1-6	Active participation
olt665 Scientific Management	Optional compulsory	1-9	Active involvement in a committee

olt165 Additional module "Transferable Skills"	Optional compulsory	0.5-9	Module examination depending on the module
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The person responsible for the degree programme can, on request, acknowledge further accomplishments in the area of Interdisciplinary Competences in the module olt165.

Appendix 6: Special features of the structured doctoral programme in "Medicine and Health Sciences"

Note on the type and number of module examinations

* Active participation means regular, active and documented participation in courses (workshops, internships, exercises, seminars, excursions). This includes, for example, the regular submission of exercises, the preparation of solutions for exercise assignments, the logging of the various experiments and practical work sessions, the presentation and discussion of seminar papers or presentations of tasks or contents in the course in the form of short reports. These requirements are specified in the module descriptions.

Table 1): Modules in the area of Broader and Deeper Knowledge

At least 12 CP must be achieved in this subject area.

Module name	Code	Type	Credit	Type and number of the module examinations
olt701 Summer school/workshop	A-1	Optional compulsory	0.5 - 3	Active participation
olt702 Research visit abroad	A-2	Optional compulsory	1-6	Written report and/or minutes
olt703 Clinical Epidemiology and Biometry	A-3	Optional compulsory	0.5 - 3	Active participation
olt704 Special Topics in Health Care Research	A-4	Optional compulsory	2-6	Active participation
olt705 Research methods and techniques	A-5	Optional compulsory	2-6	Active participation
Olt 209 Laboratory Animal Science	A-6	Optional compulsory	3	Web-based written examination and active participation in practical part of the module
olt706 Research colloquium	A-7	Compulsory	2 - 3	Active participation and/or seminar lecture
olt707 Additional module "Specific knowledge"	A-8	Optional compulsory	0.5 - 6	Module examination depending on the module (active participation)

Upon request, the person responsible for the degree programme can acknowledge additional work in the area of Broader and Deeper Knowledge in module olt707.

Table 2) Modules in the area of Communication and Knowledge Transfer

At least 6 CP must be achieved in this subject area.

Module name	Code	Type	Credit	Type and number of the module examinations
olt731 Congress	B-1	Compulsory	3	Presentation and/or poster presentation

olt732 Didactics	B-2	Optional compulsory	0.5 - 6	Active participation, active teaching
olt733 Advanced presentation techniques	B-3	Optional compulsory	1-3	Active participation and two presentations
olt133 Language courses	B-4	Optional compulsory	0.5 - 6	Active participation
olt734 Additional module "Communication"	B-5	Optional compulsory	0.5 - 6	Module examination depending on the module (active participation)

Upon request, the person responsible for the degree programme can acknowledge further accomplishments in the area of Communication and Knowledge Transfer in module olt734.

Table 3) Modules in the area of Interdisciplinary Competences

At least 6 CP must be achieved in this subject area.

Module name	Code	Type	Credit points	Type and number of the module examinations
olt761 Data Privacy, ethics, good scientific practice, good clinical practice	C-1	Compulsory	0.5 - 6	Seminar lecture, report, written exam
olt762 Scientific Writing and Publishing	C-2	Compulsory	3-6	Own manuscript
olt763 Statistics	C-3	Optional compulsory	0.5 - 3	Active participation
olt764 Numeric and computer skills	C-4	Optional compulsory	0.5 - 3	Active participation
olt161 Transferable skills/Scientific career	C-5	Optional compulsory	0.5 - 9	Active participation
olt164 Mentoring	C-6	Optional compulsory	6	Active participation
olt165 Additional module "Transferable Skills"	C-7	Optional compulsory	0.5 - 6	Module examination depending on the module (active participation)

The person responsible for the degree programme can, on request, acknowledge further accomplishments in the area of Interdisciplinary Competences in the module olt165.

Appendix 7: Special features of the structured doctoral programme "Environmental Sciences and Biodiversity"

Note on the type and number of module examinations

* Active participation means regular, active and documented participation in courses (workshops, internships, exercises, seminars, excursions). This includes, for example, the regular submission of exercises, the preparation of solutions for exercise assignments, the logging of the various experiments and practical work sessions, the presentation and discussion of seminar papers or presentations of tasks or contents in the course in the form of short reports. These requirements are specified in the module descriptions.

Table 1): Modules in the area of Broader and Deeper Knowledge

At least 12 CP must be achieved in this subject area.

At least one module must be completed from the module groups A 1 and A 2.

Module name	Code	Type	Credit points	Type and number of module examinations
olt401 Summer school/congress/workshop	A-1	Compulsory	3-9	oral report and/or minutes and/or discussion of the poster and/or evaluation of a trial lecture
olt402 Lab visit abroad/field work	A-2	Optional compulsory	6 - 9	oral or written report
olt403 Special techniques in "Environmental Sciences and Biodiversity"	A-3	Optional compulsory	3-9	oral or written report or written exam
olt404 International Colloquium	A-4	Optional compulsory	3	Active participation and/discussion contributions
olt405 Subject-related colloquium	A-5	Compulsory	3	Active participation and/or seminar lecture
olt406 Additional module "Subject-specific knowledge"	A-6	Optional compulsory	3-6	Module examination depending on the module
olt408 Thesis Committee meetings	A-7	Compulsory	3 - 4	at least two Thesis Committee meetings per year, minutes of the Thesis Committee meetings

Upon request, the person responsible for the degree programme can acknowledge additional work in the area of Broader and Deeper Knowledge in module olt406.

Table 2): Modules in the area of Communication and Knowledge Transfer

At least 6 CP must be achieved in this subject area.

Module name	Code	Type	Credit points	Type and number of module examinations
olt431 Didactics /supervision of students	B-1	Optional compulsory	3-6	Development of an internship experiment and/or a didactic concept in the respective field and/or report and/or supervision of doctoral students
olt432 PhD forum	B-2	Compulsory	3	Organisation and active participation and seminar lecture
olt131 Advanced presentation techniques	B-3	Optional compulsory	3	Oral report and/or evaluation of a poster and/or evaluation of a test lecture
olt133 Language courses	B-4	Optional compulsory	2-6	Active participation
olt134 Additional module "Communication"	B-5	Optional compulsory	0.5 - 6	Module examination depending on the module

Upon request, the person responsible for the degree programme can acknowledge further accomplishments in the area of Communication and Knowledge Transfer in module olt134.

Table 3) Modules in the area of Interdisciplinary Competences

At least 6 CP must be achieved in this subject area.

Module name	Code	Type	Credit points	Type and number of module examinations
olt461 Scientific publishing	C-1	Optional compulsory	2-6	Peer-reviewed manuscript (submitted to international scientific journal)
olt161 Transferable skills/Scientific career	C-2	Optional compulsory	3-9	Active participation
olt463 Good scientific practice	C-3	Compulsory	0.5	Active participation
olt464 Scientific writing	C-4	Compulsory	1 - 2	Concept for a publication
olt163 Fundraising /project management	C-5	Optional compulsory	2	Concept for a research application
olt164 Mentoring	C-6	Optional compulsory	6	Active participation
olt165 Additional module "Transferable Skills"	C-7	Optional compulsory	0.5 - 6	Module examination depending on the module

The person responsible for the degree programme can, on request, acknowledge further accomplishments in the area of Interdisciplinary Competences in the module olt165.

Re: Section 6 Examining Board

Re: Subsection 2: The Examining Board reports to School V Mathematics and Natural Sciences of the University of Oldenburg and the institutes with a focus on environmental sciences. The Examining Board is composed of members of School V and other scientific departments of the university that focus on environmental sciences.

Appendix 8: Certificate of Doctoral Studies in German

Carl von Ossietzky Universität Oldenburg

Certificate

[Name]*)

born on:in

hat den Promotionsstudiengang/das strukturierte Promotionsprogramm**
der Graduiertenschule Naturwissenschaft, Medizin und Technik (Oltech) an der Carl von Ossietzky Univer-
sität Oldenburg erfolgreich abgeschlossen.

Für den erfolgreichen Abschluss des Promotionsstudiengangs/des strukturierten Promotionspro-
gramms** müssen verschiedene Module des Studiengangs/strukturierten Programms** im Umfang von
mindestens 30 Kreditpunkten (ECTS) belegt werden.

[Name] ... hat in den folgenden Modulen des Promotionsstudiengangs/des strukturierten Promotionspro-
gramms** insgesamt ... Kreditpunkte erreicht.

Modul	Kreditpunkte
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Themenfeld „Verbreiterung und Vertiefung von Fachwissen“

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.....

Themenfeld „Kommunikation und Wissensvermittlung“

.....
.....

Themenfeld „Fachübergreifende Kompetenzen“

.....
.....

Oldenburg, den

Der/Die* Vorsitzende des Prüfungsausschusses

*Zutreffendes einfügen, ** nicht zutreffendes streichen

Appendix 9: Certificate of Doctoral Studies in English

University of Oldenburg

Certificate

[Name] *).....born on:in
has successfully passed the PhD study programme at the Graduate
School Science, Medicine and Technology (Oltech) of the Carl von Ossietzky University Oldenburg.

A successful completion of the PhD study programme requires the participation in different modules of
the programme comprising at least credit points (ECTS).

[Name] ... achieved a total of ... credit points and participated in the following modules of the PhD study
programme.....

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Module	Credits
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Specialized Scientific Knowledge	
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Communicative Competences	
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Interdisciplinary Competences and Transferable skills	
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Oldenburg,

Chairman Examination Committee

Please note: This is an unofficial translation provided for your convenience only. It does not have any legally binding effects. Only the German version is legally binding!"
