



Official Announcements 33/2024

Regulations amending the examination regulations for the master's programs MSc. in Genetics and Biology of Aging and Regeneration, MSc. in Computational Biology, MSc. in Ecology, Evolution, and Environment, MSc. in Molecular Plant and Microbial Sciences, and MSc. in Neuroscience at the Faculty of Mathematics and Natural Sciences at the University of Cologne
dated June 6, 2024

Obligation to lodge a complaint:

Pursuant to Section 12 (5) of the HG NRW (Act on Higher Education Institutions in the Land of North Rhine-Westphalia), one year after the publication of these regulations, violations of procedural or formal requirements of the HG NRW or of the regulations or other autonomous law of the university can no longer be asserted, unless

1. the regulations have not been properly announced,
2. the rectorate has previously objected to the decision of the body adopting the regulations,
3. the formal or procedural defect has been previously reported to the university, specifying the legal provision that has been violated while stating the fact that constitutes the deficit, or
4. When the regulations were publicly announced, no reference was made to the legal consequence of the exclusion of complaints.

I M P R E S S U M

Publisher: UNIVERSITY OF
COLOGNE THE
RECTOR

Address: ALBERTUS-MAGNUS-PLATZ
50923 COLOGNE

Date of publication : JUNE 7, 2024

Regulation amending the examination regulations for the Master's programs Master of Science in Genetics and Biology of Aging and Regeneration, Master of Science in Computational Biology, Master of Science in Ecology, Evolution, and Environment, Master of Science in Molecular Plant and Microbial Sciences, and Master of Science in Neuroscience of the Faculty of Mathematics and Natural Sciences at the University of Cologne

Faculty of Mathematics and Natural Sciences at the University of Cologne

dated June 6, 2024

Pursuant to Section 2 (4) and Section 64 of the Act on Higher Education Institutions in the Land of North Rhine-Westphalia (Hochschulgesetz-HG) in the version of the Higher Education Future Act (HZG NRW) of September 16, 2014 (GV.NRW. p. 547), last amended by Article 1 of the Act on the Further Development of the Faculty of Medicine in East Westphalia-Lippe and on the Amendment of Further Higher Education Regulations of August 29, 2023 (GV. NRW. p. 1072), the Faculty of Mathematics and Natural Sciences at the University of Cologne issues the following regulations:

Article I

The examination regulations for the Master of Science in Genetics and Biology of Aging and Regeneration, Master of Science in Computational Biology, Master of Science in Ecology, Evolution, and Environment, Master of Science in Molecular Plant and Microbial Sciences, and Master of Science in Neuroscience at the Faculty of Mathematics and Natural Sciences at the University of Cologne, dated January 10, 2023 (Official Announcements 3/2023), are amended as follows:

- § 1 Scope.....
- § 2 Study objective.....
- § 3 Academic degree.....
- § 4 Admission to the program, start of studies, standard period of study, organization of studies....
- § 5 Structure and organization of the program.....
- § 6 Modules

§ 7 Credit point system and general criteria for awarding credit points.....	
§ 8 Vacant.....	
§ 9 Courses	
§ 10 Student counseling, subject-specific counseling, examination.....	
§ 11a Recognition of credits	
§ 11b Credit transfer.....	
§ 12 Types of examinations	
§ 13 Examinations using the multiple-choice method.....	
§ 14 Examination language.....	
§ 15 Registration and admission to examinations	
§ 16 Deregistration, absence, and withdrawal from examinations	
§ 17 Compensation for disadvantages and protective provisions	
§ 18 Assessment of examination performance	
§ 19 Announcement of examination results	
§ 20 Repeating module examinations	
§ 21 Master's thesis module.....	
§ 22 Examination board	
§ 23 Examiners and assessors	
§ 24 Deception, breach of order	
§ 25 Invalidity of Examination Results, Revocation of Master's Degree	
§ 26 Examination files, inspection of files	
§ 27 Completion of studies and degree documents	
§ 28 Transitional provisions	

Appendices

§ 1

Scope

¹These examination regulations govern the course of study, the examination procedure, and the academic degree to be awarded for the Master's programs Master of Science in Genetics and Biology of Aging and Regeneration, Master of Science in Computational Biology, Master of Science in Ecology, Evolution, and Environment, Master of Science in Molecular Plant and Microbial Sciences, and Master of Science in Neuroscience at the University of Cologne. ²The contents and requirements of the modules are governed in the appendices. ³The appendices are part of these examination regulations.

§ 2

Study objective

¹Taking into account the requirements and changes in the professional world and interdisciplinary references, teaching and study impart the necessary specialist knowledge, skills, and methods to students in accordance with the degree program in such a way that they are enabled to carry out scientific work, apply scientific findings and methods in professional practice, critically evaluate scientific findings, and act responsibly¹. ²The degree programs are research-oriented.

§ 3

Academic degree

Upon successful completion of the program, the academic degree Master of Science, M.Sc. is awarded.

§ 4

Admission to the program, start of studies, standard period of study, organization of studies

(1) Admission and enrollment for the program are governed by separate regulations.

(2) ¹The program can only be started in the winter semester. ²The standard period of study is four semesters.

(3) ¹The course of study is organized by the Faculty of Mathematics and Natural Sciences in such a way that the program can be completed within the standard period of study. ²The Faculty of Mathematics and Natural Sciences ensures that students receive appropriate support in organizing their studies, among other things through program-specific advising and measures to evaluate and ensuring the quality of teaching.

(4) ¹A study plan is drawn up. ²This study plan is part of the examination regulations (Appendix 2).

(5) ¹The degree programs are offered in English. ²Proof of English language proficiency is regulated in the regulations governing admission to master's programs.

¹ Students acquire the necessary knowledge and skills that enable them to practice good scientific practice and act responsibly in science in accordance with the "Regulations of the University of Cologne for Ensuring Good Scientific Practice and Dealing with Scientific Misconduct" (Official Communications of the University of Cologne 24/2011) in the currently valid version.

§ 5

Structure and organization of the program

- (1) A total of 120 credit points (LP) must be earned during the course of study in accordance with § 7.
- (2) ¹The program comprises 10 modules in accordance with § 6. ²Specifically it includes:
 - a) 4 basic modules, each worth 6 credit points, 2 advanced modules, each worth 12 credit points, 2 specialization modules, each worth 12 credit points, and one supplementary module worth 12 credit points,
 - b) the Master's thesis module, consisting of the Master's thesis worth 30 credit points and the final colloquium worth 6 credit points.
- (3) The program is conducted in accordance with the respective provisions in the appendices to these examination regulations.

§ 6

Modules

- (1) The program is structured in modules.

(2) ¹Modularization is the combination of subject areas into thematically and temporally related, self-contained teaching units that are assigned credit points. ²The content of a module must be designed so that it can generally be taught within one semester or within two semesters. ³In particularly justified cases, a module may also extend over more than two semesters.

(3) ¹Modules usually have a scope of 6, 9, 12, 15, or 18 credit points. ²Modules with 6 credit points can usually be completed in one semester, while the others can usually be completed in a maximum of two semesters.

- (4) A distinction is made between the following module types:

- a) Core modules serve to impart basic knowledge,
- b) Advanced modules build on the core modules and serve to deepen the knowledge and skills acquired,
- c) Specialization modules serve to define one's own focus through specialization.
- d) Supplementary modules are not firmly anchored in the course of study and serve to round off the individual's studies.

- (5) Modules can be offered as compulsory modules or elective modules:

- a) Compulsory modules must be studied; they are identified as such in the appendices.
- b) Elective modules must be selected from a specified list or are organized individually and are compulsory in accordance with the provisions in the appendices; they are identified as such in the appendices.

(6) ¹Regulations governing the individual modules and the examinations at the end of these modules are specified in the appendices. ²These include in particular:

- a) Identification number of the module,
- b) Title of the module,
- c) Module participation requirements,
- d) Start of the module,
- e) Frequency of the module,
- f) Duration of the module in semesters,
- g) Teaching methods used in the module and attendance requirements,
- h) Examination admission requirements,
- i) Examination form, type, and duration of the module examination, examination elements (if applicable) and their pass/fail and retake modalities,
- j) Examination language,
- k) Attempt Restrictions,
- l) Designation as a compulsory or (compulsory) elective module,
- m) Credit points for the module,
- n) Requirements for the awarding of credit points,
- o) For elective modules: proportion of the module's credit points relative to the total credit points required in the respective elective area,
- p) Weighting of the module grade in the final grade.

(7) ¹Modules are usually completed with only one module examination, which is based on the learning objectives and learning outcomes defined for the module. ²The provisions of § 12 apply to module examinations.

(8) ¹Participation in modules or elements of modules may be subject to prerequisites. ²The prerequisites are listed in the appendices.

§ 7

Credit point system and general criteria for awarding credit points

(1) ¹Successful participation in modules is certified by the awarding of credit points. ²Credit points are calculated based on the estimated amount of work required of students and are a quantitative measure of the overall workload of students. ³They include the time required to attend classes, prepare for and review the course material (classroom and self-study), prepare for exams, and complete exams, including final theses and student research projects, as well as internships (if applicable). ⁴Credit points are equivalent to credits under the European Credit Transfer and Accumulation System. ⁵One credit point corresponds to an average workload of approximately 30

hours.⁶ A standard academic workload comprises 60 credit points per year.⁷ The requirements for the successful completion of a module are specified in the appendices.⁸ The requirements may include examinations and/or coursework.⁹ In accordance with § 63 (1) of the Higher Education Act (HG), examination performances are graded achievements used to assess academic success and are generally included in the final grade of the study programme.¹⁰ They are carried out in the forms specified in § 12 and the appendices.¹¹ In contrast, coursework assessments serve to evaluate the learning progress of both students and instructors, may be repeated without limitation, and are not included in the calculation of the final grade.¹² Coursework assessments are generally provided in the following formats: electronic learning assessments, essays, exercises, homework, short presentations, minutes, reviews, test exams, thesis papers, and similar formats.¹³ In cases where coursework assessments require attendance in a course that does not mandate regular participation pursuant to § 9 (4), the chair of the examination board may, in justified exceptional cases, provide students with an alternative form of coursework assessment that does not require attendance, provided that it supports the intended learning outcomes and allows for a comparable assessment of the student's progress.

(2) ¹Credit points are awarded when the coursework and/or examinations required in the respective module have been completed or passed. ²Section 48 (5) HG applies to the acquisition of credit points during periods of leave of absence. ³Coursework and examinations from incomplete modules may be shown in the transcript of records.

§ 8 vacant

§ 9

Courses

(1) Courses are generally offered in the following forms:

- a) Lecture: Coherent presentation and teaching of basic and specialized scientific knowledge and methodological skills, usually in individual sessions distributed periodically over the course of a semester.
- b) Seminar: Discursive examination of fundamental or advanced issues.
- c) Exercise: Course accompanying a lecture or seminar. Discussion of specified exercises and consolidation of learning content through independent study or acquisition and consolidation of knowledge through working on tasks or conducting experiments.
- d) Internship: Acquisition and deepening of knowledge through working on practical tasks or conducting experiments. An internship can be carried out at the university (e.g., laboratory internship) or outside the university (e.g., as a field, company, or school internship).
- e) Excursion: Course outside the university for the purpose of observation. Students recognize subject-specific aspects in reality, identify relevant factors/structures based on observations, and practice applying the knowledge they have acquired or develop scientific conclusions.

f) Language course: Course designed to help students learn and/or improve their foreign language skills.

g) Project: Action-oriented, independent work on a complex task or problem carried out in successive phases (planning, execution, presentation of results), usually within a predetermined time frame.

h) Tutorial: Usually a supplementary course to basic courses. Working techniques are practiced and basic knowledge is deepened in small groups; students are provided with explanations of the complex content of the main course, or theoretical concepts are illustrated using practical examples.

(2) The course types listed in paragraph 1 may be offered in combination.

(3) ¹If, due to the nature or purpose of a course or for other reasons related to research or teaching, it is necessary to limit the number of participants and the number of applicants exceeds the capacity, the number of participants may be limited in accordance with § 59 paragraph 2 HG. ²In this case, priority shall be given to students who are required to attend a course at this point in their studies. ³The faculty shall regulate the details, in particular the criteria for prioritization, in its own regulations. ⁴Within the limits of the available resources, it shall be ensured that the restrictions on the number of participants do not cause any loss of time for the students.

(4) ¹Admission to an examination or the awarding of credit points may require regular attendance at courses in modules and their assessment. ²The relevant provisions are set out in the appendices. ³Requiring regular attendance is only permissible if it is proportionate and the learning objective can only be achieved through regular attendance. ⁴This is generally the case if at least one of the following reasons applies:

a) The obligation to demonstrate regular participation in modules or courses arises from the necessity of engaging in and practicing scientific discourse, which is the primary and defining element and essential learning objective of the module or course. Scientific discourse is characterized by the presentation of scientific questions and arguments and the expression of one's own position, as well as critical reflection and mutual exchange on what has been presented.

b) The obligation to demonstrate regular participation in modules or courses arises from the didactic design of the course, which requires ongoing participatory, interactive, and cooperative teaching and learning formats as well as guided reflection on content and results in order to achieve the learning objectives.

c) The obligation to demonstrate regular participation in modules or courses is stipulated by legal provisions.

d) The obligation to demonstrate regular participation in modules or courses is mandatory for reasons of occupational health and safety and laboratory safety.

e) The obligation to demonstrate regular participation in modules or courses arises from the need to acquire practical skills and abilities that cannot be acquired in any other way, as well as to test, practice, and reflect on them under supervision.

f) The obligation to demonstrate regular participation in modules or courses arises from the need to practice sign language or oral or written language skills and abilities, as well as their practical linguistic execution and reflection in the context of communicative and personal interaction under supervision.

g) The obligation to demonstrate regular participation in modules or courses arises from the need to examine content-relevant subjects and contexts in situations and to acquire practical or professionally relevant skills and abilities in a location- and situation-dependent manner, including non-university learning locations.

⁵Regular attendance is generally deemed to have been fulfilled if absences do not exceed 20%.

⁶Exceptions to this rule may be made, particularly in the case of internships and excursions. ⁷The relevant regulations are set out in the appendices. ⁸If attendance is compulsory, absences cannot be compensated for by other achievements. ⁹§ 17 (2) to (4) remains unaffected. ¹⁰Regular participation in the courses and their preparation and follow-up is recommended.

§ 10

Study counseling, subject-specific counseling, examination counseling

(1) Legally binding information on examination requirements and examination performance is provided by the chair of the examination board, his or her deputy, the head of the respective examination office, and his or her deputy.

(2) ¹The Central Student Advisory Service of the University of Cologne is available for general study advice, in particular on study options and study requirements. ²Faculty-wide advisory services are available for interdisciplinary study advice. ³The Center for Teacher Training ("Zentrum für LehrerInnenbildung") is also available for interdisciplinary advice on teacher training courses.

(3) ¹Subject-specific academic advising is provided by university lecturers and academic staff involved in teaching these degree programs during office hours. ²Office hours are announced on notice boards in the institutes and on the internet. ³Individual academic advising is recommended.

(4) The General Student Committee (AStA) and the Biology Student Council offer advice on general questions regarding the organization of studies.

(5) For specific questions from international students and for preparing to study abroad, Department 9: International Office at the University of Cologne and the Center for International Relations (ZiB) at the Faculty of Mathematics and Natural Sciences offer counseling.

(6) If you are experiencing personal difficulties related to your studies, you can seek help from the Cologne Student Union's psychosocial counseling service.

(7) Students with disabilities or chronic or mental illnesses can seek advice from the university administration (Service Center Inclusion) and the representative for students with disabilities or chronic illnesses.

(8) ¹The Examination Office is available to provide academic advising on the provisions of these regulations, in particular on the registration of individually organized modules and the Master's thesis module, as well as on planning stays abroad. ²Students who have not taken any examinations for more than two semesters or who have only one attempt left to pass a module examination or a combined module examination should contact the Examination Office for advice.

§ 11a

Recognition of credits

(1) For the purposes of these regulations, the term "recognition" means the recognition of university credits within the meaning of § 63a (1) HG.

(2) ¹Credits earned in degree programs at other state or state-recognized universities, at state or state-recognized institutions of cooperative education, or in degree programs at foreign state or state-recognized universities, or in another degree program at the same university, shall be recognized upon request, provided that there is no significant difference in the skills acquired compared to the credits being replaced; no assessment of equivalence will be conducted. ²The same applies to degrees awarded upon completion of study programmes as referred to in sentence 1.

(3) ¹If credits are recognized, the grades shall be transferred and included in the calculation of the overall grade, provided that the grading systems are comparable. ²In the case of incomparable grading systems, the notation "passed" shall be included. ³It is permissible to indicate the recognition in the certificate of examination credits earned.

(4) The recognition of credits earned elsewhere is excluded if these credits have already been earned at the University of Cologne.

(5) ¹Students must submit the documents required for recognition in electronic form. ²If there are doubts about the authenticity of the documents submitted electronically, the chairpersons of the relevant examination boards may request submission of the original documents or certified copies. ³Applications for recognition must be submitted in written form or electronically. ⁴During the recognition process, subject representatives shall generally be consulted. ⁵The decision shall generally be made within three months and communicated to the student without delay by entering the recognition information in the campus management system; reasons for refusing recognition shall be given in written form or electronically. ⁶If the recognition requested pursuant to paragraph 1 is denied, the applicant may, without prejudice to procedural or legal time limits, request a review of the decision by the Rectorate. ⁷The Rectorate shall make a recommendation to the chair of the examination board for the further processing of the application.

(6) ¹In the case of stays abroad as part of their studies, students may conclude an agreement with the relevant authorities on the credits to be recognized (learning agreement). ²A learning agreement confirms that there is no significant difference within the meaning of paragraph 2 between the credits to be earned at the foreign university and the specified credits at the University of Cologne. ³The agreed credits shall be recognized upon written or electronic application by the student, provided that the other requirements for recognition are met at the time of application.

§ 11b

Credit transfer

(1) For the purposes of these regulations, the term "credit transfer" refers to the accreditation of non-university achievements in accordance with § 63a (7) HG.

(2) ¹Upon request, knowledge and qualifications acquired outside of formal university studies may be credited on the basis of submitted documents, provided that such knowledge and qualifications are equivalent in content and level to the academic achievements they are intended to replace. ²Recognition of such non-university achievements beyond half of the required examination credits is not permitted.

(3) ¹If credits are transferred, the grades shall be adopted and included in the calculation of the overall grade, provided that the grading systems are comparable. ²In the case of incomparable grading systems, the notation "passed" shall be recorded. ³The transfer of credits shall be indicated in the certificates of credits earned.

(4) ¹Credits for achievements completed elsewhere cannot be transferred if these achievements have already been successfully completed at the University of Cologne. ²This also applies if these achievements have not yet been assessed.

(5) ¹Students must submit the documents required for credit transfer. ²If there are doubts about the authenticity of the documents submitted electronically, the chairpersons of the relevant examination boards may request the submission of the original documents or certified copies. ³Applications for credit transfer must be submitted in written form or electronically. ⁴The chair of the examination board shall decide on the credit transfer. ⁵During the credit transfer procedure, subject representatives shall generally be consulted. ⁶The decision shall generally be made within three months and communicated to the applicant without delay by entering the credit transfer information in the campus management system; reasons for rejecting a credit transfer request shall be provided in written form or electronically.

§ 12

Types of examinations

(1) ¹As a rule, modules are completed with only one module examination. ²Module examinations can be taken in written, oral, practical, or combined form. ³The form of examination must be suitable for testing the learning objectives and learning outcomes taught in the module and for demonstrating that the examinees have mastered the content and methods of the module in their essential contexts and can apply the knowledge and skills they have acquired. ⁴For modules worth 6 credit points, the module examination consists of only one examination element. ⁵For modules worth 9 credit points, the module examination may consist of a maximum of two examination elements. ⁶For modules worth 12, 15, or 18 credit points, the module examination may consist of a maximum of three examination elements. ⁷If a module examination consists of several examination elements, these usually represent different forms of examination or variations of forms of examination in accordance with paragraphs 2 to 6. ⁸The form and duration, or respectively the workload of each examination performance are specified in detail in the appendices. ⁹For serious reasons, the chair of the examination board may specify a different form of examination upon written or electronic request. ¹⁰Individual modules may also be completed without an examination performance. ¹¹The corresponding regulations are specified in the appendices.

(2) Written examinations usually take the following forms:

a) Written exam: A written exam is a test that must be taken under personal supervision or electronic supervision (video surveillance), in which specified tasks must be completed alone and independently using only the permitted aids. The duration of a written exam is usually at least 45 and at most 180 minutes and is specified for the respective exam in

the appendices. Written exams may be conducted either on paper or in electronic format. Written exams can also be conducted in whole or in part in the form of a multiple-choice procedure in accordance with § 13.

b) Term paper: A term paper is an independent written paper on a specified topic that was covered in the relevant module. The duration and scope of the term paper are determined by the workload specified in the appendices. It must be submitted in written form and/or in an electronic format specified by the examiner. The term paper must be accompanied by a declaration with the following wording: "I hereby declare that I have written this paper independently and without the use of any aids other than those specified. All passages taken verbatim or in substance from published or unpublished sources have been identified as such." If both an electronic and a paper version are submitted, the following sentence must be added: "I declare that the printed version submitted corresponds completely to the electronic version submitted."

c) A take-home exam is the independent written completion of one or more exam tasks within a specified exam period. A take-home exam can be conducted on paper or in electronic format. The duration and scope of the take-home exam are determined by the workload specified in the appendices.

d) An internship report is a written or electronic presentation and analysis of the tasks completed during an internship at or outside the university. The duration and scope of the internship report are determined by the workload specified in the appendices.

e) A portfolio consists of several tasks of different types to be completed independently and without examination supervision over a period of time. It comprises a compilation of individual documents to be prepared by the examinees. The portfolio serves to document and reflect the learning process, represents this process, and is evaluated as a whole. The portfolio is usually divided into an introduction, a collection of documents from the study of the relevant module, and a concluding reflection. Written exams and term papers within the meaning of paragraph 2 (a) and (b) cannot be part of a portfolio. A portfolio may be maintained in written or electronic form. The duration and scope of the portfolio are determined by the workload specified in the appendices.

(3) The oral examination format usually takes the following forms:

a) Oral examinations: In oral examinations, candidates must demonstrate an understanding of the interrelationships within the examination subject area and the ability to contextualize specific questions within these relationships. Oral examinations are conducted by at least two examiners or by one examiner in the presence of a knowledgeable assessor. An oral examination usually lasts at least 20 and at most 45 minutes per candidate and may be conducted entirely or partially via electronic communication. The duration, essential course, subjects, and results must be recorded in minutes. Upon request, candidates from the same degree program shall be allowed to attend oral examinations as listeners, unless a candidate objects. The examiner shall decide on the request depending on the number of seats available. Participation does not extend to the consultation and announcement of the examination results.

b) Presentation: A seminar presentation serves to present a given topic or subject matter within a limited time. The examination takes place within the framework of a course in the form of a presentation using appropriate presentation techniques. A presentation may be conducted entirely or partially in electronic form. The scope is determined by the workload specified in the appendices.

c)

d) Lecture: A lecture is used to present independently developed aspects or perspectives of a topic within a limited time frame with the aid of suitable presentation techniques. A lecture may be conducted entirely or partially via electronic communication. The scope is determined by the workload specified in the appendices. The examination usually takes place within the framework of a course.

(4) Practical examinations usually take the form of setting up and conducting experiments and examinations in which a non-textual product is created.

(5) ¹Combined examinations usually comprise different forms of examination that are suitable for testing the acquisition of different types of skills. ²The combined examination form usually takes the following forms: workplace-based assessments, simulations, presentations with written reports, papers with presentations, scenario-based simulation game, project work, and poster presentations, whereby the following applies:

a) In the case of a presentation with a written paper, the presentation is the focus of the examination. The requirements of paragraph 3(b) must be observed. The presentation with written paper may be conducted in whole or in part via electronic communication. The duration and scope of the examination are determined by the workload of the module and are specified in the appendices.

b) In the case of a term paper with presentation, the examination focuses on the in-depth elaboration of a topic. The requirements of paragraph 2(b) must be observed. The presentation serves to provide a summary in connection with the topic of the term paper. The term paper with presentation may be conducted in whole or in part via electronic communication. The duration and scope of the examination are determined by the workload of the module and are specified in the appendices.

c) A poster presentation is a condensed, large-format textual and/or visual representation of scientific research results, methods, and findings on a scientific question and can be carried out in written or electronic form. It serves to document and reflect on the learning process and is accompanied by an oral presentation of results and findings, which can be carried out in whole or in part via electronic communication. The duration and scope of the poster presentation are determined by the workload specified in the appendices.

d) A workplace-based assessment is a non-exhaustive collection of assessment tools that are suitable for observing behavior (procedures, communication, etc.) in vivo and providing qualified feedback. The assessment tools are mostly used formatively. To this end, participants work together in groups that are assigned different goals or interests. The specific implementation of the assessment and the criteria for evaluation are explained to the participants in advance. The scope is determined by the workload specified in the appendices.

e) A simulation is an examination of complex, realistic competencies, abilities, and skills conducted in vivo, carried out using suitable models or actors. The examinations can be conducted as individual examinations or in series (as so-called objectively structured examinations). The examination performance is documented on special documentation sheets (so-called checklists) by one examiner per station. The duration of the examination is determined by the workload specified in the appendices.

f) A scenario-based simulation game is a complex scenario of varying duration with realistic and at the same time open-ended problems that must be solved. Simulation games can be competitive (enforcing a group's solution) or cooperative (joint solution finding). In addition to knowledge, simulation games test planning, strategic, and

communication skills in dealing with and using technical knowledge in application scenarios. The solutions are not defined in advance, but are the result of planning, negotiations, strategies, tactics and decisions. The scope is determined by the workload specified in the appendices.

g) A project assignment involves the independent handling of a task or problem in a group or by an individual, comprising planning, implementation, and documentation of the results in written, oral, electronic, or other form. The processing time and scope are determined by the workload specified in the appendices.

(6) In appropriate cases, examinations may also be conducted as group work or as oral group examinations at the discretion of the examiner, provided that the individual contribution of each group member is clearly recognizable, clearly distinguishable, and assessable.

(7) ¹When announcing the examination date in accordance with § 15 (5), the examiners shall determine whether the examination will be conducted in person or in electronic form and whether the examination in electronic form will be accompanied by video surveillance. ²If there are serious reasons, a different form of examination (electronic or in person) may be determined after the examination date has been announced in consultation with the responsible examination board, provided that this does not disadvantage the examinees in taking their examinations. ³In the case of an examination conducted in electronic form, candidates shall be given sufficient opportunity prior to the examination to familiarize themselves with the electronic information and communication systems used in the respective examination. ⁴With regard to data protection regulations and the implementation of video surveillance, the provisions of the University of Cologne's regulations governing online examinations and video surveillance, as amended, shall apply, with the exception of § 5 (4) sentences 1 and 2.

(8) ¹Any disruptions to the examination process must be reported immediately to the chair of the examination board or to the responsible examiner in writing or electronically. ² The claim shall be excluded at the latest if more than three working days have elapsed since the examination was taken.

§ 13

Examinations using the multiple-choice method

(1) ¹An examination using a multiple-choice format is one in which the minimum performance required for the candidate to pass the examination can be achieved solely by marking or assigning the given answers. ²Exams or examination questions in multiple-choice format are only permissible if they are suitable for demonstrating that the candidate has mastered the content and methods of the module in their essential contexts and can apply the knowledge and skills acquired.

(2) ¹The exam questions must be unambiguous, clearly understandable, free of contradictions, and must allow for definite answers. They must be suitable for assessing the knowledge of the exam candidates to be examined in accordance with paragraph 1, sentence 2. ²Iterations of the same exam questions (including the answer options) are permitted. ³The deduction of points within an exam task is not permitted.

(3) If, in accordance with the faculty- or degree program-specific design of the particular multiple-choice procedure, the examiner is not the same person who prepared the examination questions, and if the examination responsibility is transferred from the examiner responsible according to the examination regulations to another person, namely the person who sets the questions, the following paragraphs 4 to 9 shall also apply.

(4) ¹The examiner selects the examination material, formulates the questions, determines the possible answers, and draws up the assessment rules and the assessment scheme in accordance with paragraph 6. ²The requirements for passing the examination must be specified in advance. ³Before the examination, the examiner conducts a review process in which the content and form of the questions are checked by a second examiner.

(5) ¹The examiner may also create a pool of equivalent exam questions from which the exam candidates receive different exam questions to answer. ²The assignment is made by random selection. ³The equivalence of the exam questions must be ensured.

(6) ¹The examination is passed if the candidate has achieved at least 60 percent of the total points available. ²If the overall average of the points achieved in an examination, minus 12 percent of the overall mean, is below 60 percent but above 50 percent of the maximum possible score, the pass mark is calculated according to this sliding scale clause. ³A grading scheme that specifies only an absolute pass mark is not permitted.

(7) ¹Examination performance shall be graded as follows: If the minimum number of points required to pass the examination has been achieved, the grade shall be

"very good"	if at least 75 percent,
"good"	if at least 50 but less than 75 percent,
"satisfactory"	if at least 25 but less than 50 percent,
"adequate"	if none or less than 25 percent

of the points available above the minimum passing score. ²When calculating the scores, 0.5 values are interpreted in favor of the examinee. ³If the minimum number of points required to pass the exam has not been achieved, the grade is "fail (5.0)".

(8) ¹If, during the evaluation of examination performance, a noticeable accumulation of errors in the answers to individual examination questions becomes apparent, the examiner shall immediately review the relevant examination questions before the examination results are announced to determine whether they are incorrect in relation to the requirements set out in paragraph 2, sentence 1. ²The questions shall be analyzed post hoc. ³The difficulty index, discrimination index, reliability, and distractor analysis provide information about the quality of the questions asked. ⁴If the review reveals that individual exam questions are flawed, they shall be re-evaluated or not taken into account when determining the exam result. ⁵The number of examination questions to be taken into account for determining the examination result shall be reduced accordingly. ⁶The reduction in the number of examination questions after publication of the results must not be disadvantage any examination candidate. ⁷If the number of points attributable to the examination question to be eliminated exceeds 20 percent of the total points available, the examination must be repeated in its entirety. ⁸This also applies if only part of an examination is to be completed using a multiple-choice format.

(9) If an examination task consists only partially of multiple-choice questions, this paragraph shall apply, with the exception of paragraph 8, sentences 7 and 8, only to the part of the examination completed using the multiple-choice method.

§ 14

Examination language

Examinations are generally conducted in English.

§ 15

Registration and admission to examinations

(1) ¹Before admission to a module examination, it is verified whether the candidate is entitled to take the examination. ²Admission to and sitting of a module examination shall be granted if the examination candidate is enrolled at the University of Cologne in the relevant degree program or is admitted as a guest student, has registered for the respective module examination in accordance with paragraphs 4 and 9 within the specified time limit, and, if applicable, fulfills any additional requirements in accordance with paragraph 2, and there are no grounds for refusal in accordance with paragraph 3.

(2) ¹Admission to a module examination may be subject to the fulfillment of certain requirements. ²The respective requirements for admission to a module examination are listed in the appendices.

(3) ¹Admission to a module examination shall be refused if the requirements under paragraph 1 or paragraph 2 are not met, if the module examination has already been passed in the same or an equivalent module at the University of Cologne, or if a repeat period has been missed. ²Admission to a module examination shall also be refused if the examination candidate has definitively failed an examination required under the examination regulations or has lost the right to be examined in the chosen degree program at a university within the jurisdiction of the Basic Law; this applies accordingly to degree programs that are very similar in content to the previous degree program. ³In addition, admission to an examination shall be refused if an examination candidate is on leave of absence pursuant to § 48 (5) HG, unless one of the exceptions specified in § 48 (5) sentences 4 and 5 HG applies.

(4) ¹Registration in the campus management system is required for each module examination; without registration, there is no entitlement to participate in or be assessed for the examination. ²Registration for a module examination must generally take place no later than six weeks before the examination date. ³Notwithstanding this, § 20 (8) applies.

(5) ¹The examination dates must be announced at the beginning of the lecture period, but no later than nine weeks before the examination date, by means of a notice board or on the Internet in a suitable form. ²Notwithstanding this, the following applies: In the case of oral module examinations, the examination periods must be announced at the beginning of the lecture period and the specific date must be announced no later than two weeks before the module examination. ³Students who are admitted to a module examination are entitled to take an examination on a published date, except in cases of force majeure. ⁴Notwithstanding this, § 20 (8) applies.

(6) At least two examination dates close together shall be offered for the completion of an examination.

(7) Students who are enrolled in several degree programs at the same time and wish to take a module examination that is part of more than one of these degree programs must specify in which degree program they will take the module examination when registering for this module examination.

(8) ¹Examinations on the content of a specific course are offered over a period of three semesters. ²Registration for the first attempt at an examination in modules, in which attendance at the course is scheduled for the first semester in accordance with Appendix 2, must take place at the latest in the fourth semester. ³If students do not take the examination, they lose their right to take the examination unless they can prove that they are not responsible for missing the deadline. ⁴If they lose their right to take the examination, this will result in de-registration in accordance with § 51 (1) No. 3 HG. ⁵For students changing courses and lateral entrants, the individual study plan issued on the basis of recognized prior achievements shall be used to calculate the deadline in accordance with sentence 2. ⁶The deadlines within the meaning of sentence 2 shall be extended for valid reasons in accordance with § 64 (3a) HG.

§ 16

Deregistration, absence, and withdrawal from examinations

(1) ¹The deadlines for deregistration from module examinations shall be announced by the examination board at least nine weeks before the examination by means of a notice board or in a suitable form on the Internet. ²An examination candidate may generally deregister from the module examination without giving reasons at least two weeks before the respective examination date.

(2) ¹If an examination candidate does not take part in a module examination at a specified time and place without valid reason, or withdraws after it has commenced without valid reason, the examination performance shall be graded as "unsatisfactory (5.0)" or "failed." ²The same shall apply if an examination performance is not completed within the specified time limit. ³If an examination is conducted electronically, the examination performance shall only be considered to have been completed if the electronic transmission to the responsible office has been completed in full by the end of the specified time limit.

(3) ¹If an examination candidate fails to attend a module examination or withdraws from the module examination after it has begun, the chair of the examination board may, in the case of valid reasons, refrain from grading the examination performance as "unsatisfactory (5.0)" or "failed." ²The same applies if an examination performance is not completed within the specified processing time. ³The reasons given for the absence or withdrawal must be reported to the chair of the examination board immediately in writing or electronically and must be substantiated. ⁴In the event of illness, a medical certificate must be submitted. ⁵In cases of doubt, a medical certificate from an officially designated physician may be required; the costs shall be borne by the university. ⁶The same applies in the case of a certified illness of a child to be cared for by an examination candidate, or of a spouse, registered life partner, direct relative, or first-degree relative by marriage requiring care.

§ 17

Compensation for disadvantages and protective provisions

(1) The special needs of students with disabilities, chronic or mental illnesses, and students who are subject to maternity protection provisions must be taken into account in order to ensure equal opportunities.

(2) ¹If an examination candidate can credibly demonstrate that he or she is unable to participate in a module examination in the prescribed form or to the prescribed extent due to a prolonged or permanent illness or disability, he or she shall be granted compensation for disadvantages upon written or electronic application to the chair of the examination board. ²In such cases, the submission of a medical certificate from a specialist may be required. ³This applies accordingly with regard to deadlines and dates, as well as obligations to attend courses and complete coursework.

(3) ¹The protective provisions in accordance with the provisions of maternity protection law and in accordance with the time limits of the Federal Parental Allowance and Parental Leave Act in its currently valid version may be invoked upon request; in such cases, module examinations may be taken despite leave of absence. ²If an examination candidate can credibly demonstrate that she is unable to participate in a module examination in the prescribed form or to the prescribed extent due to maternity protection provisions, she shall be granted compensation for disadvantages upon written or electronic application to the chair of the examination board. ³For this purpose, the submission of a medical certificate from a specialist may be required. ⁴This applies accordingly with regard to deadlines and dates, as well as obligations to participate in courses and to complete coursework. ⁵The application must be submitted immediately after the conditions have been met.

(4) ¹Special circumstances arising from the need to care for or provide for a spouse, registered civil partner, a direct relative, or a first-degree relative by marriage shall be taken into account appropriately, particularly with regard to deadlines and dates as well as attendance requirements for courses. ²The application must be submitted immediately after the conditions are met.

(5) ¹Applications pursuant to paragraphs 2 to 4 must be comprehensively justified by the examination candidate, who must provide appropriate evidence. ²Applications must be submitted to the chair of the examination board within a reasonable period of time before the performance is to be rendered. ³Unless a change in the nature of the illness or disability is to be expected, the compensation for disadvantages shall extend to all examinations to be taken in the course of the program and to the acquisition of participation requirements.

§ 18

Assessment of examination performance

(1) ¹Examination performance shall be graded by the examiners or assessed as "pass" or "failed". ²The following grades shall be used:

1 = very good: an excellent performance;

2 = good: performance significantly above average requirements;

3 = satisfactory: performance that meets average requirements;

4 = adequate: a performance that still meets the requirements despite its shortcomings;

5 = poor: a performance that no longer meets the requirements due to significant shortcomings.

³Intermediate values for differentiated assessment are formed by lowering or raising the individual grades in increments of 0.1. ⁴Grades of 0.9 and below, 4.1 to 4.9, and 5.1 and above are excluded. ⁵An examination is passed if it is graded "sufficient (4.0)" or better or if it is graded "pass".

(2) ¹The master's thesis and the associated colloquium, as well as examinations for which there is no possibility of compensation in the event of final failure, are assessed by two examiners; the appointment is made by the chairperson of the examination board. ²If an exam performance is graded by two or more examiners, the grade for the exam performance is calculated as the arithmetic mean of the individual grades. ³If, in the case of written examinations based on the two-examiner principle, the difference between the individual assessments is more than 1.0 grade points, or if only one of the two individual assessments is "poor (5.0)", the chair of the examination board shall appoint a third examiner. ⁴In this case, the grade is calculated as the arithmetic mean of the three individual assessments. ⁵If the mean value is lower than "sufficient (4.0)", the examination performance shall be graded as "sufficient (4.0)" if two individual assessments are "sufficient (4.0)" or better. ⁶If two individual assessments are "poor (5.0)", the examination performance shall be assessed as "poor (5.0)", irrespective of the arithmetic mean.

(3) If a written examination performance that is graded as "pass" or "fail" is assessed by two examiners, and the two examiners' assessments differ, the chair of the examination board shall appoint a third examiner to determine the final assessment.

(4) ¹In the case of combined forms of examination in accordance with § 12 (6), an overall assessment of the examination performance shall be made. ²In the case of grading, the grade shall be reported in accordance with paragraph 1.

(5) If a module examination consists of several examination elements, the assessment shall be carried out in accordance with the provisions set out in the appendices.

(6) *Unassigned*

(7) ¹The overall grade for the degree program is calculated as the weighted arithmetic mean of the module grades and the grade for the master's thesis module in accordance with the weighting specified in the appendices. ²The provisional overall grade for the degree program is calculated as the weighted arithmetic mean of the grades already available for successfully completed or recognized modules. ³If more modules are completed than required by these examination regulations, the calculation of the overall grade shall be based on the passed examination performances from the compulsory modules as well as from the compulsory elective modules in chronological order according to the examination date recorded in the campus management system. ⁴The remaining passed elective modules are shown as additional examinations on the transcript of records.

(8) ¹Grades are shown with one decimal place and are used in this form for further calculations; all further decimal places are deleted without rounding. ²The overall grade for the degree program is shown with two decimal places in the transcript of records. ³All further decimal places are deleted without rounding.

(9) Grades that are calculated as average values are as follows:

- from 1.0 to 1.5 = very good;
- from 1.6 to 2.5 = good;
- from 2.6 to 3.5 = satisfactory;
- from 3.6 to 4.0 = adequate;
- above 4.0 = poor.

(10) If all grades are "very good" in accordance with paragraph 9 and the weighted average of the grades according to the appendix is 1.3 or better, the overall grade "*with distinction*" is awarded.

§ 19

Announcement of examination results

(1) ¹The assessment of examination performance is usually announced to the examination candidates within eight weeks by entering the assessment results into the campus management system. ²If there is a deviation from this rule, the reasons must be recorded. ³The result of an oral examination shall be communicated to the examination candidate immediately after the examination.

(2) The decision regarding the final failure of an examination or a master's thesis shall be formally sent to the examination candidate at the postal address stored in the campus management system or sent electronically, together with information on the right to appeal.

§ 20

Repeating module examinations

(1) ¹Failed module examinations may be repeated. ²Notwithstanding the provisions of § 21 (11), the number of examination attempts per module may be limited to three. ³Further details are governed in the provisions in the appendices. ⁴With regard to all modules of the master's program in which the number of examination attempts is limited to three, a total of two additional examination attempts are permitted. ⁵In addition, examination candidates who have earned at least 90 credit points are granted one further additional examination attempt. ⁶If an examination is not passed after exhausting the two additional examination attempts and, if applicable, the further examination attempt pursuant to sentence 5, the program is definitively failed, resulting in de-registration from the program. ⁷The additional examination attempts pursuant to sentences 4 and 5 do not apply to the repetition of the master's thesis and the final colloquium.

(2) ¹If an examination candidate has failed a module examination for which the number of examination attempts is limited to three in accordance with paragraph 1 sentence 2 for the third time, the chair of the examination board shall notify the candidate in writing or electronically whether it is possible to take additional examination attempts for this examination in accordance with paragraph 1 sentences 4 and 5. ²If the examination candidate is subsequently entitled to an additional examination attempt in accordance with paragraph 1, sentence 5, he or she shall receive separate notification of this. ³In the case of additional examination attempts, the module examination must be successfully completed no later than two years after receipt of the notification in accordance with sentence 1 or sentence 2. ⁴If the respective module examination is not offered at least twice during this period, the deadline shall be extended by a further year. ⁵If the deadline is missed for reasons for which the examination candidate is responsible, the module examination shall be deemed to have been definitively failed, resulting in de-registration from the degree program.

(3) The following applies to additional examination attempts in compulsory elective modules: If an examination candidate has failed a module examination in a compulsory elective module for which the number of examination attempts is limited to three in accordance with paragraph 1 sentence 2 for the third time, additional examination attempts must be taken in the same compulsory elective module.

(4) Additional examination attempts may only be granted for a module examination if none of the examination attempts in the module in question were failed due to cheating or a violation of regulations in accordance with § 24.

(5) ¹Before taking a first additional examination attempt in accordance with paragraph 1, it is strongly recommended that the candidate take advantage of counseling opportunities: ²For this purpose, the examination candidate will receive a written or electronic invitation to counseling, which also provides information about the counseling options available.

(6) ¹If a module examination consists of several examination elements, the following applies: ²All examination elements must be graded "pass" or "sufficient (4.0)" or better. ³All examination elements of the module examination that are graded "poor (5.0)" or "failed" must be repeated. ⁴Paragraphs 1 to 4 apply accordingly to examination elements.

(7) In the case of repeat examinations, the chair of the examination board may, at the request of the examiner, specify a different form of examination or different characteristics of the respective form of examination.

(8) In justified cases, the deadlines specified in § 15 paragraphs 4 and 5 may be deviated from for repeat examinations.

(9) The repetition of a master's thesis shall be carried out in accordance with § 21 (12).

(10) Repeating passed module examinations is not permitted.

§ 21

Master's thesis module

(1) The master's thesis is an examination in the form of an independently written paper, which is intended to demonstrate that the examination candidate is able to scientifically address and reflect on a thematically limited problem from the subject area of the degree program using the necessary methods within a specified period of time.

(2) ¹The master's thesis is written during the course of study. ²30 credit points are awarded for the master's thesis. ³The requirements for admission to the master's thesis are listed in the appendices.

(3) Vacant

(4) ¹In accordance with § 23 (3), the chair of the examination board appoints an examiner to set the topic of the master's thesis (topic setter) and appoints another examiner for a second assessment (second assessor); In exceptional cases justified on academic grounds, in particular in the case of externally conducted master's theses, the chair of the examination board may, at the request of the student, appoint a third examiner, provided that this person fulfills the requirements of § 65 (1) HG. ²The examination candidate has the right to make suggestions regarding the topic and the choice of examiner. ³The chair of the examination board shall notify the candidate of the topic in writing or electronically, stating the deadline by which the master's thesis must be submitted. ⁴The date on which the topic is issued shall be officially recorded. ⁵The topic may be returned once within four weeks of being issued.

(5) ¹The processing time for the master's thesis is a maximum of 6 months, beginning with the assignment of the topic. ²The topic of the master's thesis must be of such content and scope that it can be completed within the period specified in sentence 1. ³Upon written or electronic request, the chair of the examination board may grant an extension of up to four weeks; the request must be submitted to the Examination Office before the deadline expires. ⁴Such an individual case

shall be assumed in particular if there is a significant impairment of performance relevant to examination law, which must be proven, or in the event of circumstances that significantly impair the candidate's ability to take the examination, for which they are not responsible and which are directly related to the content of the master's thesis. ⁵The decision on whether a justified individual case exists lies with the chair of the examination board. ⁶In the case of a decision in accordance with the last half-sentence of sentence 5, he or she shall hear the person who proposed the topic before making a decision.

(6) The master's thesis must be written in English.

(7) ¹The provisions of good scientific practice apply to the preparation of the master's thesis. ²The master's thesis may not have been submitted in the same or a similar form as part of another examination. ³If this provision is violated, the thesis will be graded as "unsatisfactory (5.0)". ⁴The decision is made by the examination board.

(8) ¹The master's thesis shall contain a list of the resources used. ²In addition, a declaration with the following wording must be attached: "I hereby declare that I have written this thesis [*title of the thesis*] independently and without the use of resources other than those specified. ³All passages that have been taken verbatim or paraphrased from published and unpublished third-party writings are identified as such. ⁴The thesis has not been submitted in the same or a similar form as part of another examination." ⁵If, in addition to the electronic version, a paper version is submitted in accordance with paragraph 9, sentence 3, the following sentence must be added: "I certify that the submitted print version corresponds completely to the submitted electronic version." ⁶If the master's thesis involves the collection of raw data or the analysis of such data, or if the reproducibility of the results presented in the master's thesis requires the availability of data analyses, test protocols, or sample material, the following sentence must be added to the declaration: "I certify that raw data, data analyses, test protocols, or sample material have been secured in accordance with the principles of good scientific practice and are accessible to the head of the working group in which the master's thesis was carried out." ⁷If the affidavit has been made falsely, the legal consequences pursuant to § 63 (5) HG may apply.

(9) ¹The master's thesis must be submitted in electronic form (PDF/A only) to the relevant examination office by the deadline; the date of submission must be officially recorded. ²If the master's thesis is not submitted by the deadline, it will be graded as "unsatisfactory (5.0)". ³When submitting the master's thesis, the examination candidate must be enrolled in the corresponding degree program or admitted as a guest student.

(10) ¹The candidate will generally be notified of the grade for the master's thesis within eight weeks of submission by posting the grade information in the campus management system. ²Any deviations from this rule must be officially recorded.

(11) ¹A master's thesis that has been graded "fail (5.0)" or is considered to be a fail may be repeated once with a new topic. ²Registration for the repeat must take place within 6 months. ³If an examination candidate misses this deadline, the examination is definitively failed, unless he or she can prove that he or she is not responsible for missing the deadline. ⁴The deadline is extended for valid reasons in accordance with § 64 (3a) HG. ⁵§ 17 remains unaffected. ⁶A second retake of a failed master's thesis is not permitted. ⁷If a master's thesis is failed after a single retake, the degree program is definitively failed. ⁸Retaking a passed master's thesis is not permitted.

(12) ¹The decision regarding the failure of the master's thesis shall be formally delivered to the examination candidate by the chair of the examination board to the postal address stored in the campus management system or electronically. ²The decision shall be accompanied by information on the right of appeal.

(13) ¹The second part of the "Master's thesis" module is a final colloquium. ²Six credit points are awarded for the final colloquium. ³As a rule, the candidate's thesis supervisor and second examiner participate in the candidate's final colloquium as examiners, as well as a knowledgeable assessor as the recording secretary. ⁴If a third assessor has been appointed, he or she may participate in the final colloquium. ⁵The right to attend does not extend to the discussion of the examination results. ⁶Students from the same degree program may be admitted as listeners at the request of the candidate. ⁷Members of the institute where the master's thesis was written and members of the Faculty of Mathematics and Natural Sciences may be admitted as observers at the request of the examiners, provided that the candidate does not object. ⁸The participation of observers does not extend to the consultation and announcement of the examination results. ⁹The final colloquium may take place no earlier than two working days after the examination office has received the reviews for the master's thesis and only if the master's thesis has been graded with at least "sufficient (4.0)". ¹⁰It should generally take place no later than two weeks after completion of the master's thesis evaluation process. ¹¹The final colloquium lasts at least 45 minutes and no more than one hour. ¹²It begins with a 20-minute presentation by the candidate in English on the most important findings of their master's thesis. ¹³This is followed by a discussion between the examiners and the candidate on the scientific and methodological-technical aspects of the master's thesis and its integration into the broader academic context. ¹⁴Each examiner proposes a grade. ¹⁵The overall grade is calculated as the arithmetic mean of the proposed grades. ¹⁶Only the first decimal place is taken into account. ¹⁷A record must be prepared documenting the key contents of the final colloquium and the examination result. ¹⁸A failed final colloquium may be repeated once. ¹⁹If the repeat is also failed, the degree program is definitively failed. ²⁰The final colloquium usually takes place in person. ²¹It may be conducted entirely or partially via electronic communication with the consent of all parties involved.

§ 22

Examination Board

(1) ¹The Faculty Board of the Faculty of Mathematics and Natural Sciences shall elect an examination board for the degree program governed by these regulations. ²The examination board is responsible for all modules governed by these regulations. ³For polyvalent modules, the provisions of the faculty offering the module shall apply.

(2) ¹The examination board shall ensure that the provisions of these regulations, including their appendices, are complied with. ²In particular, it shall decide on admissions to examinations, the proper conduct of examinations, the appointment of examiners and assessors, withdrawal from examinations, cheating and misconduct, appeals against examination results, decisions on compensation for disadvantages and protective provisions, the invalidity of examination results, and the revocation of degrees. ³It reports to the Faculty of Mathematics and Natural Sciences on the development of the examination system in the degree program as necessary and, if necessary, makes suggestions for changes to these regulations within the framework of quality assurance. ⁴Provisions of these regulations regarding the responsibilities of the chair of the examination board remain unaffected by this.

(3) ¹The examination board consists of the following 12 voting members:

1. the chairperson from the group of university teachers,
2. 6 other members from the group of university teachers, whereby teachers from each degree program should be represented,

3. 2 members from the group of academic staff,
4. 1 member from the group of technical and administrative staff,
5. 2 members from the group of students.

(4) The examination board shall elect a deputy for the chairperson from among the members referred to in paragraph 2 no. 2.

(5) ¹One deputy shall be elected for each member referred to in paragraph 3, nos. 2 to 5. ²The deputies shall act if the members from the relevant group are unable to attend.

(6) The chairperson may invite other persons, in particular deputy members, to attend the meetings of the examination board, provided this appears appropriate and is not opposed by the majority of the voting members present.

(7) ¹The members and their deputies pursuant to paragraph 3 nos. 2 to 5 shall be elected separately by group by the Faculty Board of the Faculty of Mathematics and Natural Sciences. ²The groups shall have the right to propose candidates. ³The members from the group of university teachers, from the group of academic staff, and from the group of technical and administrative staff shall be elected for three years; the members from the group of students shall be elected for one year. ⁴Re-election is permitted. ⁵The term of office of a deputy ends with the term of office of the corresponding member. ⁶If a member or deputy in accordance with paragraph 3, nos. 2 to 5 resigns prematurely, a successor shall be elected for the remainder of the term of office.

(8) ¹The examination board shall constitute a quorum if the chairperson or his or her deputy and at least three other members from the group of university teachers and two other members entitled to vote are present. ²If the deputy chairperson chairs a meeting because the chairperson is unable to attend, his or her deputy in accordance with paragraph 4 shall participate in the meeting as a voting member. ³The examination board shall decide by a simple majority of those present who are entitled to vote. ⁴In the event of a tie, the chairperson shall have the casting vote. ⁵The members of the examination board from the group of technical and administrative staff shall only have voting rights in matters relating to teaching if they perform corresponding functions at the university and have special experience in the respective field; such experience shall be assumed in particular if the employee has the status of an examiner in accordance with § 65 paragraph 1 sentence 2 HG fulfilled. ⁶The chairperson shall decide on the fulfillment of these requirements at the beginning of the member's term of office and, in cases of doubt, the rectorate shall decide. ⁷Members from the student group shall only vote on educational-scientific decisions, in particular on the recognition of examination achievements and on appeals, if they fulfill the requirements for examiners pursuant to § 65 (1) sentence 2 HG.

(9) ¹The meetings of the examination board are not open to the public and are generally held in person. ²The chairperson may decide that the meeting shall take place via electronic communication. ³The decision shall become invalid if at least half of the members of the examination board object to it before the meeting. ⁴In the case of meetings held via electronic communication, the chairperson may also decide that decisions shall be made via electronic communication; this may be deviated from by a resolution of the committee. ⁵Paragraph 8, sentence 1 shall apply to meetings held via electronic communication, with the proviso that "present" means participation in the meeting. ⁶Resolutions may also be adopted by written circulation procedure, provided that no member objects. ⁷The members and their deputies are subject to official secrecy. ⁸Unless they are in public service, they shall be bound to secrecy by the chairperson.

(10) ¹The members of the examination board and their deputies have the right to be present during examinations. ²The right to be present does not extend to the discussion of the examination results.

(11) The examination office of the Department of Biology of the Faculty of Mathematics and Natural Sciences is available to the examination board for the organizational handling of the examination procedures.

(12) ¹The chair of the examination board, or in his or her absence the deputy, represents the examination board, convenes the meetings of the examination board, chairs them, and implements the decisions taken there. ²The examination board may delegate the performance of its tasks in all normal cases to the chair. ³In urgent cases, the chairperson may conduct a vote by circular resolution. ⁴The chairperson may make decisions that cannot be postponed on behalf of the examination board; the examination board must be notified of this immediately; the examination board may overturn the decision; any rights of third parties that have already arisen remain unaffected. ⁵Decisions on appeals shall be reserved for the Examination Board. ⁶Minutes shall be taken at each meeting of the Examination Board.

(13) The chairperson of the examination board shall publish orders, the setting of dates and deadlines, and other announcements by the examination board that do not only concern individual persons with legally binding effect on the faculty website, via the campus management system, or by other suitable means.

§ 23

Examiners and assessors

(1) ¹Examiners are appointed from among university lecturers and independent group leaders² as well as from among the members and affiliates of the Faculty of Mathematics and Natural Sciences, the Faculty of Medicine, the Max Planck Institutes for Plant Breeding Research, Biology of Ageing, and Metabolism Research, and the Jülich Research Center in accordance with § 65 (1) HG. ²Examination performances may only be assessed by persons who themselves possess at least the qualification to be determined by the examination or an equivalent qualification. ³Retired examiners may be reappointed as examiners for a period of one year after the end of the semester in which they left the University of Cologne or the scientific institutions referred to in sentence 1, were relieved of their duties, or retired. ⁴Only persons who have obtained a relevant degree at a university at least at the master's level or an equivalent qualification may be appointed as assessors.

(2) ¹The examination board appoints the examiners and assessors. ²It may delegate the appointment to the chairperson. ³The appointment of examiners and assessors shall be officially recorded. ⁴Notwithstanding the provision in sentence 1, a lecturer shall be the examiner for the course for which he or she is responsible and which he or she teaches, unless the examination board appoints a different examiner.

² An independent group leader is employed full-time at a scientific institution, conducts independent research, and heads their own research group. They have personnel and budgetary responsibility, as well as the necessary basic equipment or access to infrastructure and all necessary resources. He or she has been selected in a competitive process and is in the process of qualifying for scientific leadership positions, especially for appointment to a professorship.

(3) ¹The examination board appoints the examiners responsible for the master's thesis module from among the professors, adjunct professors, honorary professors, junior professors, and private lecturers; independent group leaders may be appointed as examiners. ²The appointment of the subject-specific examiners shall generally be made from among the teaching staff of the compulsory elective modules of the first year of study in accordance with the study plans (Appendix 2). ³In justified exceptional cases, the examination board shall decide on the appointment of additional examiners who meet the requirements of § 65 (1) HG. ⁴It may delegate the appointment to the chairperson. ⁵Examiner who have left, been relieved of their duties, or retired may be reappointed as examiners for the master's thesis for a period of one year after the end of the semester in which they left the University of Cologne. ⁶The examination board may extend this period upon justified request. ⁷It may delegate this decision to the chairperson. ⁸University teachers from an institution affiliated through a partnership or cooperation agreement may be appointed as supervisors for a master's thesis upon justified request by the university professors representing the subject. ⁹In special cases, the chair of the examination board may, upon justified request by the examiner proposing the topic, appoint university teachers who are members of another university with which no partnership agreement exists, and persons who are not university teachers, as reviewers of the master's thesis. ¹⁰The appointment of examiners for the master's thesis must be officially recorded in the files.

(4) ¹The examiners shall specify the work materials and aids permitted for the examinations they conduct and shall announce these in a timely manner, at the latest when the examination date for the respective examination is announced. ²If no agreement can be reached, the examination board shall decide.

(5) ¹Examiners are independent of instructions in their examination activities. ²They and, where applicable, the assessors are subject to official secrecy. ³Unless they are civil servants, they shall be bound to secrecy by the chair of the examination board.

§ 24

Deception, breach of order

(1) ¹If an examination candidate attempts to influence the assessment of an examination performance by deception for their own or another person's benefit, brings aids that are not permitted in the examination, or commits scientific misconduct while performing the examination, they are committing an act of deception. ²Unauthorized aids may be confiscated by the invigilators after the examination has been completed, to which the examination candidate is entitled, with the consent of the examination candidate, for the purpose of preserving evidence, or secured in an appropriate manner.

(2) ¹Depending on the severity of the act of deception referred to in paragraph 1, the examination board shall impose one of the following sanctions on the candidate:

a) a warning;

b) the candidate shall be required to repeat the examination to which the act of deception relates;

c) the examination performance to which the act of deception relates shall be graded as "poor (5.0)" or "failed";

- d) the examination to which the act of deception relates shall be declared definitively failed;
- e) the examination candidate is excluded from taking further examinations, thereby forfeiting their right to take examinations in the degree program.

²A serious violation is considered to be, in particular, the use of unauthorized aids, the (attempted) influencing of the examiner, or, in cases of plagiarism, the deliberate concealment of sources by rephrasing the original texts, changing the syntax, or using synonyms. ³A particularly serious case is considered to be, in particular, the elaborate use of technical aids such as internet-enabled mobile phones, repeated acts of deception in various examinations, organized collaboration between several persons, the adoption of an entire third-party work as one's own achievement, the falsification of scientific work, or the sabotage of examination work and the research activities of others. ⁴The sanction chosen shall be noted in the examination file.

(3) ¹If there is initial suspicion of plagiarism in a piece of coursework or an examination, the examination board may carry out further checks, in particular with the aid of plagiarism detection software, even without the express consent of the examination candidates. ²For this purpose the submission of an electronic version of the work may also be requested retrospectively. ³Storage in databases of plagiarism detection software beyond the end of the respective assessment procedure requires the express consent of the students. ⁴Consent must be given voluntarily and is not a prerequisite for exam registration, submission, or assessment. ⁵The result of the review shall be stored as part of the examination file.

(4) As a consequence of an act of deception pursuant to paragraph 1, the academic achievement in question shall be deemed not to have been achieved.

(5) ¹Anyone who disrupts an examination may be warned by the respective examiners or invigilators. ²If the warnings are ineffective or if the disruption is serious, the examination candidate may be excluded from continuing the examination. ³In this case, the examination board may grade the examination as "unsatisfactory (5.0)" or "failed". ⁴The reasons for the exclusion must be officially recorded.

(6) ¹Before the examination board makes a decision, the examination candidate must be given a legal hearing. ²The decision must be communicated to the examination candidate immediately in writing or electronically, stating the reasons and providing information on the right of appeal.

(7) ¹In addition, administrative offense proceedings may be initiated in accordance with Section 63 (5) HG. ²Anyone who intentionally attempts to influence the result of an examination for the benefit of another person is also acting in an unlawful manner.

§ 25

Invalidity of examination results, revocation of master's degree

(1) ¹If the requirements for admission to an examination were not met without the candidate having intended to deceive, and this fact becomes known only after the certificate has been issued, this deficiency shall be remedied by passing the examination. ²If the examination candidate has intentionally obtained admission under false pretences, the examination board shall decide on the legal consequences in accordance with the provisions of the Administrative Procedure Act of the State of North Rhine-Westphalia (VwVfG NRW).

(2) If an examination candidate has cheated in an examination and this fact only becomes known after the certificate has been issued, the examination board may subsequently withdraw the assessment for the examination in which the candidate cheated, in accordance with the conditions set out in § 48 VwVfG NRW, and impose a sanction appropriate to the severity of the cheating in accordance with § 24.

(3) The master's degree may be revoked if it transpires that it was obtained by deception or if essential requirements for its award were mistakenly considered to have been met.

(4) ¹The examination candidate shall be given the opportunity to comment before a decision is made in accordance with paragraphs 1 to 3. ²The examination board is responsible for the decision and shall make its decision in accordance with the provisions of the Administrative Procedure Act of the State of North Rhine-Westphalia (VwVfG NRW). ³A decision shall be excluded after a period of five years from the date of the certificate.

(5) ¹The incorrect certificate and all incorrect attachments shall be withdrawn and, if necessary, reissued. ²If the entire course of study has been declared failed, the academic degree shall be revoked by the Faculty of Mathematics and Natural Sciences and the master's certificate shall be withdrawn.

§ 26

Examination files, inspection of files

(1) ¹An examination file shall be kept for each examination candidate by the examination board. ²The examination file shall document, in particular, the examination attempts, the examination papers, the examiners' reports on them, the examination records, the examination results, grade calculations, and copies of certificates and documents. ³The examination file shall be kept in writing or wholly or partially electronically.

(2) Examination candidates may obtain information on the status of their examination results at any time, within the limits of organizational possibilities.

(3) ¹After the announcement of an examination result, each examination candidate or a corresponding authorized representative shall be granted, upon written or electronic request, electronic or physical access to their written work in this examination and the related expert opinions and correction notes of the examiners, as well as to the minutes of oral examinations. ²An examination candidate or his or her authorized representative shall be entitled to make copies or photographs of the documents free of charge during the inspection or to request them. ³The examination board shall regulate the further procedure for inspection, including a reasonable deadline for the inspection request. ⁴After the specified deadlines have expired, inspection is generally only possible if an examination candidate can prove that they are not responsible for missing the deadline. ⁵As a rule, there is no entitlement to information beyond this.

(4) ¹With the exception of the provisions in sentence 2, the examination file shall be retained until the end of the fifth year following de-registration from the respective degree program and then offered to the responsible archive; if the archive refuses to accept it, it must be destroyed. ²Written examination documents, including associated assessment documents, shall be offered to the archive two years after the assessment has been announced, provided that no legal dispute is pending; this shall apply accordingly to electronic versions; if the archive refuses to accept them, they must be destroyed. ³A register may be kept in which the conferred academic degrees and a catalogued collection of the issued certificates and diplomas are retained until the end of the fiftieth year after completion of the degree program; the second half of sentence 1 shall apply accordingly.

(5) ¹Examination questions, correction notes, and expert opinions from examiners that become known to a student may not be passed on to third parties or published if they are protected by copyright. ²If a confidentiality notice has been agreed upon for the thesis written by a student, the thesis may only be published with the corresponding approval. ³Notwithstanding this, legitimate legal interests remain unaffected, for example in the form of disclosure to a commissioned lawyer.

§ 27

Completion of studies and degree documents

(1) ¹The degree program is successfully completed when all required examinations have been passed and the credit points have been earned in accordance with § 5. ²A certificate is issued upon successful completion of the degree program. ³The certificate is signed by the chair of the examination board and contains

- a) the name of the degree program,
- b) the grades for all modules,
- c) the topic of the master's thesis,
- d) the overall grade.

⁴Grades shall be given in words and numerically. ⁵The certificate shall be issued on the date on which the last examination was taken or recognized. ⁶An English translation of the certificate shall also be issued. ⁷The German version shall be legally binding.

(2) ¹Together with the transcript, the student shall be issued with a master's degree certificate certifying the award of the degree in accordance with § 3; this shall bear the date of the transcript. ²The master's degree certificate shall be signed by the dean of the Faculty of Mathematics and Natural Sciences and by the chair of the examination board and shall bear the seal of the faculty. ³An English translation of the certificate shall also be issued. ⁴The German version is legally binding.

(3) ¹Together with the certificate and the master's degree certificate, a diploma supplement in German and English shall be issued, providing information on the subject profile of the completed degree program and the academic and professional qualifications acquired with the degree. ²Upon written or electronic request, a transcript of grades, enabling the relative ranking of the overall grade within the examination results of the degree program, will be provided. ³The grade transcript is based on the final grades from the two semesters preceding the date of issue of the certificate. ⁴The Diploma Supplement further describes the degree program completed and provides information about the faculty. ⁵The Transcript of Records is part of the Diploma Supplement.

(4) ¹If a student has not passed or has definitively failed or discontinued their studies, or if they are transferring to another university, they will be issued, upon request, with a certificate (transcript of records) detailing the examinations taken, supplementary studies and achievements, grades, and credits earned. ²If applicable, it must indicate that the student has failed or definitively failed the program.

Article II

These regulations will be published in the Official Announcements of the University of Cologne and will come into effect on the day after publication. At the same time, the examination regulations for the Master's programs Master of Science in Genetics and Biology of Aging and Regeneration, Master of Science in Computational Biology, Master of Science in Ecology, Evolution, and Environment, Master of Science in Molecular Plant and Microbial Sciences, and Master of Science in Neuroscience at the Faculty of Mathematics and Natural Sciences of the University of Cologne dated July 11, 2022 (Official Announcements 47/2022) shall cease to be in force.

Issued on the basis of the decision of the Faculty of Mathematics and Natural Sciences on January 25, 2024, and after review of its legality by the Rectorate on May 6, 2024.

Cologne, June 6, 2024

The Dean
of the Faculty of Mathematics and Natural Sciences at
the University of Cologne

signed

on behalf of University Professor Dr. Alga Zuccaro

Appendix 1.1

Specific provisions for the Master of Science in Genetics and Biology of Aging and Regeneration program at the Faculty of Mathematics and Natural Sciences at the University of Cologne

Explanation: In the first semester, four basic modules, each worth 6 credit points, must be completed (three lecture modules and one seminar module; two of the lecture modules are compulsory elective modules). In the second and third semesters, two advanced modules (subject modules) and two specialization modules (project modules), each worth 12 credit points, follow. Upon request, a subject module can be replaced by a laboratory module (subject module [type 4]). In addition, a supplementary module (elective module) worth 12 credit points must be completed (according to the study plan in the first and second semesters). The program is completed with the master's thesis module worth 30 credit points and a final colloquium worth 6 credit points in the third and fourth semesters.

Module identification number	Title of the module	Module participation requirements	Start Frequency Duration of the module	Teaching methods and participation requirements (TP)	Examination requirements / Requirements for the awarding of credit points	Examination elements Type of examination (and weighting) Duration Language of the module examination Requirements for the award of credit points (LP award)	Examination restrictions	Elective module (WP), compulsory module (P)	Credit points for the module ⁶	Total number of credits in the elective area	Weighting of the module grade in the overall grade
MN-B-GA 1	Lecture Principles of Molecular Genetics, Development, and Aging [Basic Module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Lecture	None	Examination elements: 1 Examination type: Written exam Duration: 2 hours Language: English LP allocation: Passing the examination element	None	P	6 LP		7.5/100
MN-B-A 2	Seminar Modern Techniques and Approaches in Genetics, Aging, and Regeneration Research [Basic Module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Seminar (TP, 20%) ² with exercises (TP, 20%) ³	None	Examination elements: 1 Examination type: Poster presentation Duration: 20-30 minutes Language: English LP allocation: Passing the examination element	3	P	6 LP		7.5/100

Module identification number	Title of the module	Module participation requirements	Start Frequency Duration of the module	Teaching methods and attendance requirements (TP)	Examination requirements / Requirements for the awarding of credit points	Examination elements Type of examination (and weighting) Duration Language of the module examination Requirements for the awarding of credit points (LP award)	Examination restrictions	Elective module (WP), compulsory module (P)	Credit points for the module ⁸	Total number of credits in the elective area	Weighting of the module grade in the overall grade
MN-B-B 1	Lecture Advanced Biochemistry and Molecular Medicine [Basic module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Lecture	None	Examination elements: 1 Type of examination: Written exam Duration: 2 hours Language: English LP allocation: Passing the examination element	None	WP	6 LP	12 LP	7.5/100
MN-B-C 1	Lecture Computational Biology [Basic Module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Lecture	None	Examination elements: 1 Type of examination: Written exam Duration: 2 hours Language: English LP allocation: Passing the examination element	None	WP	6 LP		7.5/100
MN-B-E 1	Lecture Ecology, Evolution and Environment [Basic module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Lecture	None	Examination elements: 1 Type of examination: Written exam Duration: 2 hours Language: English LP allocation: Passing the examination element	None	WP	6 LP		7.5/100

MN-B-N 1	Lecture Neuroscience [Basic module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Lecture	None	Examination elements: 1 Type of examination: Written exam Duration: 2 hours Language: English LP allocation: Passing the examination element	None	WP	6 LP	7.5/100
----------	---	------	--	---------	------	---	------	----	------	---------

NON BINDING ENGLISH VERSION

Module identification number	Title of the module	Module participation requirements	Start Frequency Duration of the module	Teaching methods and attendance requirements (TP)	Examination requirements / Requirements for the awarding of credit points	Examination elements Type of examination (and weighting) Duration Language of the module examination Requirements for the awarding of credit points (LP award)	Examination restrictions	Elective module (WP), compulsory module (P)	Credit points for the module ⁸	Total number of credits in the elective area	Weighting of the module grade in the overall grade
MN-B-P 1	Lecture Molecular Plant and Microbial Sciences [Basic Module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Lecture	None	Examination elements: 1 Type of examination: Written exam Duration: 2 hours Language: English LP allocation: Passing the examination element	None	WP	6 LP		7.5/100
MN-B-SM (Type 1)	Subject Module (Type 1) [Advanced Module]	None	Start: Summer semester Frequency: annually Duration: 7 weeks ⁵	Lecture; project and/or exercise (TP, 20%) ^{3,4} ; Seminar (TP, 20%) ²	None	Examination elements: 2 Examination type: Written exam (50%); Presentation (50%) Duration: 1-2 hours (written exam); 20-30 min (presentation) Language: English LP allocation: Passing all examination elements	3	WP	12 LP	24 LP	12/100
MN-B-SM (Type 2)	Subject Module (Type 2) [Advanced Module]	None	Start: Summer semester Frequency: annually Duration: 7 weeks ⁵	Lecture; project and/or exercise (TP, 20%) ^{3,4} ; Seminar (TP, 20%) ²	None	Examination elements: 2 Examination type: Presentation (50%); internship report (50%) Duration: Presentation 20-30 min, internship report 1 week Language: English LP allocation: Passing all examination components	3	WP	12 LP		12/100

Module identification number	Title of the module	Module participation requirements	Start Frequency Duration of the module	Teaching methods and attendance requirements (TP)	Examination requirements / Requirements for the awarding of credit points	Examination elements Type of examination (and weighting) Duration Language of the module examination Requirements for the awarding of credit points (LP award)	Examination restrictions	Elective module (WP), compulsory module (P)	Credit points for the module ⁸	Total number of credits in the elective area	Weighting of the module grade in the overall grade
MN-B-SM (Type 3)	Subject module (Type 3) [Advanced module]	None	Start: Summer semester Frequency: annually Duration: 7 weeks ⁵	Lecture; project and/or exercise (TP, 20%) ^{3,4} ; Seminar (TP, 20%) ²	None	Examination elements: 2 Examination type: Oral examination (50%); internship report (50%) Duration: Oral exam 20-30 min, internship report 1 week Language: English LP allocation: Passing all exam components	3	WP	12 LP		12/100
MN-B-SM [LM] (Type 4) ¹	Subject Module [Laboratory Module] (Type 4) [Advanced Module]	None	Start: year-round Duration: 7 weeks ⁵	Project (TP 20%) ⁴ ; Seminar (TP, 20%) ²	None	Examination elements: 2 Examination type: Oral examination (50%); internship report (50%) Duration: Oral exam 20-30 min, internship report 1 week Language: English LP allocation: Passing all examination elements	3	WP	12 LP		12/100
MN-B-EM ¹	Elective module [Supplementary module]	None	Start: year-round Duration: Not specified	Depends on the individual choice of the student	Depends on the individual choice of the student	LP allocation: Proof of participation	None	WP	12 LP		0/100

Module identification number	Title of the module	Module participation requirements	Start Frequency Duration of the module	Teaching methods and attendance requirements (TP)	Examination requirements / Requirements for the awarding of credit points	Examination elements Type of examination (and weighting) Duration Language of the module examination Requirements for the awarding of credit points (LP award)	Examination restrictions	Elective module (WP), compulsory module (P)	Credit points for the module ⁸	Total number of credits in the elective area	Weighting of the module grade in the overall grade
MN-B-PM ¹ (Type 1)	Project module [Specialization Module]	None	Start: year-round Duration: 7 weeks ⁵	Project	None	Examination elements: 1 Type of examination: Internship report Duration: 1 week Language: English LP allocation: Passing the examination element	3	WP	12 LP	24 LP	3/100
MN-B-PM ¹ (Type 2)	Project module [Specialization Module]	None	Start: year-round Duration: 7 weeks ⁵	Project	None	Examination elements: 1 Type of examination: Presentation Duration: 20-30 min Language: English LP allocation: Passing the examination element	3	WP	12 LP		
MN-B-MT	Master's Thesis [Specialization Module]	Successful completion of all other modules in the degree program	Start: year-round Duration: 7 months	Project	A grade of at least "sufficient" for the master's thesis is a prerequisite for the final colloquium.	Examination elements: 2 Examination type: Master's thesis (75%); final colloquium (25%) Duration: Master's thesis 6 months, final colloquium 45 min Language: English LP allocation: Passing all examination elements	2	P	36 LP		40/100

¹No more than two of these modules may be supervised by the same examiner.

²The obligation to provide evidence of regular participation in seminars arises from Section 9 (4) sentence 4 a).

³The obligation to provide evidence of regular participation in exercises arises from § 9 (4) sentence 4 e). Furthermore, according to § 9 (

4 sentence 4 d), participation in safety training is mandatory.

⁴The obligation to participate regularly in projects in a verifiable manner arises from Section 9 (4) sentence 4 e). Furthermore, pursuant to Section 9 (4 sentence 4 d), participation in safety training is mandatory.

⁵Preparation times prior to the official start of the module are not taken into account.

NON BINDING ENGLISH VERSION

Appendix 1.2

Specific provisions for the Master of Science in Computational Biology program at the Faculty of Mathematics and Natural Sciences at the University of Cologne

Explanation: In the first semester, four basic modules, each worth 6 credit points, must be completed (three lecture modules and one seminar module; one of the lecture modules is a compulsory elective module). In the second and third semesters, two advanced modules (subject modules) and two specialization modules (project modules), each worth 12 credit points, follow. Upon request, a subject module can be replaced by a laboratory module (subject module [type 3]). In addition, a supplementary module (elective module) worth 12 credits must be completed (according to the study plan in the first and second semesters). The program is completed with the master's thesis module worth 30 credits and a final colloquium worth 6 credits in the third and fourth semesters.

Module identification number	Title of the module	Module participation requirements	Start Frequency Duration of the module	Teaching methods and attendance requirements (TP)	Examination requirements / Requirements for the awarding of credit points	Examination elements Type of examination (and weighting) Duration Language of the module examination Requirements for the awarding of credit points (LP award)	Examination restrictions	Elective module (WP), compulsory module (P)	Credit points for the module ⁸	Total number of credits in the elective area	Weighting of the module grade in the overall grade
MN-B-C 1	Lecture Computational Biology [Basic module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Lecture	None	Examination elements: 1 Type of examination: Written exam Duration: 2 hours Language: English LP allocation: Passing the examination element	none	P	6 LP		7.5/100
MN-B-GA 1	Lecture Principles of Molecular Genetics, Development, and Aging [Basic Module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Lecture	None	Examination elements: 1 Type of examination: Written exam Duration: 2 hours Language: English LP allocation: Passing the examination element	None	P	6 LP		7.5/100

Module identification number	Title of the module	Module participation requirements	Start Frequency Duration of the module	Teaching methods and attendance requirements (TP)	Examination requirements / Requirements for the awarding of credit points	Examination elements Type of examination (and weighting) Duration Language of the module examination Requirements for the awarding of credit points (LP award)	Examination restrictions	Elective module (WP), compulsory module (P)	Credit points for the module ⁸	Total number of credits in the elective area	Weighting of the module grade in the overall grade
MN-B-C2	Seminar Computational Biology [Basic module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Seminar (TP, 20%) ² with exercises (TP, 20%) ³	Presentation	Examination elements: 1 Examination type: Portfolio Language: English Duration: 12 weeks, 4 hours per week LP allocation: Passing the examination element	3	P	6 LP		7.5/100
MN-B-B1	Lecture Advanced Biochemistry and Molecular Medicine [Basic Module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Lecture	None	Examination elements: 1 Type of examination: Written exam Duration: 2 hours Language: English LP allocation: Passing the examination element	None	WP	6 LP	6 LP	7.5/100
MN-B-E1	Lecture Ecology, Evolution and Environment [Basic module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Lecture	None	Examination elements: 1 Type of examination: Written exam Duration: 2 hours Language: English LP allocation: Passing the examination element	None	WP	6 LP		7.5/100

MN-B-N 1	Lecture Neuroscience [Basic module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Lecture	None	Examination elements: 1 Examination type: Written exam Duration: 2 hours Language: English LP points: Passing the examination element	None	WP	6 LP	7.5/100
----------	---	------	--	---------	------	--	------	----	------	---------

NON BINDING ENGLISH VERSION

Module identification number	Title of the module	Module participation requirements	Start Frequency Duration of the module	Teaching methods and attendance requirements (TP)	Examination requirements / Requirements for the awarding of credit points	Examination elements Type of examination (and weighting) Duration Language of the module examination Requirements for the awarding of credit points (LP award)	Examination restrictions	Elective module (WP), compulsory module (P)	Credit points for the module ⁸	Total number of credits in the elective area	Weighting of the module grade in the overall grade
MN-B-P 1	Lecture Molecular Plant and Microbial Sciences [Basic module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Lecture	None	Examination elements: 1 Type of examination: Written exam Duration: 2 hours Language: English LP allocation: Passing the examination element	None	WP	6 LP		7.5/100
MN-B-SM (Type 1)	Subject Module (Type 1) [Advanced Module]	None	Start: Summer semester Frequency: annually Duration: 7 weeks ⁵	Lecture; project and/or exercise (TP, 20%) ^{3,4} ; Seminar (TP, 20%) ²	None	Examination elements: 2 Examination type: Written exam (50%); Presentation (50%) Duration: 2 hours (written exam) 20-30 min (presentation) Language: English Credit points: Passing all examination elements	3	WP	12 LP	24 LP	12/100
MN-B-SM (Type 2)	Subject Module (Type 2) [Advanced Module]	None	Start: Summer semester Frequency: annually Duration: 7 weeks ⁵	Lecture; project and/or exercise (TP, 20%) ^{3,4} ; Seminar (TP, 20%) ²	None	Examination elements: 2 Examination type: Oral examination (50%); portfolio (50%) Duration: 20-30 min oral exam; 6 weeks, 4 hours per week portfolio Language: English LP awarded: Passing all examination elements	3	WP	12 LP		12/100

Module identification number	Title of the module	Module participation requirements	Start Frequency Duration of the module	Teaching methods and attendance requirements (TP)	Examination requirements / Requirements for the awarding of credit points	Examination elements Type of examination (and weighting) Duration Language of the module examination Requirements for the awarding of credit points (LP award)	Examination restrictions	Elective module (WP), compulsory module (P)	Credit points for the module ⁸	Total number of credits in the elective area	Weighting of the module grade in the overall grade
MN-B-SM [LM] (Type 3) ¹	Subject Module [Laboratory Module] (Type 3) [Advanced module]	None	Start: year-round Duration: 7 weeks ⁵	Project (TP 20%) ⁴ ; Seminar (TP, 20%) ²	None	Examination elements: 2 Examination type: Oral examination (50%); internship report (50%) Duration: Oral exam 20-30 min, internship report 1 week Language: English LP allocation: Passing all examination elements	3	WP	12 LP		12/100
MN-B-EM ¹	Elective module [Supplementary module]	None	Start: year-round Duration: Not specified	Depends on the individual choice of the student	Depends on the individual choice of the student	LP allocation: Proof of participation	None	WP	12 LP		0/100
MN-B-PM ¹ (Type 1)	Project Module [Specialization module]	None	Start: year-round Duration: 7 weeks ⁵	Project	None	Examination elements: 1 Type of examination: Internship report Duration: 1 week Language: English LP allocation: Passing the examination element	3	WP	12 LP	24 LP	3/100

Module identification number	Title of the module	Module participation requirements	Start Frequency Duration of the module	Teaching methods and attendance requirements (TP)	Examination requirements / Requirements for the awarding of credit points	Examination elements Type of examination (and weighting) Duration Language of the module examination Requirements for the awarding of credit points (LP award)	Examination restrictions	Elective module (WP), compulsory module (P)	Credit points for the module ⁶	Total number of credits in the elective area	Weighting of the module grade in the overall grade
MN-B-PM ¹ (Type 2)	Project module [Specialization module]	None	Start: year-round Duration: 7 weeks ⁵	Project	None	Examination elements: 1 Type of examination: Presentation Duration: 20-30 min Language: English LP allocation: Passing the examination element	3	WP	12 LP		3/100
MN-B-MT	Master's Thesis [Specialization Module]	Successful completion of all other modules in the degree program	Start: year-round Duration: 7 months	Project	A grade of at least "sufficient" for the master's thesis is a prerequisite for the final colloquium	Examination elements: 2 Examination type: Master's thesis (75%); final colloquium (25%) Duration: Master's thesis 6 months, final colloquium 45 min Language: English LP allocation: Passing all examination elements	2	P	36 LP		40/100

¹No more than two of these modules may be supervised by the same examiner.

²The obligation to provide evidence of regular participation in seminars arises from Section 9 (4) sentence 4 a).

³The obligation to provide evidence of regular participation in exercises arises from § 9 (4) sentence 4 e). Furthermore, according to § 9 (4) sentence 4 d), participation in safety training is mandatory.

⁴The obligation to participate regularly in projects in a verifiable manner arises from Section 9 (4) sentence 4 e). Furthermore, pursuant to Section 9 (4) sentence 4 d), participation in safety training is mandatory.

⁵Preparation times prior to the official start of the module are not taken into account.

Appendix 1.3

Specific provisions for the Master of Science in Ecology, Evolution and Environment program at the Faculty of Mathematics and Natural Sciences at the University of Cologne

Explanation: In the first semester, four basic modules, each worth 6 credit points, must be completed (two lecture modules, one seminar module, and one tutorial module; one of the lecture modules is an elective module). In the second and third semesters, two advanced modules (subject modules) and two specialization modules (project modules), each worth 12 credit points, follow. A subject module can be replaced by a laboratory module (subject module [type 3]) upon request. In addition, a supplementary module (elective module) worth 12 credits must be completed (according to the study plan in the 1st to 2nd semester). The program is completed with the Master's thesis module worth 30 credit points and a final colloquium worth 6 credit points in the 3rd and 4th semesters.

Module identification number	Title of the module	Module participation requirements	Start Frequency Duration of the module	Teaching methods and attendance requirements (TP)	Examination requirements / Requirements for the awarding of credit points	Examination elements Type of examination (and weighting) Duration Language of the module examination Requirements for the awarding of credit points (LP award)	Examination restrictions	Elective module (WP), compulsory module (P)	Credit points for the module ⁸	Total number of credits in the elective area	Weighting of the module grade in the overall grade
MN-B-E 1	Lecture Ecology, Evolution and Environment [Basic module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Lecture	None	Examination elements: 1 Type of examination: Written exam Duration: 2 hours Language: English LP allocation: Passing the examination element	none	P	6 LP		7.5/100
MN-B-E 2	Seminar Ecology, Evolution and Environment [Basic module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Seminar (TP, 20%) ²	None	Examination elements: 1 Type of examination: Presentation Duration: 20-30 minutes Language: English LP allocation: Passing the examination element	3	P	6 LP		7.5/100

Module identification number	Title of the module	Module participation requirements	Start Frequency Duration of the module	Teaching methods and attendance requirements (TP)	Examination requirements / Requirements for the awarding of credit points	Examination elements Type of examination (and weighting) Duration Language of the module examination Requirements for the awarding of credit points (LP award)	Examination restrictions	Elective module (WP), compulsory module (P)	Credit points for the module ⁸	Total number of credits in the elective area	Weighting of the module grade in the overall grade
MN-B-E 3	Tutorial Ecology, Evolution and Environment [Basic module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Exercise (TP, 20%) ³	None	Examination elements: 1 Examination type: Presentation Duration: 20-30 minutes Language: English LP points: Passing the exam element	3	P	6 LP		7.5/100
MN-B-B 1	Lecture Advanced Biochemistry and Molecular Medicine [Basic Module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Lecture	None	Examination elements: 1 Type of examination: Written exam Duration: 2 hours Language: English LP allocation: Passing the examination element	None	WP	6 LP	6 LP	7.5/100
MN-B-C 1	Lecture Computational Biology [Basic Module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Lecture	None	Examination elements: 1 Type of examination: Written exam Duration: 2 hours Language: English LP allocation: Passing the examination element	None	WP	6 LP		7.5/100

MN-B-GA 1	Lecture Principles of Molecular Genetics, Development, and Aging [Basic Module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Lecture	None	Examination elements: 1 Examination type: Written exam Duration: 2 hours Language: English LP allocation: Passing the examination element	None	WP	6 LP	7.5/100
-----------	---	------	--	---------	------	--	------	----	------	---------

NON BINDING ENGLISH VERSION

Module identification number	Title of the module	Module participation requirements	Start Frequency Duration of the module	Teaching methods and attendance requirements (TP)	Examination requirements / Requirements for the awarding of credit points	Examination elements Type of examination (and weighting) Duration Language of the module examination Requirements for the awarding of credit points (LP award)	Examination restrictions	Elective module (WP), compulsory module (P)	Credit points for the module ⁸	Total number of credits in the elective area	Weighting of the module grade in the overall grade
MN-B-N 1	Lecture Neuroscience [Basic module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Lecture	None	Examination elements: 1 Type of examination: Written exam Duration: 2 hours Language: English LP allocation: Passing the examination element	None	WP	6 LP		7.5/100
MN-B-P 1	Lecture Molecular Plant and Microbial Sciences [Basic Module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Lecture	None	Examination elements: 1 Examination type: Written exam Duration: 2 hours Language: English LP allocation: Passing the examination element	None	WP	6 LP		7.5/100
MN-B-SM (Type 1)	Subject Module (Type 1) [Advanced Module]	None	Start: Summer semester Frequency: annually Duration: 7 weeks ⁵	Lecture; project and/or exercise (TP, 20%) ^{3,4} ; Seminar (TP, 20%) ²	None	Examination elements: 2 Examination type: Written exam (50%); Presentation (50%) Duration: Written exam 2 hours, presentation 20-30 min Language: English LP-allocation: Passing all examination elements	3	WP	12 LP	24 LP	12/100

Module identification number	Title of the module	Module participation requirements	Start Frequency Duration of the module	Teaching methods and attendance requirements (TP)	Examination requirements / Requirements for the awarding of credit points	Examination elements Type of examination (and weighting) Duration Language of the module examination Requirements for the awarding of credit points (LP award)	Examination restrictions	Elective module (WP), compulsory module (P)	Credit points for the module ⁸	Total number of credits in the elective area	Weighting of the module grade in the overall grade
MN-B-SM (Type 2)	Subject module (type 2) [Advanced module]	None	Start: Summer semester Frequency: annually Duration: 7 weeks ⁵	Lecture; project and/or exercise (TP, 20%) ^{3,4} ; Seminar (TP, 20%) ²	None	Examination elements: 2 Examination type: Presentation (50%); Internship report (50%) Duration: Presentation 20-30 min, internship report 1 week Language: English LP allocation: Passing all examination elements	3	WP	12 LP		12/100
MN-B-SM [LM] (Type 3) ¹	Subject Module [Laboratory Module] (Type 3) [Advanced Module]	None	Start: year-round Duration: 7 weeks ⁵	Project (TP 20%) ⁴ ; Seminar (TP, 20%) ²	None	Examination elements: 2 Examination type: Oral examination (50%); internship report (50%), Duration: Oral exam 20-30 min, internship report 1 week Language: English LP allocation: Passing all examination elements	3	WP	12 LP		12/100
MN-B-EM ¹	Elective module [Supplementary module]	None	Start: year-round Duration: Not specified	Depends on the individual choice of the student	Depends on the individual choice of the student	LP allocation: Proof of participation	None	WP	12 LP		0/100

Module identification number	Title of the module	Module participation requirements	Start Frequency Duration of the module	Teaching methods and attendance requirements (TP)	Examination requirements / Requirements for the awarding of credit points	Examination elements Type of examination (and weighting) Duration Language of the module examination Requirements for the awarding of credit points (LP award)	Examination restrictions	Elective module (WP), compulsory module (P)	Credit points for the module ⁶	Total number of credits in the elective area	Weighting of the module grade in the overall grade
MN-B-PM ¹ (Type 1)	Project Module [Specialization Module]	None	Start: year-round Duration: 7 weeks ⁵	Project	None	Examination elements: 1 Examination type: Internship report Duration: 1 week Language: English LP allocation: Passing the examination element	3	WP	12 LP	24 LP	3/100
MN-B-PM ¹ (Type 2)	Project Module [Specialization Module]]	None	Start: year-round Duration: 7 weeks ⁵	Project	None	Examination elements: 1 Examination type: Presentation Duration: 20-30 min Language: English LP allocation: Passing the examination element	3	WP	12 LP		3/100
MN-B-MT	Master's thesis [Specialization module]	Successful completion of all other modules of the degree program	Start: year-round Duration: 7 months	Project	A grade of at least "sufficient" for the master's thesis is a prerequisite for the final colloquium	Examination elements: 2 Type of examination: Master's thesis (75%); final colloquium (25%) Duration: Master's thesis 6 months, final colloquium 45 min Language: English LP allocation: Passing all examination elements	2	P	36 LP		40/100

¹No more than two of these modules may be supervised by the same examiner.

²The obligation to provide evidence of regular participation in seminars arises from Section 9 (4) sentence 4 a).

³The obligation to provide evidence of regular participation in exercises arises from § 9 (4) sentence 4 e). Furthermore, according to § 9 (4) sentence 4 d), participation in safety training is mandatory.

⁴The obligation to participate regularly in projects in a verifiable manner arises from Section 9 (4) sentence 4 e). Furthermore, pursuant to Section 9 (4) sentence 4 d), participation in safety training is mandatory.

⁵Preparation times prior to the official start of the module are not taken into account.

NON BINDING ENGLISH VERSION

Appendix 1.4

Specific provisions for the Master of Science in Neuroscience program at the Faculty of Mathematics and Natural Sciences at the University of Cologne

Explanation: In the first semester, four basic modules, each worth 6 credit points, must be completed (two lecture modules, one seminar module, and one tutorial module; one of the lecture modules is an elective module). In the second and third semesters, two advanced modules (subject modules) and two specialization modules (project modules), each worth 12 credit points, follow. Upon request, a subject module can be replaced by a laboratory module (subject module [type 4]). In addition, a supplementary module (elective module) worth 12 credits must be completed (according to the study plan in the 1st to 2nd semester). The program is completed with the Master's thesis module worth 30 credit points and a final colloquium worth 6 credit points in the 3rd and 4th semesters.

Module identification number	Title of the module	Module participation requirements	Start Frequency Duration of the module	Teaching methods and attendance requirements (TP)	Examination requirements / Requirements for the awarding of credit points	Examination elements Type of examination (and weighting) Duration Language of the module examination Requirements for the awarding of credit points (LP award)	Examination restrictions	Elective module (WP), compulsory module (P)	Credit points for the module ⁸	Total number of credits in the elective area	Weighting of the module grade in the overall grade
MN-B-N 1	Lecture Neuroscience [Basic module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Lecture	None	Examination elements: 1 Examination type: Written exam Duration: 2 hours Language: English LP allocation: Passing the examination element	None	P	6 LP		7.5/100
MN-B-N 2	Seminar Neuroscience [Basic Module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Seminar (TP, 20%) ²	None	Examination elements: 1 Type of examination: Presentation Duration: 20-30 minutes Language: English LP allocation: Passing the examination element	3	P	6 LP		7.5/100

Module identification number	Title of the module	Module participation requirements	Start Frequency Duration of the module	Teaching methods and attendance requirements (TP)	Examination requirements / Requirements for the awarding of credit points	Examination elements Type of examination (and weighting) Duration Language of the module examination Requirements for the awarding of credit points (LP award)	Examination restrictions	Elective module (WP), compulsory module (P)	Credit points for the module ⁸	Total number of credits in the elective area	Weighting of the module grade in the overall grade
MN-B-N 3	Tutorial Neuroscience [Basic module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Exercise (TP, 20%) ⁹	None	Examination elements: 1 Examination type: Poster presentation Duration: 20-30 minutes Language: English LP allocation: Passing the examination element	3	P ⁶	6 LP		7.5/100
MN-B-B 1	Lecture Advanced Biochemistry and Molecular Medicine [Basic Module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Lecture	None	Examination elements: 1 Type of examination: Written exam Duration: 2 hours Language: English LP allocation: Passing the examination element	None	WP	6 LP	6 LP	7.5/100
MN-B-C 1	Lecture Computational Biology [Basic Module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Lecture	None	Examination elements: 1 Type of examination: Written exam Duration: 2 hours Language: English LP allocation: Passing the examination element	None	WP	6 LP		7.5/100

MN-B-E 1	Lecture Ecology, Evolution and Environment [Basic module]	MN-B-E 1	Start: Winter semester Frequency: annually Duration: 15 weeks	Lecture	None	Examination elements: 1 Type of examination: Written exam Duration: 2 hours Language: English LP allocation: Passing the examination element	None	WP	6 LP	7.5/100
----------	---	----------	--	---------	------	---	------	----	------	---------

NON BINDING ENGLISH VERSION

Module identification number	Title of the module	Module participation requirements	Start Frequency Duration of the module	Teaching methods and attendance requirements (TP)	Examination requirements / Requirements for the awarding of credit points	Examination elements Type of examination (and weighting) Duration Language of the module examination Requirements for the awarding of credit points (LP award)	Examination restrictions	Elective module (WP), compulsory module (P)	Credit points for the module ⁸	Total number of credits in the elective area	Weighting of the module grade in the overall grade
MN-B-GA 1	Lecture Principles of Molecular Genetics, Development and Aging [Basic module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Lecture	None	Examination elements: 1 Type of examination: Written exam Duration: 2 hours Language: English LP allocation: Passing the examination element	None	WP	6 LP		7.5/100
MN-B-P 1	Lecture Molecular Plant and Microbial Sciences [Basic Module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Lecture	None	Examination elements: 1 Type of examination: Written exam Duration: 2 hours Language: English LP allocation: Passing the examination element	None	WP	6 LP		7.5/100
MN-B-SM (Type 1)	Subject Module (Type 1) [Advanced Module]	None	Start: Summer semester Frequency: annually Duration: 7 weeks ⁵	Lecture; project and/or exercise (TP, 20%) ^{3,4} ; Seminar (TP, 20%) ²	None	Examination elements: 2 Examination type: Written exam (50%); Presentation (50%) Duration: Written exam 1 hour, presentation 20-30 min Language: English LP allocation: Passing all examination elements	3	WP	12 LP	24LP	12/100

Module identification number	Title of the module	Module participation requirements	Start Frequency Duration of the module	Teaching methods and attendance requirements (TP)	Examination requirements / Requirements for the awarding of credit points	Examination elements Type of examination (and weighting) Duration Language of the module examination Requirements for the awarding of credit points (LP award)	Examination restrictions	Elective module (WP), compulsory module (P)	Credit points for the module ⁸	Total number of credits in the elective area	Weighting of the module grade in the overall grade
MN-B-SM (Type 2)	Subject module (type 2) [Advanced module]	None	Start: Summer semester Frequency: annually Duration: 7 weeks ⁵	Lecture; project and/or exercise (TP, 20%) ^{3,4} ; Seminar (TP, 20%) ²	None	Examination elements: 2 Examination type: Presentation (50%); Internship report (50%) Duration: Presentation 20-30 min, internship report 1 week Language: English LP allocation: Passing all examination elements	3	WP	12 LP		12/100
MN-B-SM (Type 3)	Subject Module (Type 3) [Advanced Module]	None	Start: Summer semester Frequency: annually Duration: 7 weeks ⁵	Lecture; project and/or exercise (TP, 20%) ^{3,4} ; Seminar (TP, 20%) ²	None	Examination elements: 2 Examination type: Oral examination (50%); internship report (50%) Duration: Oral exam 20-30 min, internship report 1 week Language: English LP allocation: Passing all examination elements	3	WP	12 LP		12/100

Module identification number	Title of the module	Module participation requirements	Start Frequency Duration of the module	Teaching methods and attendance requirements (TP)	Examination requirements / Requirements for the awarding of credit points	Examination elements Type of examination (and weighting) Duration Language of the module examination Requirements for the awarding of credit points (LP award)	Examination restrictions	Elective module (WP), compulsory module (P)	Credit points for the module ⁸	Total number of credits in the elective area	Weighting of the module grade in the overall grade
MN-B-SM [LM] (Type 4) ¹	Subject Module [Laboratory Module] (Type 4) [Advanced module]	None	Start: year-round Duration: 7 weeks ⁵	Project (TP 20%) ⁴ ; Seminar (TP, 20%) ²	None	Examination elements: 2 Examination type: Oral examination (50%); internship report (50%) Duration: Oral exam 20-30 min, internship report 1 week Language: English LP allocation: Passing all examination elements	3	WP	12 LP		12/100
MN-B-EM ¹	Elective module [Supplementary module]	None	Start: year-round Duration: Not specified	Depends on the individual choice of the student	Depends on the individual choice of the student	LP allocation: Proof of participation	None	WP	12 LP		0/100
MN-B-PM ¹ (Type 1)	Project Module [Specialization module]	None	Start: year-round Duration: 7 weeks ⁵	Project	None	Examination elements: 1 Type of examination: Internship report Duration: 1 week Language: English LP allocation: Passing the examination element	3	WP	12 lp	24 LP	3/100

Module identification number	Title of the module	Module participation requirements	Start Frequency Duration of the module	Teaching methods and attendance requirements (TP)	Examination requirements / Requirements for the awarding of credit points	Examination elements Type of examination (and weighting) Duration Language of the module examination Requirements for the awarding of credit points (LP award)	Examination restrictions	Elective module (WP), compulsory module (P)	Credit points for the module ⁸	Total number of credits in the elective area	Weighting of the module grade in the overall grade
MN-B-PM ¹ (Type 2)	Project module [Specialization module]	None	Start: year-round Duration: 7 weeks ⁵	Project	None	Examination elements: 1 Type of examination: Presentation Duration: 20-30 min Language: English LP allocation: Passing the examination element	3	WP	12 LP		3/10
MN-B-MT	Master's Thesis [Specialization Module]	Successful completion of all other modules in the degree program	Start: year-round Duration: 7 months	Project	A grade of at least "sufficient" on the master's thesis is a prerequisite for the final colloquium	Examination elements: 2 Examination type: Master's thesis (75%); final colloquium (25%) Duration: Master's thesis 6 months, final colloquium 45 min Language: English LP allocation: Passing all examination elements	2	P	36 LP		40/100

¹No more than two of these modules may be supervised by the same examiner.

²The obligation to provide evidence of regular participation in seminars arises from Section 9 (4) sentence 4 a).

³The obligation to provide evidence of regular participation in exercises arises from § 9 (4) sentence 4 e). Furthermore, according to § 9 (4) sentence 4 d), participation in safety training is mandatory.

⁴The obligation to participate regularly in projects in a verifiable manner arises from Section 9 (4) sentence 4 e). Furthermore, pursuant to Section 9 (4) sentence 4 d), participation in safety training is mandatory.

⁵Preparation times prior to the official start of the module are not taken into account.

⁶Alternatively, but only after consultation with a study advisor, another lecture from the elective area of the first semester may be chosen as a substitute for the tutorial module.

Appendix 1.5

Specific provisions for the Master of Science in Molecular Plant and Microbial Sciences program at the Faculty of Mathematics and Natural Sciences at the University of Cologne

Explanation: In the first semester, four basic modules, each worth 6 credit points, must be completed (three lecture modules and one seminar module; two of the lecture modules are compulsory elective modules). In the second and third semesters, two advanced modules (subject modules) and two specialization modules (project modules), each worth 12 credit points, follow. A subject module can be replaced by a laboratory module (subject module [type 3]) upon request. In addition, a supplementary module (elective module) worth 12 credit points must be completed (according to the study plan in the 1st to 2nd semester). The program is completed with the master's thesis module worth 30 credit points and a final colloquium worth 6 credit points in the 3rd and 4th semesters.

Module identification number	Title of the module	Module participation requirements	Start Frequency Duration of the module	Teaching methods and attendance requirements (TP)	Examination requirements / Requirements for the awarding of credit points	Examination elements Type of examination (and weighting) Duration Language of the module examination Requirements for the awarding of credit points (LP award)	Examination restrictions	Elective module (WP), compulsory module (P)	Credit points for the module ⁸	Total number of credits in the elective area	Weighting of the module grade in the overall grade
MN-B-P 1	Lecture Molecular Plant and Microbial Sciences [Basic module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Lecture	None	Examination elements: 1 Type of examination: Written exam Duration: 2 hours Language: English LP allocation: Passing the examination element	None	P	6 LP		7.5/100
MN-B-P 2 ²	Seminar Molecular Plant and Microbial Sciences [Basic Module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Seminar (TP, 20%) ² with exercises (TP, 20%) ³	None	Examination elements: 1 Examination type: Presentation Duration: 20-30 minutes Language: English LP allocation: Passing the examination element	3	P	6 LP		7.5/100

Module identification number	Title of the module	Module participation requirements	Start Frequency Duration of the module	Teaching methods and attendance requirements (TP)	Examination requirements / Requirements for the awarding of credit points	Examination elements Type of examination (and weighting) Duration Language of the module examination Requirements for the awarding of credit points (LP award)	Examination restrictions	Elective module (WP), compulsory module (P)	Credit points for the module ³	Total number of credits in the elective area	Weighting of the module grade in the overall grade
MN-B-B 1	Lecture Advanced Biochemistry and Molecular Medicine [Basic module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Lecture	None	Examination elements: 1 Type of examination: Written exam Duration: 2 hours Language: English LP allocation: Passing the examination element	None	WP	6 LP	12 LP	7.5/100
MN-B-C 1	Lecture Computational Biology [Basic Module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Lecture	None	Examination elements: 1 Type of examination: Written exam Duration: 2 hours Language: English LP allocation: Passing the examination element	None	WP	6 LP		7.5/100
MN-B-E 1	Lecture Ecology, Evolution and Environment [Basic module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Lecture	None	Examination elements: 1 Type of examination: Written exam Duration: 2 hours Language: English LP allocation: Passing the examination element	None	WP	6 LP		7.5/100

MN-B-GA 1	Lecture Principles of Molecular Genetics, Development, and Aging [Basic Module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Lecture	None	Examination elements: 1 Examination type: Written exam Duration: 2 hours Language: English LP allocation: Passing the exam element	None	WP	6 LP	7.5/100
-----------	---	------	--	---------	------	---	------	----	------	---------

NON BINDING ENGLISH VERSION

Module identification number	Title of the module	Module participation requirements	Start Frequency Duration of the module	Teaching methods and attendance requirements (TP)	Examination requirements / Requirements for the awarding of credit points	Examination elements Type of examination (and weighting) Duration Language of the module examination Requirements for the awarding of credit points (LP award)	Examination restrictions	Elective module (WP), compulsory module (P)	Credit points for the module ⁸	Total number of credits in the elective area	Weighting of the module grade in the overall grade
MN-B-N 1	Lecture Neuroscience [Basic module]	None	Start: Winter semester Frequency: annually Duration: 15 weeks	Lecture	None	Examination elements: 1 Type of examination: Written exam Duration: 2 hours Language: English LP allocation: Passing the examination element	None	WP	6 LP		7.5/100
MN-B-SM (Type 1)	Subject Module (Type 1) [Advanced Module]	None	Start: Summer semester Frequency: annually Duration: 7 weeks ⁵	Lecture; project and/or exercise (TP, 20%) ^{3,4} ; Seminar (TP, 20%) ²	None	Examination elements: 2 Examination type: Written exam (50%); Presentation (50%) Duration: 1 hour (written exam) 20-30 min (presentation) Language: English LP allocation: Passing all exam components	3	WP	12 LP	24 LP	12/100
MN-B-SM (Type 2)	Subject Module (Type 2) [Advanced Module]	None	Start: Summer semester Frequency: annually Duration: 7 weeks ⁵	Lecture; project and/or exercise (TP, 20%) ^{3,4} ; Seminar (TP, 20%) ²	None	Examination elements: 2 Examination type: Presentation (50%); Internship report (50%) Duration: Presentation 20-30 min, internship report 1 week Language: English LP allocation: Passing all examination elements	3	WP	12 LP		12/100

Module identification number	Title of the module	Module participation requirements	Start Frequency Duration of the module	Teaching methods and attendance requirements (TP)	Examination requirements / Requirements for the awarding of credit points	Examination elements Type of examination (and weighting) Duration Language of the module examination Requirements for the awarding of credit points (LP award)	Examination restrictions	Elective module (WP), compulsory module (P)	Credit points for the module ⁸	Total number of credits in the elective area	Weighting of the module grade in the overall grade
MN-B-SM [LM] (Type 3) ¹	Subject Module [Laboratory Module] (Type 3) [Advanced module]	None	Start: year-round Duration: 7 weeks ⁵	Project (TP 20%) ⁴ ; Seminar (TP, 20%) ²	None	Examination elements: 2 Examination type: Oral examination (50%); internship report (50%) Duration: Oral exam 20-30 min, internship report 1 week Language: English LP allocation: Passing all examination elements	3	WP	12 LP		12/100
MN-B-EM ¹	Elective module [Supplementary module]	None	Start: year-round Duration: Not specified	Depending on the individual choice of students	Depending on the individual choice of the students the	LP allocation: Proof of participation	None	WP	12 LP		0/100
MN-B-PM ¹ (Type 1)	Project Module [Specialization Module]	None	Start: year-round Duration: 7 weeks ⁵	Project	None	Examination elements: 1 Type of examination: Internship report Duration: 1 week Language: English LP allocation: Passing the examination element	3	WP	12 LP	24 LP	3/100

Module identification number	Title of the module	Module participation requirements	Start Frequency Duration of the module	Teaching methods and attendance requirements (TP)	Examination requirements / Requirements for the awarding of credit points	Examination elements Type of examination (and weighting) Duration Language of the module examination Requirements for the awarding of credit points (LP award)	Examination restrictions	Elective module (WP), compulsory module (P)	Credit points for the module ⁸	Total number of credits in the elective area	Weighting of the module grade in the overall grade
MN-B-PM ¹ (Type 2)	Project module [Specialization Module]	None	Start: year-round Duration: 7 weeks ⁵	Project	None	Examination elements: 1 Type of examination: Presentation Duration: 20-30 min Language: English LP allocation: Passing the examination element	3	WP	12 LP		3/100
MN-B-MT	Master's Thesis [Specialization Module]	Successful completion of all other modules in the degree program	Start: year-round Duration: 7 months	Project	A grade of at least "sufficient" for the master's thesis is a prerequisite for the final colloquium	Examination elements: 2 Examination type: Master's thesis (75%); final colloquium (25%) Duration: Master's thesis 6 months, final colloquium 45 min Language: English LP allocation: Passing all examination elements	2	P	36 LP		40/100

¹No more than two of these modules may be supervised by the same examiner.

²The obligation to provide evidence of regular participation in seminars arises from Section 9 (4) sentence 4 a).

³The obligation to provide evidence of regular participation in exercises arises from § 9 (4) sentence 4 e). Furthermore, according to § 9 (4) sentence 4 d), participation in safety training is mandatory.

⁴The obligation to participate regularly in projects in a verifiable manner arises from Section 9 (4) sentence 4 e). Furthermore, pursuant to Section 9 (4) sentence 4 d), participation in safety training is mandatory.

⁵Preparation times prior to the official start of the module are not taken into account.

Appendix 2.1

Study plan for the Master of Science in Genetics and Biology of Aging and Regeneration and Master of Science in Molecular Plant and Microbial Sciences programs at the Faculty of Mathematics and Natural Sciences

Semester	Basic, advanced, and specialization modules	Supplementary module
1	Compulsory lecture (6 LP) Seminar (6 LP) Elective lecture 1 (6 LP) Elective lecture 2 (6 LP)	Elective module (12 LP)
2	Subject Module 1 (12 LP) Subject Module 2 (12 LP)	
3	Project Module 1 (12 LP) Project Module 2 (12 LP)	
3 + 4	Master's thesis with colloquium (36 LP)	

Appendix 2.2

Study plan for the Master of Science in Computational Biology program at the Faculty of Mathematics and Natural Sciences

Semester	Basic, advanced, and specialization modules	Supplementary module
1	Compulsory lecture 1 (6 LP) Compulsory lecture 2 (6 LP) Seminar (6 LP) Elective lecture (6 LP)	Elective module (12 LP)
2	Subject Module 1 (12 LP) Subject Module 2 (12 LP)	
3	Project Module 1 (12 LP) Project Module 2 (12 LP)	
3 + 4	Master's thesis with colloquium (36 LP)	

Appendix 2.3

Study plan for the Master's programs Master of Science in Ecology, Evolution and Environment and Master of Science in Neuroscience at the Faculty of Mathematics and Natural Sciences

Semester	Basic, advanced, and specialization modules	Supplementary module
1	Compulsory lecture (6 LP) Seminar (6 LP) Tutorial (6 LP) Elective lecture (6 LP)	Elective module (12 LP)
2	Subject Module 1 (12 LP) Subject Module 2 (12 LP)	
3	Project Module 1 (12 LP) Project Module 2 (12 LP)	
3 + 4	Master's thesis with colloquium (36 LP)	