

Education and Examination Regulations 2021–2022

Master's in Biology

TABLE OF CONTENTS

PART I GENERAL PROVISIONS	4
Section 1. General provisions	4
Article 1.1 Applicability of these regulations.....	4
Article 1.2 Executive Board Guidelines	4
Article 1.3 Definition of terms	5
PART II GENERAL PART	7
Section 2. Admission to the degree programme and education	7
Article 2.1 Admission and admission requirements	7
Section 3. Structure and design	7
Article 3.1 Final examination, degree, and distinctions	8
Article 3.2 General learning outcomes	8
Article 3.3 Curriculum	8
Article 3.4 Type of interim examination	9
Article 3.5 Exemptions	10
Article 3.6 Term of validity for successfully completed interim examinations	10
Article 3.7 Elective programme	10
Section 4. Testing	10
Article 4.1 Frequency of interim examinations	10
Article 4.2 Registration for course examinations	11
Article 4.3 Confirmation of examination results	11
Article 4.4 Publication of results.....	11
Article 4.5 Right of inspection and explanation.....	12
Article 4.6 Confirmation of examination results	12
Article 4.7 Awarding distinctions	13
Article 5.1 Study performance and support	13
Article 5.2 Method of evaluation of education	13
PART III Programme-specific part	13
Section 6. Admission to the degree programme and education	13
Article 6.1 Admission requirements	13
Article 6.2 Pre-Master's	14
Article 6.3 Microbiology enrolment capacity	14

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Section 7.	Structure and design	14
Article 7.1	Programme-specific learning outcomes.....	14
Article 7.2	Composition of the programme	17
Article 7.2a	Master’s specialisation in Adaptive Organisms	17
Article 7.2b	Master’s specialisation in Conservation and Restoration Ecology	20
Article 7.2c	Master’s specialisation in Water and Environment	21
Article 7.2c.1	Master’s specialisation in Water and Environment – variant Transnational Ecosystem-based Water Management	23
Article 7.2d	Master’s specialisation in Microbiology.....	24
Article 7.2e	Master’s specialisation in Science, Management and Innovation (SMI).....	26
Article 7.2f	Master’s specialisation in Science in Society (SiS)	29
Article 7.2g	Master’s specialisation in Science and Education.....	31
Article 7.3	Deviating programme.....	32
Article 7.4	Sequence of exams	32
Section 8.	Transitional provisions	33
PART IV	Final provisions	35
Paragraph 9.	Final provisions	35
Article 9.1	Safety net scheme and hardship clause	35
Article 9.2	Establishment and amendments	35
Article 9.3	Entry into force	35
Article 9.4	Publication	35

PART I GENERAL PROVISIONS

Section 1. General provisions

Article 1.1 Applicability of these regulations

1. These Education and Examination Regulations (EER) apply to the Master's programmes (the degree programme in which the student is enrolled is hereinafter referred to as 'the programme'), including all their components, of the Faculty of Science. These EER outline the applicable procedures, rights and obligations concerning teaching, interim examinations, and final examinations.
2. The present regulations apply to all students enrolled in the programme in the 2021–2022 academic year. Students who started this degree programme before 1 September 2016 and have been continuously enrolled in the programme may appeal to the EER that was active at the time of their initial enrolment in the programme.
3. Course components provided by different faculties or institutions are subject to the rules applicable at the faculty or institution in question. Components offered by the Faculty of Science are subject to the regulations described in at least one of the EERs of the Faculty of Science at all times.
4. The faculty offers the following 120-EC Master's programmes:
 - a. Biology;
 - b. Chemistry (being phased out);
 - c. Computing Science;
 - d. Mathematics;
 - e. Medical Biology;
 - f. Molecular Life Sciences (being phased out);
 - g. Molecular Sciences
 - h. Physics and Astronomy;
 - i. Science (being phased out);
5. The faculty offers the following 60-EC Master's programmes:
 - a. Information Sciences.
6. All degree programmes are offered exclusively as full-time programmes.
7. The programmes are taught in English. The exception to this is the educational components of the Faculty of Science Education and Science specialisations that are taught in Dutch.

Article 1.2 Executive Board Guidelines

1. In view of the organisation and coordination of the provisions in these regulations, the Executive Board has established the following guidelines: The guidelines can be found in the Appendix:
 - a. Guideline for regulations on academic distinctions;

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2. In addition to the above guidelines, the Executive Board has established a number of temporary guidelines for the 2021–2022 academic year in response to the coronavirus measures. These guidelines are available at <https://www.ru.nl/nieuws-agenda/nieuws/coronavirus-radboud-universiteit/coronarichtlijnen/>.

Article 1.3 Definition of terms

1. The terms used in these EER, which are also used in the Higher Education and Research Act (Wet op het hoger onderwijs en wetenschappelijk onderzoek, hereinafter, 'the Act') have the same meaning as in the Act.
2. Apart from the terms referred to in clause 1, the terms below are understood to have the following meanings:
 - a. Degree programme: the Master's degree programme referred to in Article 7.3a, clause 1 of the Act;
 - b. Component: an educational unit as referred to in Article 7.3 paragraphs 2 and 3 of the Act;
 - c. Student: anyone enrolled at Radboud University for participation in a degree programme or in the partial examinations or final examinations of a programme;
 - d. Academic year: the period from 1 September in a given year until 31 August of the following year;
 - e. Practical: a practical exercise as referred to in Article 7.13 clause 2 under D of the Act;
 - f. Interim examination: an examination testing the knowledge, understanding or skills of the student in relation to a certain unit of study, as well as the assessment of the results of this examination, which is administered by at least one examiner designated by the Examining Board. For the purpose of these regulations, a partial examination or a resit is also considered an interim examination;
 - g. Partial examination: an examination of the knowledge, insight and skills of the student, as well as the assessment of the results of the examination, which in conjunction with one or more other partial examinations, constitutes the interim examination, as referred to under clause f. In these regulations, when the term 'examination' is used, this can also be read as 'partial examination', unless explicitly indicated otherwise;
 - h. Resit: an opportunity to retake a particular examination as referred to in Article 7.10 clause 1 of the Higher Education and Research Act (WHW). In these regulations, when the term 'examination' is used, this can also be read as 'resit', unless explicitly indicated otherwise;
 - i. Final examination: an assessment, on the basis of which the Examining Board determines whether all the components pertaining to the Master's programme have been completed successfully. The Examining Board may decide that the final examination also includes an investigation by the Examining Board into the knowledge, insight and skills of the

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- candidate, as well as the assessment of the outcomes of that investigation (in accordance with Article 7.10 WHW);
- j. Fraud: any deliberate act or omission by a student that makes forming an accurate opinion of their knowledge, understanding and skills partially or entirely impossible. The Regulations on Fraud during Interim Examinations and Examinations are included as an annex to these EER;
 - k. Examining Board: the examining board of a degree programme, established in accordance with Article 7.12 of the Act. Also see the Radboud University Structural Regulations;
 - l. Examiner: the person designated by the Examining Board to administer the interim examinations, in accordance with Article 7.12 of the Act;
 - m. EC: European Credits, i.e. the study load unit in accordance with the European Credit Transfer
 - n. System;
 - o. Specialisation: a coherent programme within the Master's programme that has been approved as such by the faculty board;
 - p. Work day: Mondays to Fridays, with the exception of official holidays and any other days designated by Radboud
 - q. University as collective holidays;
 - r. Awarding of the degree certificate: the formal confirmation that all the examination requirements have been met;
 - s. Prospectus: the guide for a particular Faculty of Science degree programme,
 - t. containing specific information regarding the Master's degree programme;
 - u. The University: Radboud University;
 - v. The faculty: The Faculty of Science;
 - w. The education institute: the organisational unit responsible for the degree programme;
 - x. Free elective: a freely-selected, academic, assessable component.
 - y. Rules and regulations: the rules in which the Examination Board explain how it works in accordance with the Education and Examination Regulations.

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PART II GENERAL PART

Section 2. Admission to the degree programme and education

Article 2.1 Admission and admission requirements

1. Decisions regarding admission are made by the education institute on behalf of the dean.
2. The programme-specific part of these EER lists the admission requirements students must meet to be admitted to the degree programme.

Article 2.2 Language requirements

1. A sufficient command of the English language is required to participate in the programme and to sit for examinations in English. This requirement is met if the student:
 - a. comes from one of the following countries: Australia, Canada (with the exception of Quebec),
 - b. Ireland, New Zealand, Singapore, the United Kingdom, the United States or South
 - c. Africa; or
 - d. is in possession of a pre-university education (VWO) diploma; or
 - e. is in possession of a pre-university education diploma obtained at an English-language institution in the Netherlands or elsewhere; or
 - f. has a pre-university education diploma obtained at a German secondary education institution, with English as a *Grundkurs*; or
 - g. has a Bachelor's diploma from a university of applied sciences (HBO); or
 - h. has a Bachelor's diploma from a Dutch university; or
 - i. meets the requirements in the opinion of the programme; or
 - j. has achieved a sufficient score on one of the following English language tests:
 - i. the TOEFL with a score of 575 or higher for the paper version;
 - ii. the TOEFL with a score of 90 or higher for the internet version with none of the sub-scores below 20;
 - iii. the IELTS with a score of 6.5 or higher, where none of the sub-scores are below
 - iv. 6.0;
 - v. the Cambridge CAE or CPE with a score of C or higher.
2. A sufficient command of Dutch is required to participate in the programme and to sit examinations in Dutch. Non-Dutch students have met the language requirement for sufficient proficiency in Dutch if they have passed the state examination of Dutch as a second language, level 2.
 1. In certain cases, the education institute may assess whether a student is sufficiently proficient in Dutch.

Section 3. Structure and design

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Article 3.1 Final examination, degree, and distinctions

1. The degree programme is concluded by the Master's final examination.
2. A student who has passed the examinations of the Master's degree programme will be awarded the Master of Science (MSc) degree.
3. The degree referred to in the second clause is only awarded if the student has earned at least half of the EC for their degree programme at this University.
4. The Examining Board can award a distinction to a student who has successfully passed the degree programme examinations. The rules for awarding a distinction can be found in Article 4.7 of these EER.

Article 3.2 General learning outcomes

The degree programme has the following learning outcomes for students:

1. Acquire knowledge, skills and insights in the relevant field of study;
2. Develop academic competences;
3. Prepare for further study or a future career;
4. Improve skills relating to independent academic research.

Article 3.3 Curriculum

1. The programme comprises the total of the components as described in the programme-specific part of these regulations and is aimed at the realisation of well-defined objectives regarding the knowledge, understanding and skills that students are expected to possess upon successful completion of the programme.
2. For each section, the lecturer must make a course guide available prior to the course, which includes a description of the course, tests with weighting factors and deadlines. This guide may coincide with the course description in the study guide.
3. The programme has research specialisations and societal specialisations. The specialisations are described in the programme-specific part.
4. Each degree programme includes a component that is philosophical in nature, with a minimum study load of 3 EC, free elective space of 6 EC and a component to aid reflection on study performance, study planning, and professional orientation with a study load of 0 or 1 EC.
5. The elective courses cannot have substantial overlap in content with courses from the mandatory or elective components of the programme. It is not possible to receive an exemption for the elective component based on a Bachelor's course.
6. The composition of the Master's programme compiled by the student must be presented for approval to the Examining Board no later than three months before the expected examination date. The Examination Board will decide whether to grant approval within a month of receiving the submitted programme.
7. A student can only participate in components provided by the Radboud Teachers Academy of Education after the disciplinary internship has been completed. A student can only participate in

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the Science, Management and Innovation final research project after they have passed the thematic components and NWI-FMT019 Methods in Societal Research: Science, Management & Innovation. A student can only participate in the Science in Society research project after they have obtained 12 EC from the SiS curriculum.

8. A student is permitted to add components to the examination programme. These components are considered extra-curricular and do not count towards the determination of the distinction.
9. If a student can choose between components within the curriculum and they have passed more than one of these components, then they can decide which components count towards their distinction.

Article 3.4 Type of interim examination

1. Each component of the degree programme will be concluded by an interim examination. Interim examinations may comprise more than one modular partial examination and may consist of the following assessment forms:
 - a. Written test and/or
 - b. Oral test;
 - c. Presentation;
 - d. Skill test and/or the creation of a discipline-specific product and/or assignment.
2. Prior to the commencement of the academic year, information will be provided in the prospectus for each individual component regarding the way in which the interim examinations will be administered. At the request of the student or the examiner, the Examination Board may allow an interim examination to be administered in a form other than stated above if this is not to the detriment of the student.
3. In cases where an interim examination has admission requirements, the admission requirements will be published in the prospectus before the start of the academic year, see Article 3.3 paragraph 6. This requires permission from the programme coordinator. Contrary to the above provisions, the admission requirements for the courses completed in the fourth period may still be changed up until the start of the second period, with permission from the programme coordinator.
4. There are no admission requirements for an interim examination; if a student is enrolled in a component, they are admitted to all sub-components, including the interim examination.
5. Students with disabilities are given the opportunity to take interim examinations in a manner appropriately suited to their disability. The Examining Board, if necessary, will seek expert advice and counsel prior to reaching its decision. If the student in question requires certain facilities for their interim examinations or resits, they must request these from the Education and Examination Administration of the faculty no later than two weeks before the interim examination or resit.
6. During oral examinations, no more than one person is tested at a time, unless decided otherwise by the Examination Board.

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7. An oral interim examination is not public, unless the Examining Board has deemed otherwise in exceptional cases. A recording is made of all oral examinations. A second examiner or a designated observer may be present as an alternative to a recording.

Article 3.5 Exemptions

1. The Examination Board, at the request of a student and having heard the examiner involved, may exempt the student, either partially or fully, from sitting an interim examination if the student:
 - a. Has completed a course in a relevant subject at a university or institute of higher vocational education (HBO);
 - b. Demonstrates that they have adequate knowledge and skills regarding the competency in question as a result of relevant work experience or professional experience.
2. If the degree programme allows group exemptions, then these are included in the programme-specific part of these regulations.
3. Only one grade for each course may be registered for a single degree programme. If a course is also part of another examination programme, this course will be listed on the degree programme's diploma as an exemption.
4. Students who were first enrolled on or after 1 September 2017 can never have more exemptions than a quarter of the total study load of the programme expressed in EC, as stated in clause 1.
5. All results for a degree programme achieved before the date of the first enrolment are stated as exemptions on the degree programme's diploma. These exemptions do not count towards the EC if the courses are only included in a one examination programme, as stated in clause 4.
6. Exemptions as referred to in paragraphs 1 and 2 cannot be granted for final examination assignments.

Article 3.6 Term of validity for successfully completed interim examinations

1. The term of validity of successfully completed interim examinations is unlimited.
2. Results obtained for interim examinations are valid at least until the end of the academic year. The lecturer can decide to extend the term of the validity of the result obtained for a partial examination.

Article 3.7 Elective programme

The Examination Board of the programme shall decide on a request for authorisation to follow a free education programme as referred to in Article 7.3d WHW. The Examination Board shall verify whether the programme fits within the domain of the degree programme under the authority of the Examination Board, whether it is sufficiently cohesive, and whether the level is adequate in the context of the programme's exit qualifications.

Section 4. Testing

Article 4.1 Frequency of interim examinations

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1. Students are given the opportunity to take the examinations at least twice per academic year per interim examination.
2. Contrary to the provisions of paragraph 1, a degree programme coordinator may decide to only offer one opportunity for an interim examination or partial examination. If only one opportunity is given to take an interim examination or partial examination, this is stated in the programme study guide before the start of the academic year.
3. Contrary to the stipulation in the first clause, there will be at least one opportunity in the following year to take an interim examination for a course that was taught for the final time in a particular academic year.
4. If a certain component is not given in a particular academic year, the opportunity to take the corresponding examination will be offered once in that academic year, as long as the interim examination is administered in written or oral form.

Article 4.2 Registration for course examinations

1. Students who register through Osiris for a component are also automatically registered for the first interim examination opportunity in the relevant academic year. This does not apply to students whose enrolment in the degree programme has not yet been completed.
2. The student can register for an examination right up until 23:59 on the day prior to a period of five working days before the date of the examination. After this date, registration is no longer possible, unless the head of the Education Centre decides otherwise in special cases, on behalf of the dean. A successfully passed examination may be taken again.
3. If a student resits an interim examination, the most recent result will determine the final result.

Article 4.3 Confirmation of examination results

1. The result of an interim examination is determined by an examiner in the form of a grade on a scale from 1 to 10 (with 10 as the highest possible grade), consisting exclusively of whole numbers or half numbers. However, a grade of 5.5 is never given. When rounding off between 5 and 6, the rule is that a grade lower than 5.5 is rounded down to a five (5), which is an insufficient grade, meaning the educational component has not been successfully completed; a 5.5 and higher is rounded up to a six (6), meaning that the educational component has been successfully completed. In addition to results in the form of a grade, the assessments 'completed', 'not completed', 'satisfactory', 'not satisfactory' and 'good' may also be awarded.
2. Notwithstanding the provisions of clause 1, partial examinations may also be graded to one decimal point on a 10-point scale. Rounding off grades is done exclusively for the final grade.

Article 4.4 Publication of results

1. The examiner shall determine the result of the final project within 15 working days after the presentation of the final project has taken place, and after the final project has been submitted in <http://thesissubmission.science.ru.nl>.

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2. The examiner shall determine the result of a interim examination within 15 working days of the date it was administered. Here, the precondition applies that there must be at least ten working days between the date of the publication of the result in Osiris and the date of the resit.
3. Contrary to the provisions in paragraph 2, the examiner shall determine the result of a interim examination in the fourth period no later than nine days before the scheduled date of the corresponding resit. The lecturer always has at least five working days after the written examination to determine the result.
4. Contrary to the provisions set out in paragraph 2, the examiner shall determine the result of an oral examination within two working days of the date it was administered.
5. In special cases, the Examination Board may extend the term in which the result must be determined as referred to in paragraph 2 and 3 by a maximum of ten working days. This is not possible for interim examinations in the fourth period.
6. In this statement of the result of an interim examination, the student is also informed of their right of inspection, referred to in Article 4.5 as well as the right to appeal to the Examination Appeals Board.
7. A student may submit an appeal of a decision by the Examination Board to the Examination Appeals Board within six weeks.

Article 4.5 Right of inspection and explanation

1. The student may request access to review and inspect all graded work within at least 30 working days following publication of a written interim examination result. For the results of interim examinations with 'open' questions, at the student's request, they shall be granted a copy of their graded work for a fee.
2. During the period referred to in paragraph 1 of this Article, any student who has taken an interim examination may review the questions and assignments of the interim examination in question, as well as the standards on which the result was based.
3. Students must be offered at least one opportunity to inspect or have their examinations explained, as referred to in paragraphs 1 and 2. If the student demonstrates that they are or were unable to attend an inspection, they may request the Examination Board to allow them another opportunity to inspect the examination, within the period referred to in the first paragraph if possible. In all cases, the inspection must take place a minimum of five working days before the resit of an interim examination. For examinations in the fourth period, the student may view their work until one working day before the resit.
4. The examiner shall retain all written interim examinations and related papers (assignments or otherwise) that count towards the final result for a period of two years following the date when the examination was administered. Master's programme reports and theses must remain available for visitations, accreditations and inspections, and are kept for seven years.

Article 4.6 Confirmation of examination results

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1. The student is given the opportunity to take the final examination after they have provided sufficient proof that they have passed the components leading up to the final examination.
2. Examinations are scheduled each month.
3. The Examining Board will determine the result of the final examination, as well as the rules in relation to the manner in which the result of the examination is determined. The result of the examination is determined by the Examining Board within five weeks following the student's request. If the examination took place in July, the results will be determined no later than 31 August. In relation to entry requirements for a subsequent programme or the acceptance of a job, if required, a statement can be provided within five days indicating that the student has met the requirements of the examination. This is only possible if the student has met the criteria specified in clause 1.
4. Prior to determining the result of the final examination, the Examination Board may evaluate and assess the student's knowledge with respect to one or more components or aspects of the programme, if and to the degree to which the results of the related interim examinations justify this.

Article 4.7 Awarding distinctions

The guidelines concerning distinctions can be found in the Appendix of the Guideline for regulations on academic distinctions.

Section 5. Study performance, guidance and evaluation of education

Article 5.1 Study performance and support

1. The faculty dean is responsible for recording student results in such a way that, upon request, the Examination Board can respond by providing the student with an overview of the progress of the study programme within a reasonable time frame.
2. The dean is responsible for providing adequate student counselling.

Article 5.2 Method of evaluation of education

In compliance with the quality assurance system of the University as described in the Handboek Kwaliteitszorg Onderwijs Radboud Universiteit (Radboud University Quality Assurance Manual), the dean shall ensure that the education of the degree programmes is systematically evaluated.

PART III PROGRAMME-SPECIFIC PART

Section 6. Admission to the degree programme and education

Article 6.1 Admission requirements

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Admission requirements for the programme:

1. Students who have successfully passed the final examination of the Bachelor's programme in Biology at Radboud University.
2. Students must have successfully passed the final examination of the Radboud University Bachelor's programme in Biology or an equivalent degree in a similar topic at another Dutch university; or
3. Students must be in possession of a degree certificate that is at least equal to the degree referred to in paragraph 6.1 under 1.
4. Students must have demonstrated suitability for participation in the degree programme, in the opinion of the Examining Board, and must provide proof of sufficient proficiency in English, as described in Article 2.2.
5. Components of the Microbiology specialisation have additional admission requirements, as described in Article 6.3.

Article 6.2 Pre-Master's

Students who have earned a university of applied sciences (HBO) degree in Biology or a related field, including higher laboratory education (HLO) and Life Science degree programmes, and have completed the Biology pre-Master's programme curriculum of 30 EC are also eligible for admission to the degree programme.

Article 6.3 Microbiology enrolment capacity

In addition to the admission requirements described above, there is a maximum enrolment capacity of 24 students per year for the Microbiology specialisation.

Section 7. Structure and design

Article 7.1 Programme-specific learning outcomes

1. In addition to the general learning outcomes described in Part II of these regulations, after obtaining their Master's degree for this programme, the student is:
 - a. Capable, possessing broad and up-to-date knowledge of biological and/or biomedical processes, in combination with specialist knowledge (theories, methods, techniques) and research experience in at least one sub-area of this field, of setting up and conducting research aimed at acquiring new knowledge and insights in this research area.
 - b. Able to formulate new questions and hypotheses in the biological/biomedical field, and familiar with the research methods and state-of-the-art techniques to solve these, taking into account available equipment and resources.

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- c. Able to set up and conduct scientific experiments in an independent manner, including the required controls, of using models and theories to explain results, and evaluate the results in terms of well-founded scientific conclusions.
 - d. Able to independently identify, critically read and comprehend relevant, up-to-date international literature from different disciplines, and discriminate essential from non-essential information, and integrate new information in their overall view on nature.
 - e. Able to use concepts from different organisation levels in biology, in combination with those from physics, chemistry and mathematics, to solve complex biological/biomedical problems at specific abstraction levels.
 - f. Able to present the results of research projects in written form, in accordance with the standards of an academic article.
 - g. Able to independent professional practice whereby, depending on the chosen variant, emphasis is put on conducting fundamental scientific research (under supervision), or transfer or apply existing scientific knowledge, thereby taking the student's own competences into account.
 - h. Able to ask adequate questions with a critical and constructive attitude towards analysis and resolve complex biological and/or biomedical problems.
 - i. Able to defend their views and critically evaluate other perspectives in a scientific discussion.
 - j. Able to present and discuss the results of a research project in the form of an oral presentation for experts and fellow students.
 - k. Able to work in or lead a project team, including being able to make plans, the distribute tasks, integrate of sub-projects and jointly evaluate results.
 - l. Able to integrate ethical aspects in their professional practice, and able to reflect on potential implications for society.
 - m. Able to assess their own performance and opportunities in the labour market, through self-reflection and discussion with others.
2. Students who choose a research-oriented specialisation, as described in Article 7.2 clause 1a-d, will also achieve the following learning outcomes upon graduation:
 - a. Capable, based on broad and deepened knowledge of the specialisation topic and research experience in at least two distinct sub-areas of biological/biomedical sciences, of setting up and performing scientific research in an independent manner.
 - b. Able to present the results of a research project in written form, in accordance with the specific format of a scientific journal.
 - c. Able to write a research proposal according to the criteria of external scientific organisations.
 3. Students who choose the Science, Management and Innovation specialisation, as described in Article 7.2e, will also achieve the following learning outcomes upon graduation:

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1. Able to bridge the gap between their own discipline and other disciplines, based on a profound understanding of a chosen core theme and how this relates to the societal, political, economic and environmental requirements of the world today.
 2. Familiar with and able to analyse specific problems within their theme, and able to apply a range of approaches to address these, argue for, select and implement feasible options, taking into account the full breadth of technological, societal, political and economic perspectives.
 3. Proficient in using research methods and techniques, including basic finance and economics, to verify, justify and substantiate strategies and plans, and capable of effectively using a wide variety of information and communication channels.
 4. Able to weigh up perspectives and interests in specific contexts within a company or (non)governmental organisation in order to formulate appropriate strategies and plans towards implementation of the Sustainable Development Goals (SDGs).
 5. Able to communicate insights, views and analyses of complex issues to others in a clear, concise and understandable manner, in both written and spoken form.
 6. Able to work in multidisciplinary and multicultural high-performance teams based on sound division of tasks, knowledge, competencies and responsibilities, whilst respecting diverging views and opinions.
4. Students who choose the Science in Society specialisation, as described in Article 7.2f, will also achieve the following learning outcomes:
- a. Able to analyse the role of scientific expertise in societal and political decision-making with regard to socio-scientific issues.
 - b. Able to design and conduct independent and methodologically sound social research at the interface of science and society and capable of contributing to academic research.
 - c. Able to understand and design public and stakeholder participation processes in research and innovation.
 - d. Able to analyse, improve and evaluate interdisciplinary collaborative ventures with multiple stakeholders, integrating different perceptions, interests and types of knowledge (experiential, professional and scientific).
 - e. Able to substantiate and communicate the relevance of their scientific discipline in society.
5. Students who choose the Science and Education specialisation, as described in Article 7.2g, will also achieve the following learning outcomes:
- a. Have knowledge of and insight into the theoretical principles of discipline-specific thinking, educational design, and the methods and techniques of applying didactic research in the discipline.
 - b. Able to design, implement and systematically evaluate an educational design and a scientific study, drawing a link between didactic and professional practice concepts, discipline-specific thinking of the students at different levels and problems from teaching practice.

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- c. Devote attention to discipline-specific learning of individual and unique students, focusing on developing inspiring education.
- d. Able to apply thorough scientific knowledge of general didactic concepts about the learning of individual students and methods to improve both the social climate in the classroom and to answer the individual learning needs of the students.
- e. Able to differentiate themselves and improve the social climate for collaboration and, in doing so, set independent priorities and respond appropriately to development and behavioural problems, after consultation with relevant third parties.
- f. Focus on collaboration and responsible behaviour based on clear communication with individual students and colleagues, on the basis of personal visions.
- g. Develop their own professional knowledge base to justify their own actions and understand the actions of colleagues and supervisors.
- h. Use their professional knowledge base and contextual feedback (students, colleagues and supervisors) to evaluate and guide their own professional development.
- i. Develop a personal identity in the context of their own actions, external frameworks and ethical dilemmas.

Article 7.2 Composition of the programme

1. Subject to the provisions in Part II of these regulations, the student chooses one of the following specialisations of the degree programme:
 - a. Adaptive Organisms
 - b. Conservation and Restoration Ecology
 - c. Water and Environment
 - d. Microbiology
 - e. Science, Management and Innovation
 - f. Science in Society
 - g. Science and Education
2. Students must select their specialisation through Osiris at the start of the Master's programme. It is possible to change this choice at any time during the first year.

Article 7.2a Master's specialisation in Adaptive Organisms

The Master's specialisation in Adaptive Organisms consists of the following components:

1. Compulsory components (15 EC):

Course code	Course name	EC
NWI-BM036A	Orientation in Biology and Environmental Sciences	3
NWI-BM077	Genomics	3

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NWI-BM010C	Adaptation physiology of Animals	3
NWI-BM076	Symbiosis	3
NWI-BM035B	Molecular physiology of plant stress adaptation	3

2. Limited choice electives (15 EC)

A student must choose at least one of the following courses:

Course code	Course name	EC
NWI-BM004C	Apoptosis	3
NWI-BM007C	TMS-VRS-D (Working with Radionuclides)	2
NWI-BM010C	Adaptation physiology of animals	3
NWI-BM014D	Microbiology of aquatic ecosystems	3
NWI-BM024D	Course on laboratory animal science	3
NWI-BM032C	Advanced Endocrinology	3
NWI-BM033F	Nature in a Crowded Country	3
NWI-BM035B	Molecular physiology of plant stress adaptation	3
NWI-BM038A	Ecological and Environmental Concepts	3
NWI-BM039A	Management of Ecosystems	3
NWI-BM040B	Field Course Alpine Ecology	6
NWI-BM041B	Principles of Systems Biology	3
NWI-BM048B	Field course Ireland	6
NWI-BM060C	Quantitative conservation ecology	6
NWI-BM063	Microbial Physiology and Metabolism	3
NWI-BM065	Microbial Cell Structure and Function	3
NWI-BM067	Host-Microbe Interactions	3
NWI-BM068	Environmental Microbiology and Biotechnology	3
NWI-BM074A	NIOZ Marine Master's Summer Course	4
NWI-BM075	Biodiversity Assessment	3
NWI-BM076	Symbiosis	3
NWI-BM077	Genomics	3
NWI-BM080	Molecular Parasitology	3
NWI-BM083	Data Visualisation	3
NWI-BM086	Human Breathomics	3
NWI-MM002A	Environmental and Ecological Modelling	3
NWI-MM018A	Environmental Economics for Water Management	3
NWI-MM019A	Integrated Water Management	3
NWI-MM021	Social Aspects of Water Management	3
NWI-MM022	Water Governance and Spatial Planning	3
NWI-MM013	Research Skills	3

The student must also choose from one of the following philosophical courses (3 EC):

Course code	Course name	EC
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NWI-FFIL202A	Evolution and the Mind	3
NWI-FFIL203B	Bio-ethics for Life Scientists	3
NWI-FFIL209B	Environmental Ethics	3
NWI-FFIL211B	Physics and Philosophy	3
NWI-FFIL212	Philosophy of Water Management	3
NWI-FFIL215	Upgrading the Human	3
NWI-FFIL216	Imagining the Anthropocene	3
NWI-FFIL217	Science and Arts	3
NWI-FFIL218	Science and Values	3
NWI-FFIL219	Philosophy of Neuroscience	3
NWI-FFIL300C	Philosophy of Mathematical Practice	3
NWI-FFIL302	Philosophy & Ethics Microbiology	3

In addition to this, natural science Master's courses need to be chosen to reach a total of 15 EC of electives.

A maximum of 6 EC of elective space can be used to extend the research internships. It is expressly forbidden to use the free electives to extend an internship.

The level of all components without a course code and not covered by the limited extension of an internship, as described above, must be assessed by the Examining Board.

3. Free electives (6 EC)

Chosen components need to be at a measurable academic level.

4. Internships (72 EC)

Students should take two scientific internships at the university-level that concern a biological problem, which is investigated through experiments and/or data analysis, each having a study load of 36 EC. Findings are recorded and presented in a written report and an oral presentation. At least one internship should take place on a specialisation-related topic.

A scientific internship must be completed at a department at Radboud University or Radboudumc. The programme will publish an annual prospectus containing an overview of suitable internship departments. Contrary to the above provisions, an internship can be done at an external research department, provided written permission is obtained at the start of the internship from an internal examiner of Radboud University or Radboud university medical center, who will also act as the assessor. The assessment of the internships is done with the internship assessment form for the Master's phase of the programme. Supervision and/or assessment of the second internship by the same supervisor and/or examiner as the first internship is not permitted, with the exception of external internships.

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5. Review Article (6 EC)

A literature review of a biological problem. Assessment must be carried out by an examiner from an internship department suitable for this specialisation, as described in Article 7.2a paragraph 4. The Review Article may be replaced by Field Course Alpine Ecology (NWIBM040B) or Field Course Ireland (NWI-BM048B). The Review Article and the Research Proposal may not both be replaced by a field course. The Review article and the Research proposal may not have the same examiner, but such a limitation does not apply if one of these assignments has been replaced by a field course.

6. Research Proposal (6 EC)

Research proposals should be based on a biological problem. The Research Proposal may be replaced by Field Course Ireland (NWI-BM048B). The Review Article and the Research Proposal may not both be replaced by a field course. The Review Article and the Research Proposal may not have the same examiner.

7. Portfolio (0 EC)

The content of the portfolio is shaped by the writing of a Master Plan, a Master's View and internship application letters.

Article 7.2b Master's specialisation in Conservation and Restoration Ecology

The Master's specialisation in Conservation and Restoration Ecology consists of the following components:

1. Compulsory components (15 EC):

Course code	Course name	EC
NWI-BM036A	Orientation in Biology and Environmental Sciences	3
NWI-BM060C	Quantitative conservation ecology	6
NWI-BM039A	Management of Ecosystems	3
NWI-BM014D	Microbiology of aquatic ecosystems	3

3.

2. Limited choice electives (15 EC)

Students must choose from the limited choice electives as described in Article 7.2a clause 2, under the conditions stated therein.

3. Free electives (6 EC)

1. Chosen components need to be at a measurable academic level.

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4. Internships (72 EC)

Students should take two scientific internships at the university-level that concern a biological problem, which is investigated through experiments and/or data analysis, each having a study load of 36 EC. Findings are recorded and presented in a written report and an oral presentation. At least one internship should take place on a specialisation-related topic.

A scientific internship must be completed at a department at Radboud University or Radboudumc. The programme will publish an annual prospectus containing an overview of suitable internship departments. Contrary to the above provisions, an internship can be done at an external research department, provided written permission is obtained at the start of the internship from an internal examiner of Radboud University or Radboud university medical center, who will also act as the assessor. The assessment of the internships is done with the internship assessment form for the Master's phase of the programme. Supervision and/or assessment of the second internship by the same supervisor and/or examiner as the first internship is not permitted, with the exception of external internships.

5. Review Article (6 EC)

A literature review of a biological problem. Assessment must be carried out by an examiner from an internship department suitable for this specialisation, as described in Article 7.2a paragraph 4. The Review Article may be replaced by Field Course Alpine Ecology (NWIBM040B) or Field Course Ireland (NWI-BM048B). The Review Article and the Research Proposal may not both be replaced by a field course. The Review article and the Research proposal may not have the same examiner, but such a limitation does not apply if one of these assignments has been replaced by a field course.

6. Research Proposal (6 EC)

Research proposals should be based on a biological problem. The Research Proposal may be replaced by Field Course Alpine Ecology (NWIBM040B) or Field Course Ireland (NWI-BM048B). The Review Article and the Research Proposal may not both be replaced by a field course. The Review Article and the Research Proposal may not have the same examiner.

7. Portfolio (0 EC)

The content of the portfolio is shaped by the writing of a Master Plan, a Master's View and internship application letters.

Article 7.2c Master's specialisation in Water and Environment

The Master's specialisation in Water and Environment consists of the following components:

1. Compulsory components (15 EC):

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Course code	Course name	EC
NWI-BM036A	Orientation in Biology and Environmental Sciences	3
NWI-BM038A	Ecological and Environmental Concepts	3
NWI-BM039A	Management of Ecosystems	3
NWI-BM075	Biodiversity Assessment	3
NWI-MM002A	Ecological and environmental modelling	3

2. Limited choice electives (15 EC)

Students must choose from the limited choice electives, as described in Article 7.2a clause 2, under the conditions stated therein.

3. Free electives (6 EC)

Chosen components need to be at a measurable academic level.

4. Internships (72 EC)

Students should take two scientific internships at the university-level that concern a biological problem, which is investigated through experiments and/or data analysis, each having a study load of 36 EC. Findings are recorded and presented in a written report and an oral presentation. At least one internship should take place on a specialisation-related topic.

A scientific internship must be completed at a department at Radboud University or Radboudumc. The programme will publish an annual prospectus containing an overview of suitable internship departments. Contrary to the above provisions, an internship can be done at an external research department, provided written permission is obtained at the start of the internship from an internal examiner of Radboud University or Radboud university medical center, who will also act as the assessor. The assessment of the internships is done with the internship assessment form for the Master's phase of the programme. Supervision and/or assessment of the second internship by the same supervisor and/or examiner as the first internship is not permitted, with the exception of external internships.

5. Review Article (6 EC)

A literature review of a biological problem. Assessment must be carried out by an examiner from an internship department suitable for this specialisation, as described in Article 7.2a paragraph 4. The Review Article may be replaced by Field Course Alpine Ecology (NWIBM040B) or Field Course Ireland (NWI-BM048B). The Review Article and the Research Proposal may not both be replaced by a field course. The Review article and the Research proposal may not have the same examiner, but such a limitation does not apply if one of these assignments has been replaced by a field course.

6. Research Proposal (6 EC)

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Research proposals should be based on a biological problem. The Research Proposal may be replaced by Field Course Alpine Ecology (NWIBM040B) or Field Course Ireland (NWI-BM048B). The Review Article and the Research Proposal may not both be replaced by a field course. The Review Article and the Research Proposal may not have the same examiner.

7. Portfolio (0 EC)

The content of the portfolio is shaped by the writing of a Master Plan, a Master's View and internship application letters.

Article 7.2c.1 Master's specialisation in Water and Environment – variant Transnational Ecosystem-based Water Management

In addition, the following programme of the **dual degree Master's variant Transnational Ecosystem-based Water Management** also counts as part of the Water and Environment specialisation:

1. Compulsory components (60 EC):

At Radboud University:

Course code	Course name	EC
NWI-BM036A	Orientation in Biology and Environmental Sciences	3
NWI-BM038A	Ecological and Environmental Concepts	3
NWI-BM039A	Management of Ecosystems	3
NWI-BM075	Biodiversity Assessment	3
NWI-MM002A	Ecological and environmental modelling	3
NWI-MM019A	Integrated Water Management	3
NWI-MM021	Social Aspects of Water Management	3
NWI-MM018A	Environmental Economics for Water Management	3
NWI-MM022	Water Governance and Spatial Planning	3
NWI-FFIL212	Philosophy of Water Management	3

At the University of Duisburg-Essen:

Course name	EC
Hydroclimatology and Sustainable Water Management	3
Applied Hydrogeology and Application	4
Water Quality Modelling	3
Ecology and Protection of Freshwater Ecosystems and Aquatic Organisms	5
Hydrobiological Field Trips	2
Waterborne Diseases	2
Basics in Hydraulic Planning and Hydraulic Works	3
Waste Water Treatment	3

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	Flood Management	2
	River Basin Management	3

2. Project (16 EC)

A project consisting of an internship based on career orientation in the field of Transnational Ecosystem-based Water Management. This space may also be filled with a short academic internship. The project is carried out under the responsibility of an examiner from one of the chair groups at the Institute for Water and Wetland Research at Radboud University, at the Institute for Science and Society at Radboud University or by an assistant, associate professor or full professor at the Center for Water and Environmental Research at the University of Duisburg-Essen. Assessment of the internship is done with the internship assessment form for the Master's phase of the programme. Together with the Orientation in biology and environmental sciences course, the project also includes the reflection on study performance, study planning and professional orientation, as referred to in Article 3.3 of this EER.

3. Free electives (14 EC)

Consisting of components of the students choosing, as long as the content is of a measurable academic level and at least 8 EC is at a Master's level. A student can use a maximum of 5 EC within the elective space to extend the project.

4. Portfolio (0 EC)

The content of the portfolio is shaped by the writing of a Master Plan, a Master's View and internship application letters.

5. Internship (30 EC)

The university-level internship is completed under the supervision of an examiner from one of the chair groups at the Institute for Water and Wetland Research of Radboud University or at the department of Sustainable Management of Resources of Radboud University, and by a lecturer, associate professor or full professor at the Center for Water and Environmental Research at the University of Duisburg-Essen.

Article 7.2d Master's specialisation in Microbiology

The Master's specialisation in Microbiology consists of the following components:

1. Compulsory components (18 EC)

Course code	Course name	EC
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NWI-BM069	Introduction and Orientation in Microbiology	3
NWI-BM063	Microbial Physiology and Metabolism	3
NWI-BM068	Environmental Microbiology and Biotechnology	3
NWI-BM065	Microbial Cell Structure and Function	3
NWI-BM067	Host-Microbe Interactions	3
NWI-BM070	Medical Microbiology	3

2. Limited choice electives (12 EC)

Students must choose from the limited choice electives, as described in Article 7.2a clause 2, under the conditions stated therein.

3. Free electives (6 EC)

Chosen components need to be at a measurable academic level.

4. Internships (72 EC)

Students should take two scientific internships at the university-level that concern a biological problem, which is investigated through experiments and/or data analysis, each having a study load of 36 EC. Findings are recorded and presented in a written report and an oral presentation. At least one internship should take place on a specialisation-related topic.

A scientific internship must be completed at a department at Radboud University or Radboudumc. The programme will publish an annual prospectus containing an overview of suitable internship departments. Contrary to the above provisions, an internship can be done at an external research department, provided written permission is obtained at the start of the internship from an internal examiner of Radboud University or Radboud university medical center, who will also act as the assessor. The assessment of the internships is done with the internship assessment form for the Master's phase of the programme. Supervision and/or assessment of the second internship by the same supervisor and/or examiner as the first internship is not permitted, with the exception of external internships.

5. Review Article (6 EC)

A literature review of a biological problem. Assessment must be carried out by an examiner from an internship department suitable for this specialisation, as described in Article 7.2a paragraph 4. The Review Article may be replaced by Field Course Alpine Ecology (NWIBM040B) or Field Course Ireland (NWI-BM048B). The Review Article and the Research Proposal may not both be replaced by a field course. The Review article and the Research proposal may not have the same examiner, but such a limitation does not apply if one of these assignments has been replaced by a field course.

6. Research Proposal (6 EC)

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Research proposals should be based on a biological problem. The Research Proposal may be replaced by Field Course Alpine Ecology (NWIBM040B) or Field Course Ireland (NWI-BM048B). The Review Article and the Research Proposal may not both be replaced by a field course. The Review Article and the Research Proposal may not have the same examiner.

7. Portfolio (0 EC)

The content of the portfolio is shaped by the writing of a Master Plan, a Master's View and internship application letters.

Article 7.2e Master's specialisation in Science, Management and Innovation (SMI)

The Master's specialisation in Science, Management and Innovation consists of the following components:

1. Compulsory courses (15 EC)

Course code	Course name	EC
NWI-FMT003E	Sustainable Innovation Management	6
NWI-FMT030	Reaching the Sustainable Development Goals	6
NWI-FMT019	Methods in Societal Research: Science, Management & Innovation	3

2. Theme courses (15 EC)

Choice of one of the themes:

Climate and Energy

Course code	Course name	EC
NWI-FMT022	Energy and Climate	6
NWI-FMT026	Energy Modelling	3
NWI-FMT032	Environmental Life Cycle Assessment	6

Health

Course code	Course name	EC
NWI-FMT023	The Future of Health	6
NWI-FMT029	How Health Systems Work	6

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	Free elective	3
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Green Industries & IT

Course code	Course name	EC
NWI-FMT022	Energy and Climate	6
NWI-SM299	Pattern Recognition in the Natural Sciences	3
NWI-FMT032	Environmental Life Cycle Assessment	6

Biodiversity

Course code	Course name	EC
NWI-BM038A	Environmental and Ecological Concepts*	3
NWI-BM075	Biodiversity Assessment*	3
NWI-BM033F	Nature in a Crowded Country	3
NWI-FMT032	Environmental Life Cycle Assessment	6

* Students who choose Water and Environment under paragraph 3 will take the following course in lieu of these courses: NWI-BM060C Quantitative Conservation Ecology (6 EC).

3. Disciplinary components (15 EC)

Choice of one of the combinations of required components, as referred to in Article 7.2a clause 1, Article 7.2b clause 1, Article 7.2c clause 1 or Article 7.2d clause 1. If the combination is chosen as described in Article 7.2d clause 1, the student must make a selection of 15 EC of the courses listed there. Alternatively, the student can choose a combination of courses referred to in Article 7.2a clause 1, Article 7.2b clause 1, Article 7.2c clause 1 and Article 7.2d clause 1, with a total of 15 EC, by requesting permission from the Examining Board with a written motivation letter, within one year of the start of the Master's programme.

4. Philosophical course (3 EC)

The student must choose from one of the following philosophical courses (3EC):

Course code	Course name	EC
NWI-FFIL202A	Evolution and the Mind	3

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NWI-FFIL203B	Bio-ethics for Life Scientists	3
NWI-FFIL209B	Environmental Ethics	3
NWI-FFIL211B	Physics and Philosophy	3
NWI-FFIL212	Philosophy of Water Management	3
NWI-FFIL215	Upgrading the Human	3
NWI-FFIL216	Imagining the Anthropocene	3
NWI-FFIL217	Science and Arts	3
NWI-FFIL218	Science and Values	3
NWI-FFIL219	Philosophy of Neuroscience	3
NWI-FFIL300C	Philosophy of Mathematical Practice	3
NWI-FFIL302	Philosophy & Ethics Microbiology	3

5. Internship (33 EC)

One scientific internship at the university-level on a biological problem. Assessment of the internship is done with the internship assessment form for the Master's phase of the programme. Assessment must be carried out by an examiner from an internship department suitable for this specialisation, as described in Article 7.2a paragraph 4, Article 7.2b paragraph 4, Article 7.2c paragraph 4 and Article 7.2d paragraph 4. Expansion of the internship is described under Free electives.

6. Review Article (6 EC)

A literature review of a biological problem. Assessment must be carried out by an examiner from an internship department suitable for this specialisation, as described in Article 7.2a paragraph 4, Article 7.2b paragraph 4, Article 7.2c paragraph 4 and Article 7.2d paragraph 4. The Review Article may be replaced by Field Course Alpine Ecology (NWI-BM040B) or Field Course Ireland (NWI-BM048B).

7. Portfolio (0 EC)

The content of the portfolio is shaped by the writing of a Master Plan, a Master's View and internship application letters.

8. Free electives (6 EC)

Under the conditions described in Article 7.2a paragraph 3. The student can use the free elective space to expand the internship by 6 EC. The student can use the free elective space to expand the Science, Management and Innovation final research project by 3 EC.

9. Science, Management and Innovation final research project (27 EC)

The SMI research project may, in consultation with the coordinator or a lecturer from the SMI specialisation, be completed both internally (at the Faculty of Science) or externally (government,

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businesses, consulting firms, NGOs, etc.), at home or abroad. In the first month, the student writes a research plan that must be approved by both the examiner and second reader. The assessment of the thesis is based on the criteria described in the manual *'Doing a research project: A guide for students of the Science, Management & Innovation Master's specialisation'*. Expansion of the project is described under Free electives.

Article 7.2f Master's specialisation in Science in Society (SiS)

The Master's specialisation in Science in Society consists of the following components:

1. Compulsory courses (24 EC)

Course code	Course name	EC
NWI-FC002B	Science and Societal Interaction	3
NWI-FC003B	Research, Responsibility and Uncertainty	3
NWI-FC0010D	Framing Knowledge	6
NWI-FC0013C	Science and Media	3
NWI-FC0043B	Science and Public Policy	3
NWI-FC0044C	Methods of Societal Research: Science in Society	6

2. Disciplinary components (15 EC)

Choice of one of the combinations of compulsory components, as referred to in Article 7.2a clause 1, Article 7.2b clause 1, Article 7.2c clause 1 or Article 7.2d clause 1. If the combination is chosen as described in Article 7.2d clause 1, the student must make a selection of 15 EC of the courses listed there. Alternatively, the student can choose a combination of courses referred to in Article 7.2a clause 1, Article 7.2b clause 1, Article 7.2c clause 1 and Article 7.2d clause 1, with a total of 15 EC, by requesting permission from the Examining Board with a written motivation letter, within one year of the start of the Master's programme.

3. Philosophical course (3 EC)

The student must choose from one of the following philosophical courses (3EC):

Course code	Course name	EC
NWI-FFIL203B	Bioethics for Life Scientists	3
NWI-FFIL202A	Evolution and the Mind	3
NWI-FFIL209B	Environmental Ethics	3
NWI-FFIL218	Science and Values	3
NWI-FFIL212	Philosophy of Water Management	3
NWI-FFIL217	Science and Arts	3
NWI-FFIL215	Upgrading the Human?	3

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NWI-FFIL302	Philosophy and Ethics in Microbiology	3
NWI-FFIL211B	Philosophy and Physics	3
NWI-FFIL216	Imagining the Anthropocene	3
NWI-FFIL300C	Philosophy of Mathematical Practice	3

4. Internship (33 EC)

One scientific internship at the university-level on a biological problem. Assessment of the internship is done with the internship assessment form for the Master's phase of the programme. Assessment must be carried out by an examiner from an internship department suitable for this specialisation, as described in Article 7.2a paragraph 4, Article 7.2b paragraph 4, Article 7.2c paragraph 4 and Article 7.2d paragraph 4.

5. Review Article (6 EC)

A literature review of a biological problem. Assessment must be carried out by an examiner from an internship department suitable for this specialisation, as described in Article 7.2a paragraph 4, Article 7.2b paragraph 4, Article 7.2c paragraph 4 and Article 7.2d paragraph 4. The Review Article may be replaced by Field Course Alpine Ecology (NWIBM040B) or Field Course Ireland (NWI-BM048B).

6. Portfolio (0 EC)

The content of the portfolio is shaped by the writing of a Master Plan, a Master's View and internship application letters.

7. Limited choice electives (3 EC)

To be filled with components related to the topic of the thesis. These components must be presented to the SiS coordinator for approval.

8. Free electives (6 EC)

Under the conditions described in Article 7.2a paragraph 3. The student can use the free elective space to expand the internship by 6 EC.

9. Science in Society research project (30 EC)

In consultation with a SiS lecturer, the SiS graduation project can be completed both internally (at the ISIS department) or externally (in government, at a consulting firm, NGO, etc.). In the first month, the student will write a research plan that must be approved both by the examiner, supervisor and second reader. The assessment of the thesis is based on the criteria described in the '*Graduation project guidelines SiS*'.

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Article 7.2g Master's specialisation in Science and Education

The Master's specialisation in Science and Education consists of the following components:

1. Disciplinary components (15 EC)

Choice of one of the combinations of compulsory components, as referred to in Article 7.2a clause 1, Article 7.2b clause 1, Article 7.2c clause 1 or Article 7.2d clause 1. If the combination is chosen as described in Article 7.2d clause 1, the student must make a selection of 15 EC of the courses listed there. Alternatively, the student can choose a combination of courses referred to in Article 7.2a clause 1, Article 7.2b clause 1, Article 7.2c clause 1 and Article 7.2d clause 1, with a total of 15 EC, by requesting permission from the Examining Board with a written motivation letter, within one year of the start of the Master's programme.

2. Philosophical course (3 EC)

The student must choose from one of the following philosophical courses (3EC):

Course code	Course name	EC
NWI-FFIL203B	Bioethics for Life Scientists	3
NWI-FFIL202A	Evolution and the Mind	3
NWI-FFIL209B	Environmental Ethics	3
NWI-FFIL218	Science and Values	3
NWI-FFIL212	Philosophy of Water Management	3
NWI-FFIL217	Science and Arts	3
NWI-FFIL215	Upgrading the Human?	3
NWI-FFIL302	Philosophy and Ethics in Microbiology	3
NWI-FFIL211B	Philosophy and Physics	3
NWI-FFIL216	Imagining the Anthropocene	3
NWI-FFIL300C	Philosophy of Mathematical Practice	3

3. Internship (30 EC)

One scientific internship at the university-level on a biological problem. Assessment of the internship is done with the internship assessment form for the Master's phase of the programme. Assessment must be carried out by an examiner from an internship department suitable for this specialisation, as described in Article 7.2a paragraph 4, Article 7.2b paragraph 4, Article 7.2c paragraph 4 and Article 7.2d paragraph 4.

4. Review Article (6 EC)

A literature review of a biological problem. Assessment must be carried out by an examiner from an internship department suitable for this specialisation, as described in Article 7.2a paragraph 4, Article

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7.2b paragraph 4, Article 7.2c paragraph 4 and Article 7.2d paragraph 4. The Review Article may be replaced by Field Course Alpine Ecology (NWIBM040B) or Field Course Ireland (NWI-BM048B).

2. 5. Portfolio (0 EC)

The content of the portfolio is shaped by the writing of a Master Plan, a Master's View and internship application letters.

6. Free electives (6 EC)

Under the conditions described in Article 7.2a paragraph 3. The student can use the free elective space to expand the internship by 6 EC.

7. Education specialisation (60 EC)

The specialisation in Science and Education is provided by the Radboud Teachers Academy. The curriculum and related regulations are found in the EER of the Radboud Teachers Academy.

Article 7.3 Deviating programme

If a student does not choose a specialisation, they must submit a motivated request for permission to the Examining Board for an alternative course selection within three months of the start of the Master's programme. The submitted course selection must include at least 60 EC, including at least 15 EC of Master's courses and a programme-specific internship.

Article 7.4 Sequence of exams

4. The course Orientation in Biology and Environmental Sciences should be completed at the first opportunity in the specialisation. An exception is the specialisation in Microbiology, in which the same regulations apply for the course Introduction and Orientation in Microbiology.
5. The project and the internship (Master's thesis) of the Transnational Ecosystem-based Water Management variant cannot be started before a passing grade has been earned and/or an exemption granted for other components of this dual degree Master's variant with a study load of at least 45 EC.

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Section 8. Transitional provisions

The following applies for students of all specialisations:

- NWI-BM008C Estuarine Ecology may be used as part of the limited elective space.
- NWI-BM021C Population Ecology may be used as part of the limited elective space.
- NWI-BM033E European Vegetation may be used as part of the limited elective space.
- NWI-BM060B Quantitative Conservation Biology may be used as part of the limited elective space.
- A thesis (NWI-BM-THESIS1, NWI-BM-THESIS2, or NWI-BM-THESIS3) may be used instead of the Review Article (NWI-BM-REVIEWART).
- A thesis (NWI-BM-THESIS1, NWI-BM-THESIS2, or NWI-BM-THESIS3) may be used instead of the Research Proposal (NWI-BM-RESPROP).
- NWI-FFIL214 Science and metaphysics may be used as a philosophical course.
- NWI-MM020A Environmental Life Cycle Assessment may be used as part of the limited elective space.

For students of the specialisation in Adaptive Organisms, the following applies:

- NWI-BM014D Microbiology of Aquatic Ecosystems may be used as part of the compulsory components instead of NWI-BM076 Symbiosis, but only if the student has participated in the course during the 2018-2019 academic year or earlier.
- NWI-BM002C Ecology and Management of Large Rivers may be used as part of the limited elective space.
- NWI-MM015 Risk Management of Chemicals may be used as part of the limited elective space.
- NWI-BM060B Quantitative Conservation Biology may be used as part of the compulsory components instead of NWI-BM077 Genomics, but only if the student has participated in the course during the 2018–2019 academic year or earlier.

The following applies for students of the specialisation in Conservation and Restoration Ecology:

- NWI-BM060B Quantitative Conservation Biology and NWI-MM002A Ecological and Environmental Modelling together may be used as part of the compulsory components instead of NWI-BM060C Quantitative Conservation Ecology.

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- NWI-BM040A Biodiversity and Ecological Assessment or NWI-BM075 Biodiversity Assessment may be used as part of the compulsory components instead of NWI-BM014D Microbiology of Aquatic Ecosystems, but only if the student has participated in the course during the 2018–2019 academic year or earlier.

The following applies for students of the specialisation Water & Environment:

- NWI-BM040A Biodiversity and Ecological Assessment may be used as part of the compulsory components instead of NWI-BM075 Biodiversity Assessment.

The following applies for students of the specialisation in Science, Management and Innovation:

- Students who have successfully completed NWI-FMT020 Bio-Economy may use it instead of one of the 3 EC courses in the Climate and Energy theme.
- Students who have successfully completed NWI-FMT025B From Lab to Clinic may use it instead of NWI-FMT029 How Health Systems Work.
- Students who have successfully completed NWI-FMT024 Policy and Economics *and* NWI-FMT006A Entrepreneurship Clinic may use it instead of NWI-FMT030 Reaching the SDGs.
- Students who have successfully completed NWI-FMT006A Entrepreneurship but *not* NWI-FMT024 Policy and Economics can place it in the free elective space *or* follow NWI-FC0043B Science and Public Policy with which they may use NWI-FMT006A Entrepreneurship and NWI-FC0043B Science and Public Policy together instead of NWI-FMT030 Reaching the SDGs.
- Students who have successfully completed NWI-FMT024 Policy and Economics but *not* NWI-FMT006A Entrepreneurship can place this in the free elective space.
- Students who have successfully completed NWI-MM020A Environmental Life Cycle Assessment and a 3 EC free elective may use it instead of NWI-FMT032 Environmental life cycle assessment.

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PART IV FINAL PROVISIONS

Paragraph 9. Final provisions

Article 9.1 Safety net scheme and hardship clause

1. In all cases not covered fully or clearly by these regulations, the decision lies with the dean.
2. In all cases in which these regulations may result in an unreasonable or unfair situation for individual students, the Examining Board or the dean is authorised to make an exception to the provisions in these Education and Examination Regulations.

Article 9.2 Establishment and amendments

1. Notwithstanding the provisions in Article 7 of the Structure Regulations, these regulations are drawn up or amended by the dean after receiving advice from the programme committees and after having obtained the approval of the Joint Assembly of the faculty.
2. An amendment to these regulations has no impact on the current academic year, unless this would disproportionately damage the student interests.
3. In derogation from clause 1, the dean is authorised to drop elective components from the curriculum should the circumstances be deemed impossible to offer the course.

Article 9.3 Entry into force

These regulations enter into force on 1 September 2021.

Article 9.4 Publication

1. The dean is responsible for publishing these regulations and any amendments hereto.
2. Interested parties may consult these regulations via the prospectus.

As established by the dean on 30-06-2021.