Education and Examination Regulation 2020-2021

Master Medical Biology

Radboud Universiteit

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[1] These Education and Examination Regulations are a translation of a Dutch-language document. The original Dutch OER takes precedence over all its translations and therefore, no rights can be derived from this translation.

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 2020-2021 academic year. Students who started the degree programme before 1 September 2016 and have been continuously enrolled in this programme may appeal to the EER which was active at the time of their initial enrolment in the programme.
3. Course components provided by a different faculty or institution that are followed as part of the degree programme are subject to the rules applicable at that faculty or institution. Components offered by the Faculty of Science are at all times subject to the regulations described in at least one of the EERs of the Faculty of Science.
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, with the exception of the educational components of the Faculty of Science Education and Science specialisations which are taught in Dutch.

Article 1.2 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") will have the same meaning as in the Act.
2. Apart from the terms referred to in paragraph 1, the terms below will be understood to have the following meaning:
   a. Degree programme: the Master's degree programme referred to in Article 7.3a paragraph 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 paragraph 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 Examination 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 constitute the interim examination as referred to under paragraph f. In these regulations, when the term examination is used this can also be read as partial examination, unless explicitly indicated otherwise;
   h. Resit: a new opportunity to take a particular examination as referred to in Article 7.10 paragraph 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 Examination Board determines whether all the components pertaining to the Master's programme have been completed successfully. The Examination Board may decide that the final examination also includes an investigation by the Examination Board into the knowledge, insight, and skills of the 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 his or her knowledge, understanding, and skills partially or entirely impossible. The Regulations

on Fraud during Interim Examinations and Examinations are included as an appendix to these EER;

k. Examination Board: the examination 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 Examination 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 System;
n. Specialisation: a coherent programme within the Master's programme that has been approved as such by the faculty board;
o. Work day: Mondays to Fridays, with the exception of official holidays and any other days designated by Radboud University as collective holidays;
p. Awarding of the degree certificate: the formal confirmation that all the examination requirements have been met;
q. prospectus: the guide for a particular degree programme of the Faculty of Science, containing specific information regarding the Master's degree programme;
r. The university: Radboud University;
s. The faculty: The Faculty of Science;
t. The education institute: the organisational unit responsible for the degree programme;
u. Free elective: a freely-selected, academic, assessable component.
v. Rules and regulations: the rules in which the Examination Board explain how it works in accordance with the Education and Examination Regulations.

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 the student 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), Ireland, New Zealand, Singapore, the United Kingdom, the United States, and South Africa; or
   b. is in possession of a pre-university education (VWO) diploma; or
   c. is in possession of a pre-university education diploma obtained at an English-language institution in the Netherlands or elsewhere; or
   d. has a pre-university education diploma obtained at a German secondary education institution, with English as *Grundkurs*; or
   e. has a Bachelor's diploma from a university of applied sciences (HBO); or
   f. has a Bachelor's diploma from a Dutch university; or
   g. in the opinion of the programme meets the requirements; or
   h. 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 6.0;
      iv. 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 for 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.

   In certain cases, the education institute may assess whether a student is sufficiently proficient in Dutch.

Section 3. Structure and design

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 final examination of the Master's degree programme will be awarded the Master of Science (MSc) degree.
3. The degree referred to in the second paragraph is exclusively awarded if the student has earned at least half of the EC for their degree programme at this university.
4. The Examination Board can award a distinction to a student who has successfully passed the degree programme examination. 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:

a. Acquire knowledge, skills and insights in the relevant field of study;
b. Develop academic competences;
c. Prepare for further study or future career;
d. Strengthen qualifications in the area of 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.
2. The programme has research specialisations and societal specialisations. The specialisations are described in the programme-specific part.
3. 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.
4. The elective courses cannot have a 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.
5. The composition of the Master's programme compiled by the student must be presented for approval to the Examination 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.
6. 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 the Science, Management and Innovation final research project after the student has 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 12 EC has been obtained from the SiS curriculum.

7. A student is permitted to add components to the examination programme. These components are considered extracurricular and do not count towards the determination of the distinction.
8. If a student can choose between components within the curriculum and the student has passed more than one of these components, then the student can decide which components will 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 (paper or digital);
   b. Oral test;
   c. Presentation;
   d. Skill test;
   e. 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 the permission of 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 the permission of 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 Examination Board, if necessary, shall seek expert advice and counsel prior to reaching its decision. If the students 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 simultaneously, unless decided otherwise by the Examination Board.

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

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 component 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 diploma as an exemption.
4. Students who were first enrolled on or after 1 September 2017 can never have more exemptions, as stated in paragraph 1, than a quarter of the total study load of the programme expressed in EC.
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 ECs as stated in paragraph 4 if the courses are only included in a one examination programme.
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 programme's Examination Board determines whether to grant permission for a student to take an elective programme as meant in Article 7.3d of the Act. The Examination Board will 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

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 prospectus before the start of the academic year.
3. Contrary to the stipulation in the first paragraph, 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. Registration for an interim examination closes at 11:59 pm on the day preceding a period of five working days before the date of the interim examination, so that there are always five full working days between the deadline for registration for the interim examination in question and the date of that examination. The day on which the interim examination takes place is not included in this period of five working days.
3. A successfully passed examination may be taken again.
4. 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 applies that a grade lower than a 5.5 is rounded down to a five (5) which is an insufficient grade, meaning the educational component has not been successfully completed; while a 5.5 and higher is rounded up to a six (6), meaning that this 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. Contrary to the provisions of paragraph 1, partial examinations may also be graded with 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 a thesis within 15 working days after its submission via http://thesissubmission.science.ru.nl.
2. The examiner shall determine the result of an oral examination within two working days of the date that it was administered.
3. The examiner shall determine the result of a written interim examination within 15 working days of the date it was administered. Here the precondition applies that there must be at least 10 working days between the date of the publication of the result in Osiris and the date of the resit.
4. Contrary to the provisions in paragraph 3, the examiner shall determine the result of a written interim examination in the fourth period no later than nine days before the scheduled date of the corresponding resit. The examiner shall determine the result of a written resit examination in the fourth period within five 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 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. Within at least 30 working days following publication of a written interim examination result, the student may request access to review and inspect all graded work. For the results of interim examinations with “open” questions, at the student’s request they shall be granted a copy of their graded work at cost.
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. Inspection or explanation as referred to in paragraph 1 and 2 shall take place during at least one scheduled moment before the start of the interim examination. If the student demonstrates that they are or were unable to attend an inspection at a determined place and time due to force majeure, they may request the Examination Board to allow them another opportunity to inspect the examination, if possible within the period referred to in the first paragraph.
4. 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.
5. 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 shall be kept for seven years.

Article 4.6 Confirmation of the result of the final examination

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 Examination 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 Examination 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 5 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 paragraph 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

1. With due observance of the provisions set out in this Article, the Examination Board is responsible for the decision of whether a distinction shall be awarded and if so, which distinction.
2. The distinctions:
   a. "cum laude" shall be awarded if the weighted average result of the assessments of all components with less than 20 EC is at least equal to an 8.0 and the weighted average result of the assessments of all components with 20 EC or more is at least equal to an 8.0.
   b. "summa cum laude" shall be awarded if the weighted average result of assessments of all components with less than 20 EC is equal to an 9.0 and the weighted average result of the assessments of all components with 20 EC or more is at least equal to an 9.0.
3. The distinction shall be calculated on the basis of all components of the examination programme for which a mark has been awarded on a scale from 1 to 10, with the exception of extra-curricular components.
4. The number of EC of the component referred to in paragraph 3 shall serve as the weighting factor for the calculation of the weighted average result, unless stipulated otherwise in the programme-specific part of these regulations.
5. The distinction shall not be awarded if more than 10 percent of the total study load of the examinations for the degree programme (being one or more components) has been re-sat or if

interim examinations have been re-sat more than once, unless the Examination Board decides otherwise, stating the reasons for this decision.

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 timeframe.
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

Students are admitted to the programme if they meet the following requirements in addition to the admission requirements described in Section 2:

1. Students who have successfully passed the final examination of the Bachelor's programme in Biology at Radboud University with the minor in Medical Biology or the minor in Medicine.
2. Students who have successfully passed the final examination of the Bachelor's programme in Molecular Life Sciences at Radboud University with at least five of the following courses: NWI-BB023B Animal Cell Biology, NWI-BB023B ***Animal Cell Biology***, NWI-BB051B ***Applied Bioinformatics***, NWI-BB017C ***Biochemistry and Molecular Biology II***, NWI-BB085B ***Brain and Behaviour***, NWI-BB081B Cognitive Neuroimaging, NWI-BB048B Endocrinology, NWI-BB064B ***Functional Genomics***, NWI-BB086 ***Genomics for Health and Environment***, NWI-BB047C Human Embryology ***and Developmental Biology***, NWI-BB025B ***Human Pathology***, NWI-BB019B ***Immunology***, NWI-MOL104 ***Medical Biotechnology***, NWI-BB084B ***Molecular Principles of Development***, NWI-BB034B Neurobiology, NWI-BB021B Neurobiophysics, NWI-BB039C ***Neurodevelopment***, ***NWI-BB080B Neurophys. of Cognition and Behaviour***, NWI-BB063B ***Neuroscience: from Basis to Clinic***, NWI-BB065B ***Pathophysiology of the Kidney***, MED-MIN16 Translational neuroscience.
3. Students must have successfully passed the final examination of the Bachelor's programme in Medical Biology, Biomedical Sciences at Radboud University or an equivalent degree in a similar topic at another Dutch university.
4. Students must be in possession of a degree certificate that is at least equal to the degree referred to in paragraph 1.
5. in the opinion of the Examination Board, have otherwise demonstrated suitability for participation in the degree programme

Article 6.2 Pre-Master's

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

Article 6.3 Enrolment capacity

In addition to the admission requirements described above, a maximum enrolment capacity of 50 students per year applies for the specialisation in Medical Epigenomics.

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, the students will also achieve the following learning outcomes upon graduation:
   a. capable of setting up and conducting research aimed at acquiring new knowledge and insight in the field, based on 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-specialisation of this field;
   b. Graduates are capable of formulating 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
   c. Graduates are capable of setting up and conducting scientific experiments in an independent manner, including the required controls, of using models and theories to explain the results, and of evaluating the results in terms of well-founded scientific conclusions
   d. Capable of independently identifying, critically reading and comprehending relevant, up-to-date international literature from different disciplines, of discriminating essential from non-essential information, and of integrating new information in their overall view on health and disease;
   e. Graduates are capable of using concepts from different organization levels in biology, in combination with those from physics, chemistry and mathematics, to solve a complex biological/biomedical problem at a specific abstraction level
   f. Graduates are capable of presenting the results of a research project in written form, in accordance with the standards of an academic article
   g. Capable of independent professional practice whereby, depending on the chosen variant, the emphasis is put on conducting fundamental scientific research (under supervision), or on transferring or applying existing scientific knowledge, thereby taking into account the students' own competences
   h. Graduates are capable of asking adequate questions with a critical and constructive attitude in regard to analysing and resolving complex biological and/or biomedical problems;
   i. Graduates are capable of defending their view and of critically evaluating other views in a scientific discussion;
   j. Graduates are capable of presenting and discussing the results of a research project in the form of an oral presentation for experts and fellow students;
   k. Graduates are capable of working in or leading a project team, including making the plans, distributing the tasks, integrating the sub-projects and jointly evaluating the results;
   l. Graduates are capable of integrating ethical aspects in their professional practice, along with the ability to reflect on the potential implications for society;
   m. Graduates are capable, through self-reflection and discussion with others, of assessing their own performance and possibilities on the labour market.
2. Students who choose a research-based specialisation, as outlined in Article 7.2 paragraph 1a-c, will achieve the following learning outcomes in addition to those described in Article 7.1 paragraph 1:
   a. Graduates are 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. Graduates are capable of presenting the results of a research project in written form, in accordance with the specific format of a scientific journal.
c. Graduates are capable of writing a research proposal according to the criteria of external scientific organisations;

3. Students who choose the specialisation in Science, Management and Innovation as described in Article 7.2d, will achieve the following learning outcomes in addition to those described in Article 7.1 paragraph 1:
   a. Graduates are capable of bridging the gap between their own discipline and other disciplines, based on a profound understanding of the chosen core theme and how this relates to societal, political, economic, and environmental requirements of the world today;
   b. Graduates are familiar with and capable of analysing specific problems within their theme and are able to apply a range of approaches to address these, to argue for, select, and implement feasible options, taking into account the full width of technological, societal, political and economic perspectives;
   c. Graduates are proficient in using research methods and techniques, including basic finance and economics, to verify, justify and substantiate strategies and plans and are capable of effectively using a wide variety of information and communication channels;
   d. Graduates are capable of balancing perspectives and interests in specific contexts within a company or (non-)governmental organisation in order to formulate appropriate strategies and plans regarding the implementation of the Sustainable Development Goals (SDGs);
   e. Graduates are capable of communicating insights, views and analyses of complex issues to others in a clear, concise and understandable manner, both in written and spoken form;
   f. Graduates are capable of working in multidisciplinary, multicultural and high-performance teams based on sound division of tasks, knowledge, competencies, and responsibilities, whilst respecting diverging views and opinions.
4. Students who choose the specialisation in Science in Society as described in Article 7.2e, will achieve the following learning outcomes in addition to those described in Article 7.1 paragraph 1:
   a. Graduates are capable of analysing the role of scientific expertise in societal and political decision-making with regard to socio-scientific issues;
   b. Graduates are capable of designing and conducting independent and methodologically sound social research at the interface of science and society and are capable of contributing to academic research;
   c. Graduates are capable of understanding and designing public and stakeholder participation processes in research and innovation;
   d. Graduates are capable of analysing, improving and evaluating interdisciplinary collaborations with multiple stakeholders and integrating different perceptions, interests and types of knowledge (experiential, professional and scientific);
   e. Graduates are capable of substantiating and communicating the relevance of one's scientific discipline in society.
5. Students who choose the specialisation in Science and Education as described in Article 7.2f, will achieve the following learning outcomes in addition to those described in Article 7.1 paragraph 1:
   a. Graduates 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. Graduates are 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;

c. Graduates devote attention to discipline-specific learning of individual and unique students, focusing on developing inspiring education;
d. Graduates are 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. Graduates are able to differentiate themselves and improve the social climate for collaboration and, in doing so, to set independent priorities and respond appropriately to development and behavioural problems, after consultation with relevant third parties;
f. Graduates focus on collaboration and responsible behaviour based on clear communication with individual students and colleagues, on the basis of a personal vision;
g. Graduates develop their own professional knowledge base to justify their own actions and understand the actions of colleagues and supervisors;
h. Graduates use their professional knowledge base and contextual feedback (students, colleagues, and supervisors) to evaluate and guide their own professional development;
i. Graduates 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. Human Biology
   b. Medical Epigenomics
   c. Neurobiology
   d. Science, Management and Innovation
   e. Science in Society
   f. Science and Education

Article 7.2a Master's specialisation in Human Biology

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

1. Compulsory components (15 EC):

Course code	Course name	EC
NWI-BM078	Molecular Therapy	6
NWI-BM072	Translational Genomics	6
NWI-BM073	Trends in Stem Cell Biology	3

2. Limited choice electives (15 EC)

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

Course code	Course name	EC

NWI-BM010C	Advanced Adaptation Physiology	3
NWI-BM004C	Apoptosis	3
NWI-BM016C	Cellular Imaging in Four Dimensions	3
NWI-BM050B	Human fertility (is taught on alternating years and will not be taught in 2020-2021)	3
NWI-BM079	Kidney: Bench to Bedside	3
NWI-BM024D	Course on laboratory animal science	3
NWI-BM032C	Advanced Endocrinology	3
NWI-BM062	Epigenomics in Health and Disease	3
NWI-BM064	Protein Dynamics and Networks	3
NWI-BM066A	Computation for Biologists	6
NWI-LM012	Molecular Aspects of Host Defence, Tissue Destruction and Repair	3
NWI-BM061	Neurogenomics of Speech, Language and Reading Disorders	3
NWI-BM015C	Oncology	3
NWI-BM041B	Principles of Systems Biology	3
NWI-MOL411	Protein Modification	3
NWI-BM051B	Systematic Reviews of Animal Studies	3
NWI-BM053B	Behavioural Neuroscience	3
NWI-MM013	Research Skills	3
NWI-BM044B	Systems Neuroscience	3
NWI-BM001D	Molecular and Cellular Neurobiology	6
NWI-BM007C	TMS-VRS-D (Working with Radionuclides)	2
NWI-MOL414	Chemical Discovery and Design	3
NWI-NM103B	Methods in Neuroscience	3
NWI-BM059	Systematic Reviews in Neuroscience	6
NWI-BM080	Molecular Parasitology	3
NWI-BM081	Physiology of the Intestine	3
NWI-BM092	Food & Brain Health	3

The student must choose from one of the following philosophical courses:

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-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
NWI-FILL302	Philosophy and Ethics in 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 limited elective space can be used to extend the research internships. It is expressly forbidden to also 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 Examination Board and approved before they can be included in the limited elective space.

3. Free electives (6 EC)

Chosen components need to be at a measurable academic level.

4. Internships (72 EC)

Two scientific internships at the university level in regard to a medical biological problem and each having a study load of 36 EC. 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 Radboud university medical center. The programme will publish a prospectus annually 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 was 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. Both internships can also be done externally, each at a different research department, if approval is received from the Examination Board. 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 medical 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.

6. Research Proposal (6 EC)

A research proposal based on a medical 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 and the Research Proposal may not have the same examiner.

7. Portfolio (0 EC)

In terms of content, the portfolio consists of reports on self-evaluation and career orientation.

Article 7.2b Master's specialisation in Medical Epigenomics

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

1. Compulsory courses (15 EC)

Course code	Course name	EC
NWI-BM062	Epigenomics in Health and Disease	3
NWI-BM064	Protein Dynamics and Networks	3
NWI-BM066A	Computation for Biologists	6
NWI-BM073	Trends in Stem Cell Biology	3

2. Limited choice electives (15 EC)

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

Course code	Course name	EC
NWI-BM010C	Advanced Adaptation Physiology	3
NWI-BM004C	Apoptosis	3
NWI-BM016C	Cellular Imaging in Four Dimensions	3
NWI-BM050B	Human fertility (is taught on alternating years and will not be taught in 2020-2021)	3
NWI-BM079	Kidney: Bench to Bedside	3
NWI-BM024D	Course on laboratory animal science	3
NWI-BM032C	Advanced Endocrinology	3
NWI-LM012	Molecular Aspects of Host Defence, Tissue Destruction and Repair	3

NWI-BM061	Neurogenomics of Speech, Language and Reading Disorders	3
NWI-BM015C	Oncology	3
NWI-BM041B	Principles of Systems Biology	3
NWI-MOL411	Protein Modification	3
NWI-BM051B	Systematic Reviews of Animal Studies	3
NWI-BM053B	Behavioural Neuroscience	3
NWI-MM013	Research Skills	3
NWI-BM044B	Systems Neuroscience	3
NWI-BM001D	Molecular and Cellular Neurobiology	6
NWI-BM007C	TMS-VRS-D (Working with Radionuclides)	2
NWI-MOL414	Chemical Discovery and Design	3
NWI-BM078	Molecular Therapy	6
NWI-BM072	Translational Genomics	6
NWI-NM103B	Methods in Neuroscience	3
NWI-BM059	Systematic Reviews in Neuroscience	6
NWI-BM080	Molecular Parasitology	3
NWI-BM081	Physiology of the Intestine	3
NWI-BM082	Food & Brain Health	3

The student must choose from one of the following philosophical courses:

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-FFIL214	Science and Metaphysics	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

Besides this, natural science courses of a measurable academic level need to be chosen to reach a total of 15 EC of electives.

A maximum of 6 EC of limited elective space can be used to extend the research internships. It is expressly forbidden to also 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 Examination Board and approved before they can be included in the limited elective space.

3. Free electives (6 EC)

Under the conditions described in Article 7.2a paragraph 3.

4. Internships (72 EC)

Two scientific internships at the university level in regard to a medical biological problem and each having a study load of 36 EC. 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 Radboud university medical center. The programme will publish a prospectus annually 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 was 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. Both internships can also be done externally, each at a different research department, if approval is received from the Examination Board. 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 medical biological problem. Assessment must be carried out by an examiner from an internship department suitable for this specialisation, as described in Article 7.2b paragraph 4.

6. Research Proposal (6 EC)

A research proposal based on a medical biological problem. Assessment must be carried out by an examiner from an internship department suitable for this specialisation, as described in Article 7.2b paragraph 4. The Review Article and the Research Proposal may not have the same examiner.

7. Portfolio (0 EC)

In terms of content, the portfolio consists of reports on self-evaluation and career orientation.

Article 7.2c Master's specialisation in Neurobiology

The Master's specialisation in Neurobiology within the Master's programme in Medical Biology consists of the following components:

1. Compulsory courses (24 EC)

Course code	Course name	EC
NWI-BM044B	Systems Neuroscience	3
NWI-BM053B	Behavioural Neuroscience	3
NWI-BM001D	Molecular and Cellular Neurobiology	6
NWI-BM073	Trends in Stem Cell Biology	3
NWI-NM103B	Methods in Neuroscience	3
NWI-BM059	Systematic Reviews in Neuroscience	6

2. Limited choice electives (12 EC)

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

Course code	Course name	EC
NWI-BM010C	Advanced Adaptation Physiology	3
NWI-BM004C	Apoptosis	3
NWI-BM016C	Cellular Imaging in Four Dimensions	3
NWI-BM050B	Human fertility (is taught on alternating years and will not be taught in 2020-2021)	3
NWI-BM024D	Course on laboratory animal science	3
NWI-BM032C	Advanced Endocrinology	3
NWI-BM062	Epigenomics in Health and Disease	3
NWI-BM064	Protein Dynamics and Networks	3
NWI-BM066A	Computation for Biologists	6
NWI-LM012	Molecular Aspects of Host Defence, Tissue Destruction and Repair	3
NWI-BM061	Neurogenomics of Speech, Language and Reading Disorders	3
NWI-BM015C	Oncology	3
NWI-BM041B	Principles of Systems Biology	3
NWI-MOL411	Protein Modification	3
NWI-BM051B	Systematic Reviews of Animal Studies	3

NWI-MM013	Research Skills	3
NWI-BM007C	TMS-VRS-D (Working with Radionuclides)	2
NWI-MOL414	Chemical Discovery and Design	3
NWI-BM078	Molecular Therapy	6
NWI-BM072	Translational Genomics	6
NWI-BM080	Molecular Parasitology	3
NWI-BM081	Physiology of the Intestine	3
NWI-BM082	Food & Brain Health	3

The student must choose from one of the following philosophical courses:

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-FFIL214	Science and Metaphysics	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

Besides this, natural science courses at a measurable academic level need to be chosen to reach a total of 12 EC of electives.

A maximum of 6 EC of limited elective space can be used to extend the research internships. It is expressly forbidden to also 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 Examination Board and approved before they can be included in the limited elective space.

3. Free electives (6 EC)

Under the conditions described in Article 7.2a paragraph 3.

4. Internships (72 EC)

Two scientific internships at the university level in regard to a medical biological problem and each having a study load of 36 EC. 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 Radboud university medical center. The programme will publish a prospectus annually 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 was 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. Both internships can also be done externally, each at a different research department, if approval is received from the Examination Board. 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. Research Proposal (6 EC)

A research proposal based on a medical biological problem. Assessment must be carried out by an examiner from an internship department suitable for this specialisation, as described in Article 7.2c paragraph 4.

6. Portfolio (0 EC)

In terms of content, the portfolio consists of reports on self-evaluation and career orientation.

Article 7.2d 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 components (15 EC):

Course code	Course name	EC
NWI-FMT003E	Innovation Management	6
NWI-FMT024	Policy and Economics	3
NWI-FMT006A	Entrepreneurship: Making a Business Plan	3
NWI-FMT019	Methods in Societal Research: Science, Management & Innovation	3

2. Theme elements (12 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-MM020A	Environmental Life Cycle Assessment	3

Health

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

3. Disciplinary components (15 EC)

Choice of one of the combinations of required components, as referred to in Article 7.2a paragraph 1, 7.2b paragraph 7, or 7.2c paragraph 1. If the combination is chosen as described in Article 7.2c paragraph 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 paragraph 1, Article 7.2b paragraph 1, and Article 7.2c paragraph 1, with a total study load of 15 EC, by requesting permission from the Examination Board through a motivated request, 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-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

5. Internship (33 EC)

One scientific internship at the university level on a medical 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, or Article 7.2c paragraph 4.

6. Review Article (6 EC)

A literature review of a medical 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, or Article 7.2c paragraph 4.

7. Portfolio (0 EC)

In terms of content, the portfolio consists of reports on self-evaluation and career orientation.

8. Free electives (6 EC)

Under the conditions described in Article 7.2a paragraph 3.

9. Science, Management and Innovation final research project (30 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, businesses, consulting firms, NGOs, etc.), at home or abroad. In the first month, the student will write a research plan which must be approved both by the examiner, supervisor and second reader. The assessment of the SMI research project 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'.

Article 7.2e 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	6

2. Disciplinary components (15 EC)

Choice of one of the combinations of compulsory components, as referred to in Article 7.2a paragraph 1, 7.2b paragraph 7, or 7.2c paragraph 1. If the combination is chosen as described in Article 7.2c paragraph 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 paragraph 1, Article 7.2b paragraph 1, and Article 7.2c paragraph 1, with a total study load of 15 EC, by requesting permission from the Examination Board through a motivated request, 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
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 medical 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, or Article 7.2c paragraph 4.

5 Review Article (6 EC)

A literature review of a medical 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, or Article 7.2c paragraph 4.

6 Portfolio (0 EC)

In terms of content, the portfolio consists of reports on self-evaluation and career orientation.

7 Limited choice electives (3 EC)

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

8 Free electives (6 EC)

Under the conditions described in Article 7.2a paragraph 3.

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 external (government, consulting firms, NGOs, etc.). In the first month, the student will write a research plan which must be approved both by the examiner, supervisor and second reader. The assessment of the SiS graduation project is based on the criteria described in the "Graduation project guidelines SiS".

Article 7.2f 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 paragraph 1, 7.2b paragraph 7, or 7.2c paragraph 1. If the combination is chosen as described in Article 7.2c paragraph 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 paragraph 1, Article 7.2b paragraph 1, and Article 7.2c paragraph 1, with a total study load of 15 EC, by requesting permission from the Examination Board through a motivated request, 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
FMT0NWI-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 medical 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, or Article 7.2c paragraph 4.

4. Review Article (6 EC)

A literature review of a medical 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, or Article 7.2c paragraph 4.

5. Portfolio (0 EC)

In terms of content, the portfolio consists of reports on self-evaluation and career orientation.

6. Free electives (6 EC)

Under the conditions described in Article 7.2a paragraph 3.

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 Examination Board for an alternative course selection within three months after 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.

Section 8. Transitional provisions

For students of all specialisations, the following applies:

- 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.

For students of Human Biology the following applies:

- NWI-BM078 Molecular Therapy (6 EC) may be replaced by one of the following three combinations: (i) NWI-MOL413 Transport and Metabolomics (3 EC) and NWI-BM071 Molecular Therapy (3 EC); or (ii) NWI-MOL413 Transport and Metabolomics (3 EC) and a 3 EC component from the limited choice electives; or (iii) NWI-BM071 Molecular Therapy (3 EC) and a 3 EC component from the limited choice electives.
- NWI-MOL413 Transport and Metabolomics (3 EC) may be replaced by NWI-LM011 Metabolism, Transport and Motility (3 EC).
- NWI-BM071 Molecular Therapy (3 EC) may be replaced by NWI-BM049B Molecular Mechanisms or Novel Therapeutics (3 EC).
- NWI-BM073 Trends in Stem Cell Biology (3 EC) may be replaced by NWI-BM047B Trends in Medical Biosciences II (3 EC).
- NWI-BM072 Translational Genomics (6 EC) may be replaced by NWI-BM045B Human Genetics (3 EC). The other 3 EC must be filled with a component from the limited choice electives.
- NWI-BM042B Trends in Medical Biosciences I (3 EC) may be used within the mandatory course space or the limited choice elective space.

For students of Medical Epigenomics the following applies:

- NWI-BM073 Trends in Stem Cell Biology (3 EC) may be replaced by NWI-BM047B Trends in Medical Biosciences II (3 EC).
- NWI-BM066A Computation for Biologists (6 EC) may be replaced by NWI-BM066 Computation for Biologists (3 EC). The other 3 EC must be filled with a component from the limited choice electives.
- NWI-BM042B Trends in Medical Biosciences I (3 EC) may be used within the mandatory course space or the limited choice elective space.

For students of Neurobiology the following applies:

- NWI-BM073 Trends in Stem Cell Biology (3 EC) may be replaced by NWI-BM047B Trends in Medical Biosciences II (3 EC).
- NWI-BM001D Molecular and Cellular Neurobiology (6 EC) may be replaced by NWI-BM001C Molecular and Cellular Neurobiology (3 EC). The other 3 EC must be filled with a component from the limited choice electives.
- NWI-BM042B Trends in Medical Biosciences I (3 EC) may be used within the mandatory course space or the limited choice elective space.

For students of Science, Management and Innovation, the following applies:

- NWI-FMT021 Neuroscience (3 EC) may be used to fill the 6 EC of free elective space for Health elective courses.
- NWI-FMT020 Bio-economy may be used instead of one of the 3 EC courses in the Climate and Energy theme.
- NWI-FMT025B From Lab to Clinic may be used instead of NWI-FMT029 How Health Systems Work.

PART IV FINAL PROVISIONS

Section 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 Examination 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. Contrary to 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 interest of the students.
3. In derogation from paragraph 1, the dean is authorised to drop elective components of 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 2020.

Article 9.4 Publication

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

As established by the dean on 15 July 2020.

APPENDIX I REGULATIONS ON FRAUD DURING INTERIM EXAMINATIONS AND EXAMINATIONS

Paragraph 1 Introductory provisions

Article 1. Purpose of these regulations

1. To prevent fraud during interim examinations and examinations as referred to in article 7.12b *WHW,* the executive board of Radboud University (hereinafter: RU) adopts the following regulations.

2. For the harmonization of the provisions in these regulations between faculties, these regulations have been laid down as 'comply-explain' regulations (*pas-toe-leg-uit-regeling).*

Article 2. Scope of these regulations

1. Except for the provisions referred to in this appendix, these regulations apply both to the initial RU programmes and for the students who have registered for these programmes.

2. The executive board may decide, in a separate decision, to apply these regulations *mutatis mutandis* to other programmes offered by RU.

Article 3. Definitions

The terms that are used in these regulations – in so far as these terms are also used in the Higher Education and Research Act (*Wet op het Hoger onderwijs en Wetenschappelijk onderzoek (*hereinafter: WHW) – have the same meaning that is given to these terms in the WHW.

Paragraph 2 Definition fraud, procedure and sanctions

Article 4. Definition of fraud

1. At RU, fraud is understood to mean any act or omission by student which, in its nature, is intended to have as an effect that proper assessment of the knowledge, understanding and skills of that student, or another student, is made fully or partially impossible.
2. Fraud is in any case understood to mean:
    a. fraud when taking written interim examinations, including
        i. having materials available which are not permitted under the House Rules Examinations Rooms RU Regulations (*Regeling Huisregels Tentamenruimten RU);*
        ii. copying or exchanging information;

iii. passing oneself off as someone else, or being represented by someone else during interim examinations;

b. fraud when producing theses and other papers, including
   i. plagiarism in the sense of using or copying someone else's texts, data or ideas without complete and correct source references, plagiarism in the sense of copying the work of another student and presenting this as one's own work and other specifically academic forms of plagiarism;
   ii. fabricating (making up) and/or falsifying (distorting) research data;
   iii. submitting a thesis or another paper that was written by someone else.

c. Other fraud in the context of interim examinations or examinations, including
   i. taking possession of assignments, answer keys and the like, prior to the time the interim examination or examination.

3. An attempt to commit fraud will also be seen as fraud for the purpose of these regulations.

Article 5. Procedure for suspicion of fraud

1. When fraud is suspected, the board of examiners or the examiner immediately informs the student of this suspicion. If the suspicion of fraud is established when the interim examination or the examination is administered, the board of examiners or the examiner will allow the student to complete the interim examination or the examination.

2. The board of examiners or the examiner may order the student to make any material related to the suspicion of fraud available to them.

3. The board of examiners or the examiner may order the student to make any material related to the suspicion of fraud available to them.

4. For the purposes of the provisions in paragraphs 1 and 2 of the present article, examiner is also understood to mean the invigilator or any other RU member or staff.

Article 6. Procedure for investigation and determination of fraud

1. The board of examiners makes the report referred to in article 5 available for the student without delay and then starts an investigation into the matter. The board of examiners provides the student with the opportunity to respond to the report in writing. The board of examiners hears both the examiner and the student.

2. Within four weeks following the date the report was made available to the student, the board of examiners decides whether fraud was actually committed. The board of examiners informs both the student and the examiner of their decision in writing. The four-week period may be extended by two weeks.

3. If fraud is established, the board of examiners declares the relevant interim examination or examination invalid.

4. If fraud is established, the board of examiners records both the fact that fraud was committed and the sanction imposed in the student's student file.

Article 7. Sanctions

1. If the board of examiners has established fraud has been committed, the board of examiners may:
   a. determine that the student may not sit one or more interim examinations or examinations during a period to be set by the board of examiners, which period will be a maximum of one year;
   b. determine that no distinction will be awarded on the degree certificate;
   c. make a recommendation to the Dean of the Honours Academy that the student should not be admitted to the honours programme of the university or the faculty should be ended.

   If the board of examiners has established that *serious* fraud has been committed, the board of examiners may also

   d. make a recommendation to the executive board that the student's registration for a programme should be terminated with definitive effect.

   3.
2. After the board of examiners has established that serious fraud has been committed, the executive board – upon the board of examiners' recommendation – may terminate the the student's registration for a programme with definitive effect.
3. The sanctions as referred to in this article are imposed as from the day following the date the student is notified of the decision that sanctions are imposed.

   4.

Paragraph 3 Transitional provisions

[no transitory regulations]

Paragraph 4 Final provisions

Article 8.

1. Decisions pursuant to these regulations may be sent to the student digitally and/or by email.

2. The student can appeal against any decision made under these regulations, within six weeks following the date on the relevant decision, by lodging a notice of appeal at the Examinations Appeals Board (*College voor Beroep van de Examens (CBE).*

Article 9. Adoption and amendment

1. These regulations have been adopted by the executive board in accordance with the 'comply-explain' principle.

2. In so far as the content of these regulations relates to the duties and powers of the faculty's dean or the duties and powers of the programme's board of examiners, the content must also be confirmed by that dean of that board of examiners. Without any comments by the

dean or the board of examiners as referred to in the first paragraph of the present article, confirmation will take place five months after the regulations have been adopted.

Article 10. Effect

With due observance of the provisions in article 9, these regulations take effect on 1 September 2018. These regulations will then replace any previous regulations.

Article 11. Publication

1. The executive board sees to the appropriate publication and possible amendments of these regulations.

2. For the purpose of appropriate and clear provision of information to students and prospect students, the dean and the board of examiners will include these regulations, every year, as an appendix to the Education and Examination (*Onderwijs- en Examenreglement (OER)*) and as an appendix to the Rules and Guidelines (*Regels en Richtlijnen (RR))* of the programme.

Thus adopted by the executive board on 13 November 2017.