

Education and Examination Regulations

Research Master's programme

Molecular Mechanisms of Disease

Curriculum 2021

Academic year 2021-2022

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Paragraph 1 General provisions

Article 1 Purpose of the regulations

1. In these education and examination regulations (hereinafter: regulations) the current procedures and rights and obligations have been laid down for teaching and examination of the degree programme **Molecular Mechanisms of Disease**, Croho¹ code 60322 (hereinafter: the programme) set up at the Faculty of Medical Sciences of Radboud University (hereinafter: RU). The Faculty of Medical Sciences together with the academic hospital composes the Radboud university medical center (hereinafter: Radboudumc).
2. The programme is part of the Radboud Institute for Molecular Life Sciences research graduate school, a joint graduate school of Radboudumc and the Faculty of Science, Mathematics, and Computing Sciences, both part of RU.

Article 2 Scope of the regulations

The regulations apply to all students who are registered in the academic year 2021-2022 for the programme referred to in article 1. The provisions in paragraph 2 of these regulations apply to students who register for the academic year 2021-2022.

Article 2a. Guidelines executive board

1. With a view to the organization and coordination of the provisions in these regulations, the executive board has adopted the following guidelines:
 - a. Guidelines Distinctions Regulation
 - b. Guidelines Binding Study Recommendations (*BSA*)
 - c. Apart from the guidelines referred to above, the executive board has adopted several temporary guidelines for the academic year 2021-2022 because of measures in relation to the COVID-19 outbreak. These guidelines are available via <https://www.ru.nl/nieuws-agenda/nieuws/coronavirus-radboud-universiteit/coronarichtlijnen/>.
2. The provisions in these education and examination regulations apply without prejudice to the provisions of the guidelines referred to in paragraph 1 of the present article.
3. The guidelines referred to in paragraph 1 of the present article are available via <https://www.radboudnet.nl/onderwijs/werkwijze-regelingen/>.

¹ Central Register of Higher Education Study Programmes

Article 3 Definitions

1. The terms in these regulations that are also used in the Higher Education and Research Act (*Wet op het hoger onderwijs en wetenschappelijk onderzoek*; hereinafter to be referred to as 'the Act') have the same meaning as these terms have in the Act.
2. Notwithstanding the provisions in paragraph 1 of the present article, the following terms have the following meanings:
 - a. Contact hour: a tuition period during which the lecturer is physically present;
 - b. Module test: an examination with respect to the knowledge, understanding and the skills of the examinee, as well as the assessment of the outcomes of that examination, which, in coherence with one or more other examinations referred to here, constitute the examination as referred to in article 7.10 paragraph 1 of the Act. Where these regulations refer to examination², this term also includes module tests, unless explicitly stipulated otherwise;
 - c. Final paper: an assessment of the student's academic achievements in the particular field of the programme (master's thesis);
 - d. Resit: the re-examination of an examination as referred to in article 7.10 paragraph 1 of the Act. Where these regulations refer to examination, this term also includes resits, unless explicitly stipulated otherwise;
 - e. Regulations on Fraud: the RU Regulations on Fraud. In order to provide the student with proper and clear information, the Regulations on Fraud have been attached to these regulations as appendix IV;
 - f. Regulations RU Examination Rooms: the Regulations House Rules RU Examination Rooms adopted by the dean in a separate decision. These regulations have been attached as appendix V;
 - g. Working day: Monday until Friday, with the exception of public holidays as referred to in the Bargaining Agreement Dutch Universities (CAO Nederlandse Universiteiten) and the collective days off set by the executive board;
 - h. Assessment regulations: description of the form and components of an examination, and of the manner in which the final result is determined;
 - i. UMC-Raad: the faculty joint assembly of Radboudumc;
 - j. Academic adviser: staff member who may be consulted by students to be advised about academic and/or personal issues;

² In this translation, the word 'bachelor or master examination' is used for the Dutch word '*examen*' and the word 'examination' for the Dutch word '*tentamen*'.

- k. Academic year: period from September 1 up to and including August 31 of the following year;
- l. Assessor: a scientist of sufficient seniority and expertise, holding a PhD degree, who assesses an oral presentation or written report, master's thesis or literature thesis;
- m. Board of examiners: board of examiners of a programme instituted in terms of the Act;
- n. Brightspace: a digital learning environment. Course manuals, full details of the courses, assessment regulations, timetables and rooms, as well as PowerPoint presentations and other study materials, will be made available through Brightspace;
- o. Course (unit of study): a range of lectures and/or practical trainings on a specific subject resulting in an assessment;
- p. Course examination: an assessment of a student's knowledge, insight and skills with regard to a particular course as well as an evaluation of that assessment by at least one Examiner appointed for this purpose by the board of examiners. A course examination may consist of several module tests, each of which may be assessed on separate occasions;
- q. EC: European Credit (Transfer System). Each EC point equals a study load of 28 hours;
- r. Electives: either theoretical or practical optional courses in molecular medicine and/or life sciences which the student uses for specialisation or broadening of knowledge;
- s. Examiner: person appointed by the board of examiners to set and mark examinations in terms of the Act;
- t. External assessor: a PI from another department than the department of the supervisor, who assesses a research training period (oral presentation and/or report), master's thesis or literature thesis;
- u. Knowledge Transfer: seminars, forums, conferences and workshops in life sciences;
- v. Master's examination: a review of the student's academic achievements in which the board of examiners assesses whether or not all course examinations and assessments of all courses and research training periods that are part of the Master's programme (as defined in the regulations), have been successfully completed. The board of examiners may decide to complete this review with an overall assessment (in terms of the Act);
- w. Mentor: senior scientist, also appointed as student adviser especially with respect to elective subjects and research training periods. Mentors discuss progress and future career perspectives with their students approximately four times a year;
- x. Principal Investigator (PI): scientist appointed by Radboudumc as assistant professor, associate professor or professor; or scientist appointed by RU – and affiliated with

- RIMLS – as assistant professor, associate professor or professor. A PI may act as supervisor or external assessor of a research training period or literature thesis;
- y. Research training period: a practical project as referred to in the Act, in the following form: practical training and experience, writing a report or Master's thesis;
 - z. Research training period supervisor: PI who gives guidance during a research training period;
 - aa. RIMLS: Radboud Institute for Molecular Life Sciences at Radboudumc;
 - bb. Study plan: the individual Master's programme must be submitted as a study plan. Study plans should include all of the master's programme (see Appendix II), including elective courses and two research training periods, and are to be submitted to the board of examiners for approval prior to the start of any of these units of study.
 - cc. Work plan: work plan of the intended research training period, in which the student describes background and research question of the intended project and specifies aims, methods, investigation plan and other activities during the training period. The board of examiners assesses the work plan as part of the individual study plan in order to safeguard the academic quality of the training periods and the broadness of the individual programme.

Paragraph 2 Admission to the programme

Article 4 Admission requirements and procedures

1. To be admitted to the programme, the prospective student must meet the registration requirements under and pursuant to the Act and/or the requirements set by the university board with respect to previous qualifications, admission and language and with respect to the admission procedures that apply for registration under and pursuant to the Act and/or by the executive board, in a separate decision.
2. In order to provide the prospective student with proper and clear information, these requirements and procedures have been attached to these regulations as appendix I.

Article 5 Admissions board

1. Decisions on admission to the programme are made by the dean on behalf of the executive board.
2. Without prejudice to the provisions in paragraph 1, decisions on admission to the programme are made by the selection committee of the board of examiners on behalf of the dean.

Paragraph 3 Structure and form of the programme

Article 6 Exit qualifications of the programme

1. This highly selective programme provides a sound balance of theory and practice. The exit qualifications of the programme are the following:
 - a. Broad fundamental knowledge on the molecular mechanisms underlying disease processes in the full width of the molecular life sciences;
 - b. Knowledge about key developments in translational medicine and ability to translate fundamental molecular knowledge into medical experimental research towards prevention, therapies and diagnostics;
 - c. Ability to autonomously formulate a research problem, design and perform scientific research on a high level, keeping up with international standards;
 - d. Competence to participate in scientific discussions and present scientific results in the English language to an international scientific audience;
 - e. Capacity to write at the level of published articles in international peer-reviewed journals;
 - f. Ability to integrate the societal and ethical impact of scientific research at relevant moments and in relevant situations in the scientific career;
 - g. Proficiency to move into an international PhD programme or participate in projects at biotechnology companies or the pharmaceutical industry.

Article 7 Study load of the programme

The programme has a study load amounting to 120 EC. The programme's study load has been set under or pursuant to the Act and by the executive board, in a separate decision.

Article 8 Form of the programme

The programme is taught full-time. The programme's form is determined by the executive board, in a separate decision.

Article 9 Language of the programme

The programme is taught in the English language, which is the programme's language of instruction. The programme's language of instruction is determined by the executive board, in a separate decision. The RU's Code of Conduct Foreign Language is applicable when the language of instruction is determined.

Article 10 Examination programme

1. The programme has a master examination programme³ which is aimed at realising the exit qualifications described in article 6. This examination programme constitutes a coherent complex of units of study, as described in more detail in appendix II.
2. In a case of for instance illness, pregnancy, family care commitments, or a top talent in sport or art status (as defined in the Radboud University Students' Charter), the board of examiners may allow the individual programme to be adapted at the request of the student.

Article 11 Incorporating units of study (optional courses / electives)

1. With due consideration for the master examination programme described in appendix II, the programme allows for the incorporation of 11 EC or 17 EC of optional units of study from other degree programmes.
2. The board of examiners incorporates optional units of study from other degree programmes upon the student's request.
3. For the incorporation of the optional units of study the following conditions apply:
 - a. Electives are in the field of molecular medicine and/or life sciences and may be chosen from other Master's or PhD studies, or may be composed as an individual course (code: VKO/IND);
 - b. Electives have a minimum study load of 1.5 EC. Shorter courses may be included in Knowledge Transfer (MED-MMKT);
 - c. Electives are to be graded numerically. Exceptions are MED-MMKT and when approved by the board of examiners a maximum of 6 EC of individual electives may be qualified with P (Pass) or F (Fail);
 - d. Notwithstanding the provision under a, a maximum of 6 EC may be spent on Bachelor's courses to repair knowledge deficiencies;
 - e. Notwithstanding the provision under a, a maximum of 6 EC may be spent on Bachelor's or Master's courses outside the field of molecular medicine and/or life sciences, for example for career development;
 - f. The total amount of courses on Bachelor's level in the examination programme (electives and extracurricular) may not exceed 12 EC;
 - g. Electives have no significant overlap with the other components of the student's individual study plan;

³ In this translation, the word 'master examination' is used for the Dutch word '*examen*' and the word 'examination' for the Dutch word '*tentamen*'.

- h. Electives have to be approved by the board of examiners as part of the individual study plan;
 - i. Assessment regulations, as referred to in article 27.7, for individually composed electives are to be provided by the examiner prior to the start of the elective and have to be approved by the board of examiners.
4. Incorporation of a unit of study is only permitted before the relevant unit of study starts.
5. In the event the study load units and the study result units of the units of study to be incorporated differ from the provisions laid down in these regulations, conversion will take place. The board of examiners will decide on the conversion, with due observance of the memo on conversion: 'Conversion of study load and study results' (*Conversie van studiebelasting en studieresultaten*).
6. Incorporation of units of study from other degree programmes as optional courses takes place in accordance with the relevant rules with respect to procedures and rights and obligations as referred to in article 7.13 paragraph 2 of the Act, in so far as these procedures relate to that unit of study.
7. Units of study (electives) that add to more than 120 EC required for the examination programme will be handled as extracurricular units of study. On their individual study plan students may indicate for which units of study this is applicable.

Article 12 Adding units of study (extracurricular)

1. The programme allows the addition of extracurricular units of study from other degree programmes to the examination programme.
2. The total number of units of study added to the examination programme may not be more than 18 EC.
3. The board of examiners adds the extracurricular units of study from other degree programmes upon the student's request.
4. For the addition of optional units of study the following conditions apply:
 - a. Extracurricular units of study have to be approved by the board of examiners as part of the individual study plan. Approved units will be presented on the diploma supplement;
 - b. Extracurricular units of study may be chosen from other Master's or PhD studies, or may be composed as an individual course (code: VKO/IND);
 - c. Extracurricular units of study are to be graded numerically, and at least 50% of the grade needs to be obtained by individual assessment;
 - d. Extracurricular units of study are taken along in the determination for a distinction.
 - e. Notwithstanding the provision under b, a maximum of 6 EC may be spent on Bachelor's courses;

- f. The total amount of courses on Bachelor level in the examination programme (electives and extracurricular) may not exceed 12 EC.
5. For adding units of study, the provisions in article 11 paragraphs 4 up to and including 6 apply accordingly.

Article 13 Exemptions from units of study

1. Granting exemptions from units of study is permitted.
2. The total number of exemptions never exceeds 18 EC.
3. Upon a student's request, the board of examiners may grant the student exemption from a specific unit of study and the corresponding examination if this student
 - a. Has completed a relevant unit of study as part of a university or higher professional education programme which is similar both as regards content and as regards level;
 - b. Can prove previous (academic) achievements that justify exemption.
4. The board of examiners does not grant any exemptions for module tests.
5. In the assessment referred to in paragraph 1 of the present article, the board of examiners checks the current relevance of the knowledge, understanding or skills that were tested in the examination.
6. No exemption as referred to in paragraph 1 of the present article is granted for the final paper (Master's thesis).
7. The board of examiners does not grant exemptions on the basis of results obtained in the period in which the student was barred from sitting examinations because of examination fraud which was established by the board of examiners as referred to in the RU Regulations on Fraud.
8. The following (general) exemptions are granted for the programme:
 - a. None.
9. If an exemption is granted by the board of examiners, the student will be granted the number of EC of the respective unit of study and this will be specified as VR ("vrijstelling", exemption) in the student's record. Exemptions do not count towards distinctions.

Article 14 Replacing units of study

1. Replacing units of study is permitted.
2. Upon the student's request and in special cases, the board of examiners may replace a unit of study in the examination programme by a unit of study from another degree programme.
3. For the replacement of units of study the following conditions apply:
 - a. Requests need to relate to pressing personal circumstances that justify replacement ;
 - b. Replacements of units of study need to be similar both as regards content and as regards level, and part of a university Master's or PhD programme;

- c. The board of examiners will consult the examiner of the replaced unit of study to determine suitable replacements.
4. The final paper (Master's thesis) and first research training period report cannot be replaced.
5. For replacing units of study, the provisions in article 11 paragraphs 4 up to and including 6 apply accordingly.
6. Upon the student's request and in special cases, the board of examiners may give a student, if so requested and after hearing the examiner, dispensation for a module test or certain components of a unit of study. This means that the student is not required to take those components or tests but will, as appropriate, be required to take alternatives.
7. For the dispensation of a module test or certain components of a unit of study the following conditions apply:
 - a. Requests need to relate to pressing personal circumstances that justify dispensation;
 - b. Alternatives need to be similar both as regards content and as regards level;
 - c. Any such request has to reach the board of examiners before the start of the specific component or module test.

Article 15 Optional curriculum

1. The programme's board of examiners decides on a request for permission to attend an optional curriculum as referred to in article 7.3d of the Act. The board of examiners verifies if this curriculum fits in the programme's domain which the board of examiners is part of, if it is sufficiently coherent and if the level is adequate in view of the programme's exit qualifications.
2. The request in question must have been submitted at least two months before the programme starts.

Paragraph 4 Structure and form of the units of study

Article 16 Registration and application for examinations and resits

1. The student registers for units of study of the programme he has enrolled in, in the manner and before the deadlines as described in appendix III. The student who has registered for tuition is also registered for the corresponding following examination (including all module tests) in the relevant study year.
2. If a student should not want to sit the examination, the student will have to deregister, via Osiris, at the latest 10 working days before the examination date, unless a different method or deadline for deregistration has been set in appendix III.
3. The student has to register for a resit of the examination.

- a. for the resit of the examination of a unit of study of the programme (second opportunity in the study year), the student has to register, via Osiris, at the latest 10 working days before the examination date, unless a different method or deadline has been set in appendix III.
 - b. if a student only wishes to take part in the examination (first opportunity in the study year), the student has to register, via Osiris, at the latest 10 working days before the examination date, unless a different method or deadline has been set in appendix III.
4. If the student does not sit the examination he has registered for, the result 'ND' ("niet deelgenomen", no show) as referred to in article 27 is registered, unless the board of examiners should decide otherwise in special circumstances.

Article 17 Admission to tuition and examinations

1. The student is permitted to attend all units of study in the programme and to sit the relevant examinations.
2. Contrary to the provisions in paragraph 1 of the present article, in appendix III limitations are set to the number of examinations of a unit of study, a student is allowed to sit during the programme. In cases a student has used the maximum number of examination opportunities, permission of the board of examiners is required to again attend the unit of study and/or to resit the examination.
3. Contrary to the provisions in paragraph 1 of the present article, entry requirements apply for the units of study and/or the corresponding examinations described in appendix III. If entry requirements are applicable, the student cannot be admitted to the unit of study and/or the corresponding examination before these entry requirements have been met.
4. An examination that has been passed may be resat, unless determined otherwise in appendix III. A module test that has been passed may not be resat before the examination result has become irrevocable, unless determined otherwise in appendix III.
5. In special circumstances, the board of examiners may exempt the student from the entry requirements, with or without imposing alternative requirements.
6. Admission to tuition and examinations is not made dependent on other financial contributions than tuition fees, unless costs should be involved that are connected with the course in question. If any costs referred to in this paragraph should be involved, these costs have been listed in appendix III.

Article 18 Units of study organised per study year

Each unit of study is offered once per study year, unless stated otherwise in appendix III.

Article 19 Number of opportunities to sit an examination per unit of study; resits

1. Per study year, the student can sit one examination per unit of study and resit this examination once, unless stated otherwise in appendix III.
2. If the examination referred to in paragraph 1 consists of module tests, the resit will also consist of module tests, unless stated otherwise in appendix III.

Article 20 Timetable for tuition and examinations

Appendix III at least arranges in which semester and in which period the opportunity is provided to attend courses and to sit examinations.

Article 21 Language of tuition and examinations

Tuition and examinations of the units of study are provided in the language of instruction of the relevant programme. If the courses and/or the examinations are provided in any other language than the language of instruction, this is referred to in the overview in appendix III.

Article 22 Learning objectives

Each unit of study is aimed at realising the learning objectives described in these regulations. The learning objectives per unit of study have been laid down in further detail in appendix III.

Article 23 Format of tuition

The format of the tuition has been laid down per unit of study in the overview in appendix III of these regulations.

Article 24 Number of contact hours

The number of contact hours per unit of study has been laid down in appendix III.

Article 25 Format of examination

1. The examination format has been laid down per unit of study in the overview in appendix III. The programme has the following examination formats:
 - a. Written examinations (short answer open-ended questions), whereby 'written' is meant to include writing in digital form;
 - b. Written research proposals;
 - c. Oral presentations and discussions;
 - d. Written reports, essays and assignments;
 - e. Portfolio;

- f. Participation. 'Participation' cannot be used to assess students unless supported by a rubric or assessment form to evaluate the students.
2. In special cases, the board of examiners may decide that the format of the relevant examination described in appendix III will be departed from.
3. Written examinations are administered in the rooms designated by the programme for this purpose.
4. For other than written examinations further rules are set in the assessment regulations, as referred to in article 27.7.
5. The board of examiners may allow students with an impairment, by way of special examination facilities, to sit examinations in a format adapted to their individual impairment. Prior to taking a decision in this matter, the board of examiners may seek expert advice. In so far as facilities in the context of a 'digital test' are concerned, the board of examiners, when formatting the facility, may seek advice from the faculty's digital testing coordinator.
6. Examination and assessment guidelines, giving instructions to both students and examiners are described in the Rules and Guidelines issued by the board of examiners prior to the start of each academic year.
7. In case of oral presentations at least two examiners or assessors are present. For oral presentations of research training periods the daily supervisor, even if this person does not yet hold a PhD degree, may act as assessor.
8. The board of examiners may decide that a student's work can be assessed in another form if a student requests this in writing.

Paragraph 5 Testing and administering examinations

Article 26 Rules when examinations are administered

For the proper course of events during examinations that are administered in RU examination rooms, the dean has adopted House Rules in a separate decision. In order to provide the student with proper and clear information, these rules have been attached to these regulations as appendix V.

Article 27 Establishing the examination results

1. The examiner establishes the result of an examination and registers this result in Osiris.
2. The result of an examination is expressed in full or half points on a scale of 1-10. If the result of an examination is established differently, this is described in more detail in the overview in appendix III.

3. Contrary to the provisions of paragraph 2 of the present article, the result of an examination is not set at 5.5 points. An arithmetical score lower than 5.5(0) is rounded to 5 and a score equal to or higher than 5.5(0) is rounded to 6.
4. If the result of an examination equals or is more than 6.0 points, or is graded as Pass (P), the examination is considered to have been passed. If the result of the examination equals 5.0 or is less than 5.0 points, or is graded as Fail (F), the examination is considered not to have been passed.
5. The provisions in paragraphs 2, 3 and 4 do not apply for module tests.
6. If an examination that has already been sat is resat, the more recently obtained result always determines the result.
7. For each examination the examiner determines assessment regulations in which the determination of the final result is specified. Assessment regulations need approval of the board of examiners and will be published before the start of the unit of study. Assessment regulations do not deviate from that which has been determined in appendix III.
8. The result of a module test is expressed in decimals on a scale of 1.0-10.0, unless stated otherwise in appendix III.
9. If the result of a module test equals or is more than 5.5(0) points, or is graded as Pass (P), the module test is considered to have been passed. If the result of a module test equals 5.4(9) or is less than 5.4(9) points, or is graded as Fail (F), the module test is considered not to have been passed.

Article 27a. Alphanumeric results

Without prejudice to the provisions of article 27, the following alphanumeric results are established and registered in Osiris in the following cases:

- a. 'NS' / 'ND' – no show ('niet deelgenomen'), if the student has registered for a unit of study or for an examination but has failed to participate;
- b. 'NR' / 'GU' – no result ('geen uitslag'), if no mark can be assigned due to incomplete or lack of data;
- c. 'F' / 'OV' – failed, not sufficient ('onvoldoende'), if a student fails one or more module tests or has not submitted his work before the due date that counts towards the final grade;
- d. 'SU' / 'V' – sufficient ('voldoende'), if a student passes one or more module tests;
- e. 'P' / 'VD' – passed ('voldaan'), if a student passes one or more module tests;
- f. 'EX' / 'VR' – exemption ('vrijstelling'), if the board of examiners has granted an exemption, with due consideration for the provisions in these regulations, for a unit of study which is part of the examination programme;
- g. 'FR' – fraud ('fraude'), if the board of examiners has established that fraud was committed when the examination was administered and the board of examiners has

declared the result of the examination in question invalid, with due consideration of the provisions of the Regulations on Fraud attached to these regulations;

g. 'SFR' / 'EFR' – severe fraud ('ernstige fraude'), if the board of examiners has established that serious fraud was committed when the examination was administered and the board of examiners has declared the result of the examination in question invalid, with due consideration of the provisions of the Regulations on Fraud attached to these regulations.

Article 28 Publication of the examination results

1. Immediately after the result has been established, the examiner provides the student administration office with the data required for the publication of this result.
2. The examiner publishes the result of a written examination within 15 working days after the date the examination was administered and no later than 10 working days before the date of the resit examination. If an examination takes multiple moments, the result is published within 15 working days after the last examination date. Immediately following an oral presentation or discussion, but no later than 5 working days after it was administered, the examiner informs the student about the result. With respect to examinations that are administered in any other way, in appendix III is determined within which period of time the student is informed of the result. In that case the period of 15 working days is not exceeded.
3. In special circumstances and upon request, the board of examiners may extend or reduce the periods referred to in paragraph 2 of the present article.
4. When a result of an examination is published, the student is informed about the right of perusal and inspection as meant in these regulations.
5. When the result of an examination is published, the student is informed about the possibility to appeal at the examinations appeals board within the applicable appeal period. The provisions in this article do not apply to module tests.

Article 29 Perusal and inspection rights

1. For a period of at least 15 working days following the publication of the result of an examination, the student is entitled, upon his request, to peruse and inspect the work assessed.
2. For the period referred to in paragraph 1 of the present article, any interested party is entitled to inspect, during the perusal, both the questions asked and the assignments set for the relevant written examination and the standards applied for the assessment.
3. Notwithstanding paragraphs 1 and 2 of the present article, the examiner may decide that perusal will take place for all students at the same time, on a date and at a time and place set in advance. If a student should not be able to attend this perusal because of circumstances demonstrably

beyond his control, a separate perusal can be arranged, upon the student's request, preferably within the period of time referred to in paragraph 1 of the present article.

4. In any event, the opportunity for perusal is offered no later than 5 working days prior to the first following opportunity to sit the examination.
5. At the start of the programme the student will be actively informed about the right of perusal.

Article 30 Validity term of examinations

1. The validity term of an examination that has been passed is indefinite.
2. Notwithstanding the provision in paragraph 1 of the present article, the knowledge, understanding and skills tested in the context of the units of study listed in appendix III are deemed to be outdated after the period referred to in that appendix. The validity term of the corresponding examinations of these units of study expires after the period referred to.
3. Upon the student's request and in special circumstances, the board of examiners may extend the validity term of the period referred to in paragraph 2 of the present article in individual cases. In the event a student has been granted financial support under the profiling fund, as referred to in the Act, because of an impairment or chronic illness, the board of examiners extends the period, at any time, at least by the number of months that the financial support has been granted by the executive board.
4. The student is notified, in due time, of the expiry of the validity term applicable to an examination that was passed. This notification, by or on behalf of the dean, describes, stating reasons, at least that and why the relevant knowledge, understanding and/or skills are outdated.
5. The validity term of module tests ends directly after ending of the study year following the study year in which the module test was taken, unless stated otherwise in appendix III.

Article 31 Master's examination

1. The programme is finalised by the master's examination.
2. The board of examiners establishes the result of the master's examination in writing as soon as the student has passed all the examinations corresponding to the units of study in the examination programme pertaining to the degree programme in question, and the student has requested the master's examination.
3. When determining the result of the master's examination, the board of examiners also sets the master's examination date. The master's examination date is the date the board of examiners has established the result referred to in paragraph 2 of the present article.
4. Prior to establishing the result of the examination, the board of examiners itself may conduct an inquiry into the student's knowledge with respect to one or more units of study or aspects of the programme.

5. The master's examination will be assessed according to the final approved study plan. The final study plan needs to be submitted before application for the master's examination. The preliminary study plan can be changed and additions may be made at any time, provided these are approved by the board of examiners.

Article 32 Degree and distinction

1. The student who has passed the programme's examination is awarded the degree of Master of Science (MSc).
2. The board of examiners may award a distinction to the student who has successfully completed the programme. The rules that apply for awarding distinctions have been laid down in appendix VI.

Paragraph 6 Study progress, counselling and recommendations

Article 33 Study progress and student counselling

1. The dean is responsible for the registration of the study results in such a way that the board of examiners can provide every student, upon his request and within a reasonable period of time, with an updated overview of the results obtained.
2. The dean is responsible for providing adequate student counselling.
3. Students receive support and guidance from their personal mentor throughout the programme, as described in the prospectus.
4. Students who regularly, or over an extended period, achieve little or no study progress will be invited for an interview with their mentor or academic adviser to discuss whether to continue or terminate their studies. Little or no study progress is defined as obtaining less than 50% of the EC for planned obligatory theoretical courses in 6 months or as an insufficient for internships.

Paragraph 7 Evaluation of tuition

Article 34 Tuition evaluation method

With due observance of the quality assurance system of the university, as laid down in the Handbook Quality Assurance System Degree Programmes Radboud University (*Handboek Kwaliteitszorg Onderwijs Radboud Universiteit*), the dean ensures that the tuition in the degree programme is systematically evaluated.

Paragraph 8 Iudicium abeundi

Article 35 Student behaviour in relation to future professional practice

In order to provide the student with proper and clear information, the student is informed about legal provisions in the Act (article 7.42a) that give the executive board the authority, in special cases, provided the described due diligence requirements have been met, to terminate or refuse a student's enrolment, if the student's behaviour has demonstrated an incapacity to exercise one or more professions for which their education trains them, or for the practical preparation for professional practice.

Paragraph 9 Transitional provisions

Starting 2021-2022 MED-MM1CF (3.5 EC), MED-MM2CF (3.5 EC), MED-MM3CFA (2.0 EC) and MED-MMPA (31.5 EC) are replaced by MED-MM1CFA (4.0 EC), MED-MM2CFA (4.0 EC), MED-MM3CFB (2.5 EC) and MED-MMP1C (30 EC), respectively. Students who have already completed components of the master programme in accordance with the exam regulations of 2020-2021 or earlier, can graduate under the examination programme (Appendix II) of the EER which was operative in the year they started the master programme. Students that started in 2020-2021 or earlier will have the opportunity in 2021-2022 to complete the examination of MED-MMPA and to resit the examination of MED-MM1CF, MED-MM2CF and MED-MM3CFA.

Paragraph 10 Final provisions

Article 36 Safety net scheme and hardship clause

In cases not covered by these regulations, or insufficiently covered by these regulations, the dean decides.

Article 37 Adoption, employee participation and amendments

1. The present regulations are laid down or amended by the dean, after the programme committee has delivered its opinion on them and after the UMC-Raad has consented to them.
2. Amendments to these regulations will not take effect in the current academic year, unless the interests of the student are not disproportionately compromised by it.
3. If measures related to COVID-19 prevention require deviation from these regulations, an addendum will be added. The programme committee and UMC-Raad will be involved in the

adoption of such an addendum, in accordance with the regular legal provisions regarding the adoption of (parts of) the Education and Examination Regulations.

Article 38 Implementation

1. These regulations enter into effect on September 1, 2021 and remain valid until August 31, 2022.
2. The education and examination regulations laid down previously cease to have effect as from that date.

Article 39 Publication

1. The dean is responsible for the appropriate publication of these regulations and of any amendments of them.
2. Any interested party is entitled to collect a copy of these regulations at the faculty office.

Article 40 Evaluation

The dean ensures that these regulations are evaluated on a regular basis.

These regulations were adopted by the dean June 15, 2021.

Appendix I Admission requirements and procedures

Paragraph 1 Admission requirements

1. To be admitted to the programme Molecular Mechanisms of Disease, candidates must have:
 - a. a Bachelor of Science (BSc) degree in life sciences such as Cell Biology, Molecular Medicine, Biomedical Sciences, Biochemistry, Biotechnology or Molecular Biology or have completed training which the board of examiners deems to be of a comparable content and level;
 - b. a BSc degree with results well above average as assessed by the selection committee for this programme; the board of examiners may make exceptions in special cases;
 - c. chosen the research-oriented specialisation in their BSc programme, where possible;
 - d. a strong motivation to pursue a career in research that is related to the molecular mechanisms of disease;
 - e. at least two months of hands-on practical experience in the field of molecular life sciences;
 - f. an excellent command of English (see language requirements, paragraph 2).
2. In addition to the prior education or the qualities of the candidate, at least two members of the entrance selection committee of the board of examiners will hold an individual interview (in English) with the candidate. This interview assesses communicative behavior, capacity for teamwork, the capacity to reflect on one selves, creativity, innovative thinking and scientific reasoning. Furthermore, using a standard set of questions it is assessed whether the background knowledge of the students conforms to the required content and level.

Admission to the programme is dependent on this interview and final overall judgement of the board of examiners of the master's programme Molecular Mechanisms of Disease.

Paragraph 2 Language requirements

An advanced command of English is required to participate in classes and examinations, as stated in the Code of Conduct Foreign Languages of Radboud University Nijmegen. This requirement is satisfied if the student can submit before start of the programme a testimonial of one of the following tests:

- a TOEFL test certifying a minimum score of 90 (Internet test), with all sub-scores equal or above 22;
- IELTS (International English Language Testing System), applicants must achieve an overall minimum test score of 6.5, a minimum testscore of 6.0 on all subitems and a minimal testscore on “writing” of 6.5;

- Cambridge EFL examinations, applicants must have obtained a C1 or C2 diploma, both with a minimum pass grade C.

For native speakers and students who have completed their prior education in English, a General Certificate of Education (grade C) or equivalent is sufficient. It is assumed that students who have studied to University Bachelor's or equivalent level in the Netherlands will have a sufficient level of the English language and therefore they do not need to submit a TOEFL test or equivalent.

Paragraph 3 Admission and application procedure

1. The admission procedure, which is approved by the board of examiners before start of the selection, is stated on our website. See <https://www.ru.nl/english/education/masters/molecular-mechanisms-of-disease-research/application/>
2. The programme has a maximum student number of 30, as determined by the executive board, in a separate decision. For educational reasons, to allow sufficient guidance and small scale groups, the programme has sets it's student limit to 24 in 2021-2022. At the discretion of the dean, following advice of the programme director, the set student number may be exceeded.

Appendix Ia COVID-19 exceptions admission requirements and procedures

The master programme Molecular Mechanisms of Disease will start, as planned, on **Monday September 6, 2021**. As far as allowed by governmental and Radboud University regulations, physical attendance will be required as from September 6, 2021. However, if necessary we will start the programme using (in part) “distance”-education using our online educational platforms, like virtual classroom in Brightspace.

In order to be allowed to take part in the MMD programme in the academic year 2021-2022 the following regulations apply:

- Students need to have been placed for the MMD programme (start September 6, 2021) via the regular admission and selection procedure;
- Students who do not have obtained their Bachelor of Science (BSc) diploma before September 1, 2021 will be allowed to start the MMD programme if:
 - o Not more than 12 EC of the BSc programme is lacking; an exception will be made for the bachelor thesis if due to delay, the thesis has been concluded but the EC have not been processed by the administration. In other special circumstances, at the discretion of the Board of Examiners this maximum may be deviated upon;
 - o Students are expected to participate in the obligatory MMD classes from September 2021-January 2022. Note that a high study load with many group activities is to be expected in this period. Participation exemption can be granted for writing of BSc exams.
 - o Applicable VISA requirements are met (for non-EAA students only);
 - o Language requirements as set in the OER are met; it is allowed to take online tests (see <https://www.ru.nl/english/education/masters-programmes/international-masters-students/admission-and-enrolment/language-requirements/> for approved tests) to prove English language proficiency;
 - o Students need to obtain their Bachelor of Science diploma before September 1, 2022;
 - o If the BSc diploma has not been obtained before September 1, 2022, students will not be allowed to proceed with the MMD master programme;
- The MMD programme will have one starting moment in academic year 2021-2022: September 6, 2021;
- In special circumstances, related to travel restrictions, delay of obtaining a visa, or conclusion of their Bachelor programme, students can - at the discretion of the Board of Examiners - be allowed to enter the programme with a delay of maximum 4 weeks. Obligatory MMD courses in September need then to be taken in the following years.
- If desired, students can discuss with the MMD programme coordinator if it is advisable to start the MMD programme with regard to their particular deficiencies, and solutions provided by their Bachelor programme.

Appendix II Examination programme Molecular Mechanisms of Disease

Year	Unit of study / course	Code	Study load (EC)	
1	Introduction to Molecular Mechanisms of Disease	MED-MMIC	2.5	
	Excellence in communication	MED-MMEC	1.5	
	Understanding basic statistics using R	MED-MMBS	1.5	
	Immunity, infection and inflammation	MED-MM1CFA	4.0	
	Immunity related disorders and immunotherapy	MED-MM1TR	2.0	
	Metabolism, transport and motion	MED-MM2CFA	4.0	
	Metabolic disorders	MED-MM2TR	2.0	
	Cell growth and differentiation	MED-MM3CFB	2.5	
	Developmental disorders and malignancies	MED-MM3TR	2.0	
	Computational Biology & Bioinformatics	MED-MMCBB	3.0	
	Scientific skills	MED-MMSKB	1.5	
	Masterclass 2	MED-MM2MC	1.5	
	Research training period 1	MED-MMP1C	30.0	
	2	Omics data analysis and interpretation	MED-MMSTA	3.0
		Science and society	MED-MMSS	1.5
		Masterclass 1	MED-MM1MC	1.5
Research training period 2 – 27 weeks		MED-MMP2A*	39.0	
Research training period 2 – 31 weeks		MED-MMP2B*	45.0	
1 and 2	Electives	EL#	17.0 or 11.0	
	Literature thesis	MED-MMLT**	6.0	
	Knowledge transfer	MED-MMKT**	3.0	
	Mentoring	MED-MMCOA***	0.0	
		Total	120	

*Students either do MED-MMP2A or MED-MMP2B.

#Electives need to be 17.0 EC in combination with MED-MMP2A or 11.0 EC in combination with MED-MMP2B. A maximum of 6.0 EC of electives can be used to fill deficiencies at bachelor's level. All other elective courses must be of master's or PhD level.

**Literature thesis (MED-MMLT) and Knowledge transfer (MED-MMKT) are optional elective components.

***Mentoring (MED-MMCOA) is a compulsory part for students who started their Master's in the 2021-2022 academic year or later. The compulsory components of the mentoring programme are further explained in appendix IIIc and the relevant assessment regulations.

Appendix III Course-specific information

Theoretical courses

For all theoretical courses, described in the underlying tables IIIb the following is determined.

Table IIIa. General information MMD theoretical courses (MED-MMIC, MED-MMEC, MED-MMBS, MED-MM1CFA, MED-MM1TR, MED-MM2CFA, MED-MM2TR, MED-MM3CFB, MED-MM3TR, MED-MMCBB, MED-MMSKB, MED-MM2MC, MED-MMSTA, MED-MMSS, MED-MM1MC)

Information education		
	Learning objectives	See prospectus (https://www.ru.nl/courseguides/fmw/master/molecular-mechanisms-disease-2021-2022/)
	Entry requirements	Not applicable
	Registration for tuition	All students need to register via Osiris at least 10 working days before start of the unit of study. Specific registration periods will be announced. Exempted are incoming first year MMD students; they are automatically enrolled via Osiris for tuition of all obligatory courses in Semester 1.
	Tuition form	Lectures and demonstrations, discussions, enquiry-based projects, communication skills training; for details see prospectus (https://www.ru.nl/courseguides/fmw/master/molecular-mechanisms-disease-2021-2022/)
	Number of contact hours	See https://onderwijsroosters.radboudumc.nl/schedule
	Language of instruction	English
	Study costs	Not applicable
Information examination		
	Entry requirements examination	Not applicable
	Number of examination opportunities per study year	2
	Maximum number of examination opportunities	Not applicable
	Registration examination	Students who are registered for tuition via Osiris are also automatically enrolled for the first examination opportunity of the corresponding unit of study; resit registration needs to be done via Osiris in accordance to article 16.
	Deregistration examination	See article 16, via Osiris, at the latest 10 working days before the examination date. In case notice of absence has been given to the examiner at least two days prior to the examination date, the final result of the examination will be 'NS' (no show) and no EC will be awarded.
	Examination language	English
	Period of validity	Indefinitely, with due observance of the stipulations on this matter laid down in the Act.
	Resit of passed examination	Allowed, after having informed the board of examiners at the latest 28 days before the examination date.

	Resit of module tests	Allowed for module tests that were not passed. <u>Not allowed</u> for passed module tests, except written individual exams (short answer open-ended question exams), after having informed the board of examiners at the latest 28 days before the module test date.
Set-up first examination opportunity		
	Term for publication of examination results	15 working days
	Validity term of module tests	As stated in article 30.2
Set-up resit examination		
	Term for publication of examination results	15 working days
	Number of module tests	Equal to first examination opportunity
	Examination form	Equal to first examination opportunity
Committee to be approached with special requests		
	Board of Examiners MMD	boardofexaminersmmd.rha@radboudumc.nl

Table IIIb. Specific details theoretical courses (MED-MMIC, MED-MMEC, MED-MMBS, MED-MM1CFA, MED-MM1TR, MED-MM2CFA, MED-MM2TR, MED-MM3CFB, MED-MM3TR, MED-MMCBB, MED-MMSKB, MED-MM2MC, MED-MMSTA, MED-MMSS, MED-MM1MC)

Introduction to Molecular Mechanisms of Disease		
	Code	MED-MMIC
	Study load	2.5 EC
Information examination		
	Determination examination grade	Pass (P) or Fail (F); written report is numerically graded.
Set-up first examination opportunity		
	Period	September
	Number of module tests	3
	Examination form	Written assignments (2) and written report; for details see assessment regulations.
Set-up resit examination		
	Period	To be determined in consultation between examiner and student.

Excellence in communication		
	Code	MED-MMEC
	Study load	1.5 EC
Information examination		
	Determination examination grade	Pass (P) or Fail (F)
Set-up first examination opportunity		
	Period	September
	Number of module tests	2
	Examination form	Oral presentation (performance, content and creativity) and poster presentation (content and creativity); for details see assessment regulations.
Set-up resit examination		
	Period	To be determined in consultation between examiner and student.

Understanding basic statistics using R		
	Code	MED-MMBS
	Study load	1.5 EC
Information examination		
	Determination examination grade	Pass (P) or Fail (F)
Set-up first examination opportunity		
	Period	October
	Number of module tests	2
	Examination form	Computer assignment and written scientific abstract; for details see assessment regulations.
Set-up resit examination		
	Period	To be determined in consultation between examiner and student.

Immunity, infection and inflammation		
	Code	MED-MM1CFA
	Study load	4.0 EC
Information examination		
	Determination examination grade	According to article 27; numerically graded
Set-up first examination opportunity		
	Period	December
	Number of module tests	4
	Examination form	Written examination (short answer open-ended questions), written research proposal, journal club presentation, round table discussion; for details see assessment regulations.
Set-up resit examination		
	Period	April

Immunity related disorders and immunotherapy		
	Code	MED-MM1TR
	Study load	2.0 EC
Information examination		
	Determination examination grade	According to article 27; numerically graded
Set-up first examination opportunity		
	Period	December
	Number of module tests	1
	Examination form	Written examination (short answer open-ended questions); for details see assessment regulations.
Set-up resit examination		
	Period	April

Metabolism, transport and motion		
	Code	MED-MM2CFA
	Study load	4.0 EC
Information examination		
	Determination examination grade	According to article 27; numerically graded
Set-up first examination opportunity		
	Period	November
	Number of module tests	3

Examination form	Written examination (short answer open-ended questions), written research proposal, oral presentation; for details see assessment regulations.
Set-up resit examination	
Period	March

Developmental disorders	
Code	MED-MM2TR
Study load	2.0 EC
Information examination	
Determination examination grade	According to article 27; numerically graded
Set-up first examination opportunity	
Period	November
Number of module tests	1
Examination form	Written examination (short answer open-ended questions); for details see assessment regulations.
Set-up resit examination	
Period	March

Cell growth and differentiation	
Code	MED-MM3CFB
Study load	2.5 EC
Information examination	
Determination examination grade	According to article 27; numerically graded
Set-up first examination opportunity	
Period	October
Number of module tests	1
Examination form	Written examination (short answer open-ended questions); for details see assessment regulations.
Set-up resit examination	
Period	February

Developmental disorders and malignancies	
Code	MED-MM3TR
Study load	2.0 EC
Information examination	
Determination examination grade	According to article 27; numerically graded
Set-up first examination opportunity	
Period	October
Number of module tests	1
Examination form	Written examination (short answer open-ended questions); for details see assessment regulations.
Set-up resit examination	
Period	February

Computational Biology & Bioinformatics	
Code	MED-MMCB
Study load	3.0 EC
Information examination	

	Determination examination grade	According to article 27; numerically graded
Set-up first examination opportunity		
	Period	January
	Number of module tests	2
	Examination form	Practical coding exercise/essay questions and bioinformatics project (presentation); for details see assessment regulations.
Set-up resit examination		
	Period	May

Scientific skills		
	Code	MED-MMSKB
	Study load	1.5 EC
Information examination		
	Determination examination grade	Pass (P) or Fail (F)
Set-up first examination opportunity		
	Period	January-June
	Number of module tests	1
	Examination form	Portfolio consisting out of assignments for the individual elements of the course; for details see assessment regulations.
Set-up resit examination		
	Period	To be determined in consultation between examiner and student.

Omics data analysis and interpretation		
	Code	MED-MMSTA
	Study load	3.0 EC
Information examination		
	Determination examination grade	According to article 27; numerically graded
Set-up first examination opportunity		
	Period	September
	Number of module tests	2
	Examination form	Written examination (short answer open-ended questions) and oral presentation; for details see assessment regulations.
Set-up resit examination		
	Period	November

Science and society		
	Code	MED-MMSS
	Study load	1.5 EC
Information examination		
	Determination examination grade	According to article 27; numerically graded
Set-up first examination opportunity		
	Period	September
	Number of module tests	2
	Examination form	Oral presentation and written assignment (assay/position paper); for details see assessment regulations.
Set-up resit examination		
	Period	To be determined in consultation between examiner and student.

Masterclass 1		
	Code	MED-MM1MC
	Study load	1.5 EC
Information examination		
	Determination examination grade	According to article 27; numerically graded
Set-up first examination opportunity		
	Period	September
	Number of module tests	2-3 (to be determined); see assessment regulations.
	Examination form	Written assignment, journal club presentation and other (to be determined); for details see assessment regulations.
Set-up resit examination		
	Period & form	If a student fails the masterclass, the examiner will determine the exact form and period for resit. The form will be as much as possible equal to the first examination opportunity.

Masterclass 2		
	Code	MED-MM2MC
	Study load	1.5 EC
Information examination		
	Determination examination grade	According to article 27; numerically graded
Set-up first examination opportunity		
	Period	January
	Number of module tests	2-3 (to be determined); see assessment regulations
	Examination form	Written assignment, journal club presentation and other (to be determined); see assessment regulations.
Set-up resit examination		
	Period & form	If a student fails the masterclass, the examiner will determine the exact form and period for resit. The form will be as much as possible equal to the first examination opportunity.

Table IIIc. Information MMD Mentoring

Mentoring		
	Code	MED-MMCOA
	Study load	0 EC
	Learning objectives	See prospectus (https://www.ru.nl/courseguides/fmw/master/molecular-mechanisms-disease-2021-2022/)
Information education		
	Entry requirements	Not applicable
	Registration for tuition	Not applicable
	Tuition form	Students discuss with their mentor personal study choices, personal development and

		career perspectives. Students prepare these meetings by writing a reflection report.
	Number of contact hours	Flexible; 4 meetings in first year and 3 meetings in second year are highly recommended. Three meetings during the first year and the final meeting at the end of the Master's programme are obligatory.
	Language of instruction	English
	Study costs	Not applicable
Information examination		
	Entry requirements examination	Not applicable
	Number of examination opportunities per study year	2
	Maximum number of examination opportunities	Not applicable
	Registration examination	Students are registered for the examination by the programme administration.
	Deregistration examination	Not applicable
	Examination language	English
	Period of validity	Unlimited
	Determination examination grade	Pass (P) or Fail (F)
	Resit of passed examination	Not applicable
	Resit of module tests	Not applicable
Set-up first examination opportunity		
	Period	Flexible
	Number of module tests	1
	Examination form	Written short reflection per mentor meeting. Three reflections in the first year (signed by mentor) and the final reflection of the Master's programme (all uploaded to Brightspace Mentor course) are obligatory as documentation of the mentor meetings. The final reflection has to be prepared and uploaded at least 15 working days before the intended graduation date. The mentor signature on this final reflection is not obligatory.
	Term for publication of examination results	15 working days
	Validity term of module tests	As stated in article 30.2
Set-up resit examination		
	Period	Flexible
	Number of module tests	1
	Examination form	Submit written short reflection per mentor meeting.
	Term for publication of examination results	15 working days
Committee to be approached with special requests		
	Board of Examiners MMD	boardofexaminersmmd.rha@radboudumc.nl

Research training periods

Table IIIId. Information MMD research training periods

Research training period 1		
	Code	MED-MMP1C
	Study load	21 weeks – 30 EC
	Learning objectives	See Guidelines internship MMD on Brightspace
Information education		
	Entry requirements	The work plan for the research training period must be approved by the board of examiners as part of the individual study plan before the start of the research training period.
	Registration for tuition	The student submits the research training period work plan 1 to the board of examiners via Osiris-Zaak, end of November, before start of the research training period.
	Tuition form	The student conducts research under supervision of a scientist and writes a report.
	Number of contact hours	The student conducts research 40 hours a week; estimated supervision time is at least 5 hours a week.
	Language of instruction	English
	Study costs	Not applicable
Information examination		
	Entry requirements examination	Not applicable
	Number of examination opportunities per study year	1
	Maximum number of examination opportunities	2
	Registration examination	Automatic registration after approval of research training period work plan.
	Deregistration examination	Not applicable
	Examination language	English
	Period of validity	Unlimited
	Determination examination grade	According to article 27; numerically graded. Specific rules apply to examiners and assessment forms, see Rules and regulations of the board of examiners and Guidelines internship MMD on Brightspace. Detailed assessment regulations for research training periods are printed on the assessment form (available from Brightspace).
	Resit of passed examination	Not allowed
	Resit of module tests	If a student fails the research training period, the examiner in consultation with the board of examiners will determine the options for resit.
Set-up first examination opportunity		
	Period	21 weeks in January-July; this time period includes writing a report.
	Number of module tests	4
	Examination form	Professional attitude and activities, oral presentation and written internship report. See internship assessment forms (approved by the

		board of examiners) and Guidelines internship MMD on Brightspace for details.
	Term for publication of examination results	15 working days
	Validity term of module tests	As stated in article 30.2
Set-up resit examination		
	Period	If a student fails the research training period, the examiner in consultation with the board of examiners will determine the options and period for resit.
	Number of module tests	Equal to first examination opportunity
	Examination form	Equal to first examination opportunity
	Term for publication of examination results	15 working days
Committee to be approached with special requests		
	Board of Examiners MMD	boardofexaminersmmd.rha@radboudumc.nl

Research training period 2		
	Code	MED-MMP2A or MED-MMP2B
	Study load	MED-MMP2A (27 weeks) - 39 EC MED-MMP2B (31 weeks) - 45 EC
	Learning objectives	See Guidelines internship MMD on Brightspace
Information education		
	Entry requirements	The work plan for the research training period must be approved by the board of examiners as part of the individual study plan before the start of the research training period.
	Registration for tuition	The student submits a research training period work plan (and traineeship agreement) to the board of examiners via Osiris-Zaak at least 6 weeks before start of the research training period.
	Tuition form	The student conducts research under supervision of a scientist and writes a report.
	Number of contact hours	The student conducts research 40 hours a week; estimated supervision time is at least 5 hours a week.
	Language of instruction	English
	Study costs	Not applicable
Information examination		
	Entry requirements examination	Not applicable
	Number of examination opportunities per study year	1
	Maximum number of examination opportunities	2
	Registration examination	Automatic registration after approval of research training period work plan.
	Deregistration examination	Not applicable
	Examination language	English
	Period of validity	Unlimited
	Determination examination grade	According to article 27; numerically graded. Specific rules apply to examiners and assessment forms, see Rules and regulations of the board of examiners and Guidelines internship MMD on Brightspace.

		Detailed assessment regulations for research training periods are printed on the assessment form (available from Brightspace).
	Resit of passed examination	Not allowed
	Resit of module tests	If a student fails the research training period, the examiner in consultation with the board of examiners will determine the options for resit.
Set-up first examination opportunity		
	Period	27 or 31 weeks in October-July; this time period includes writing a Master's thesis.
	Number of module tests	4
	Examination form	Professional attitude and activities, oral presentation and Master's thesis which has to be written in the format of a scientific paper with supplements. See internship assessment forms (approved by the board of examiners) and Guidelines internship MMD on Brightspace for details.
	Term for publication of examination results	15 working days
	Validity term of module tests	As stated in article 30.2
Set-up resit examination		
	Period	If a student fails the research training period, the examiner in consultation with the board of examiners will determine the options and period for resit.
	Number of module tests	Equal to first examination opportunity
	Examination form	Equal to first examination opportunity
	Term for publication of examination results	15 working days
Committee to be approached with special requests		
	Board of Examiners MMD	boardofexaminersmmd.rha@radboudumc.nl

Electives: Literature thesis and Knowledge transfer

Table IIIe. Information MMD Literature thesis

Literature thesis		
	Code	MED-MMLT
	Study load	6 EC
	Learning objectives	See Guidelines Literature thesis on Brightspace
Information education		
	Entry requirements	The application for the Literature thesis must be approved by the board of examiners as part of the individual study plan before the start of the Literature thesis.
	Registration for tuition	The student submits the application form Literature thesis to the board of examiners, at least 4 weeks, before start of the literature thesis.
	Tuition form	The student answers a research question, performs a literature study and writes a review under structured supervision of a scientist. Specific guidelines for the Literature thesis (including a time limit of 4 weeks, restrictions on topic and supervisors) are published on Brightspace.
	Number of contact hours	The student conducts the literature study in 4 weeks (or an equivalent thereof); estimated supervision time is at least 1.5 hours a week.
	Language of instruction	English
	Study costs	Not applicable
Information examination		
	Entry requirements examination	Not applicable
	Number of examination opportunities per study year	2
	Maximum number of examination opportunities	Not applicable
	Registration examination	Via approval of the Literature thesis application form.
	Deregistration examination	Not applicable
	Examination language	English
	Period of validity	Unlimited
	Determination examination grade	According to article 27; numerically graded. Specific rules apply to examiners and assessment forms, see Rules and regulations of the board of examiners and guidelines Literature thesis on Brightspace. Detailed assessment regulations for Literature thesis are printed on the assessment form (available from Brightspace).
	Resit of passed examination	Not allowed
	Resit of module tests	Not allowed
Set-up first examination opportunity		
	Period	Flexible, 4 week time period
	Number of module tests	1
	Examination form	Written Literature thesis. See Literature thesis assessment form (approved by the board of

		examiners) and guidelines Literature thesis on Brightspace for details.
	Term for publication of examination results	15 working days
	Validity term of module tests	As stated in article 30.2
Set-up resit examination		
	Period	Flexible, 4 week time period
	Number of module tests	1
	Examination form	If a student fails the Literature thesis, the student has to write a complete new Literature thesis on a new topic.
	Term for publication of examination results	15 working days
Committee to be approached with special requests		
	Board of Examiners MMD	boardofexaminersmmd.rha@radboudumc.nl

Table IIIe. Information MMD Knowledge transfer

Knowledge transfer		
	Code	MED-MMKT
	Study load	3 EC
	Learning objectives	See prospectus (https://www.ru.nl/courseguides/fmw/master/molecular-mechanisms-disease-2021-2022/)
Information education		
	Entry requirements	Not applicable
	Registration for tuition	Not applicable
	Tuition form	Students attend (international) scientific seminars and symposia, discuss and present science and reflect.
	Number of contact hours	Flexible
	Language of instruction	English
	Study costs	Reimbursement for symposia costs (fee and travel) is given up to 400 euro per student
Information examination		
	Entry requirements examination	Not applicable
	Number of examination opportunities per study year	2
	Maximum number of examination opportunities	Not applicable
	Registration examination	Via Osiris in accordance to article 16.
	Deregistration examination	Via Osiris in accordance to article 16.
	Examination language	English
	Period of validity	Unlimited
	Determination examination grade	Pass (P) or Fail (F)
	Resit of passed examination	Not applicable
	Resit of module tests	Not applicable
Set-up first examination opportunity		
	Period	Flexible
	Number of module tests	1
	Examination form	Written short reflection per seminar and/or symposium. The Knowledge transfer reflection sheet (available via Brightspace) has to be handed in to the course coordinator.

	Term for publication of examination results	15 working days
	Validity term of module tests	As stated in article 30.2
Set-up resit examination		
	Period	Flexible
	Number of module tests	1
	Examination form	Resubmit improved written short reflection per seminar and/or symposium.
	Term for publication of examination results	15 working days
Committee to be approached with special requests		
	Board of Examiners MMD	boardofexaminersmmd.rha@radboudumc.nl

Appendix IV RU Regulations on Fraud

Paragraph 1 Introductory provisions

Article 1. Purpose and scope of these regulations

To prevent fraud during examinations and bachelor/master examinations, as referred to in article 7.12b *WHW*, relating to the education and examination in the **Molecular Mechanisms of Disease** programme of Radboud University (hereinafter: RU), the dean of the faculty of Medical Sciences adopts the following regulations.

Article 2. 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: the Act)) or the Education and Examination Regulations of the degree programme (hereinafter: the EER) – have the same meaning that is given to these terms in the Act and the EER.

Paragraph 2 Definition fraud, procedure and sanctions

Article 3. Definition of fraud

1. At RU, fraud is understood to mean any act or omission by a 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 sitting written 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 examinations or bachelor/master 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 any other paper that was written by someone else.
- c) other fraud in the context of examinations or bachelor/master examinations, including
- i. taking possession of assignments, answer keys and the like, prior to the time the examination or bachelor/master examination is to take place;
 - ii. changing answers to assignments in an examination or a bachelor/master examination after it has been handed in for assessment;
 - iii. providing incorrect information when applying for an exemption, extension of validity period, and the like, of an examination or a bachelor/master examination.
3. For the purpose of these regulations, an attempt to commit fraud will also be seen as fraud.

Article 4. Procedure establishing 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 examination is administered, the board of examiners or the examiner will allow the student to complete 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. 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 of staff.
4. The board of examiners or the examiner drafts a report of the suspicion of fraud. The report drafted by the examiner will be sent to the board of examiners without delay.
5. The board of examiners makes the report referred to in paragraph 4 available to 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.
6. 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.

Article 5. Remedial action

If the board of examiners has established fraud:

- a) the board of examiners declares the relevant examination invalid, and

- b) the board of examiners includes a statement in the student's student file that it has established fraud and, if applicable, which sanctions have been imposed.

Article 6. Sanctions

1. If the board of examiners has established that fraud has been committed, the board of examiners may:
 - a) determine that the student may not sit one or more examinations during a period to be set by the board of examiners, which period amounts to 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 or recommend that the student's participation in 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 degree programme should be terminated with definitive effect.
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 student's registration for a programme with definitive effect.
3. The sanctions 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.

Paragraph 3 Transitional provisions

Not applicable.

Paragraph 4 Final provisions

Article 7. Decisions and legal protection

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 8. Adoption and amendment

1. These regulations are adopted by the dean.
2. In so far as the content of these regulations relates to the duties and powers of the degree programme's board of examiners, the content must also be confirmed by that board of examiners.

Article 9. Effect

These regulations take effect on September 1, 2019. These regulations will then replace any previous regulations.

Article 10. Publication

1. The dean ensures the appropriate publication and possible amendments of these regulations.
2. For the purpose of proper and clear provision of information to students and prospect students, the dean includes these regulations as an appendix to the Education and Examination Regulations (*Onderwijs- en Examenreglement (OER)*). Accordingly, the board of examiners includes these regulations accordingly as an appendix to the rules and guidelines of the degree programme to be laid down by that board.

Thus adopted by the dean on July 2, 2019 and ratified by the board of examiners on September 3, 2019.

Appendix V. RU Regulations on House Rules Examination Rooms

Paragraph 1 Introductory provisions

Article 1. Purpose of the regulations

For the proper course of events during examinations and bachelor/master examinations relating to the education and the examination of the **Molecular Mechanisms of Disease** programme that are administered in examination rooms at Radboud University (hereinafter: RU), the dean of the faculty of Medical Sciences of RU adopts the following regulations.

Article 2. 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: the Act)) or the Education and Examination Regulations of the degree programme (hereinafter: the EER) – have the same meaning that is given to these terms in the Act and the EER.

Article 3. Examiners and invigilators

1. For the administration of examinations the board of examiners Molecular Mechanisms of Disease has appointed one or more examiners.
2. The examiners appointed as referred to in paragraph 1 are responsible for the supervision and execution of the provisions in these regulations. On behalf of the examiner(s) appointed, one or more invigilators may be present in the examination rooms, assigned by or on behalf of the executive board.
3. When invigilators have been assigned, at least one appointed examiner is also present in the examination room or, as appropriate, available on call.

Article 4. Instructions by the executive board

1. In view of the executive board's mandating decision dated May 15, 2019, these regulations include instructions in the sense of article 7.12b of the Act. The student is obliged to comply with the instructions laid down in these regulations.
2. A student who fails to comply with any instructions under these regulations may be denied access to the examination room by or on behalf of the examiner. Non-compliance with the instructions may also lead to a suspicion of fraud in the sense of the Regulations on Fraud (*Regeling Fraude*).

Article 5. Guidelines for examiners

These regulations include instructions in the sense of article 7.12b of the Act. The examiner is obliged to comply with the instructions laid down in these regulations.

Article 6. Instructions by examiners for students

1. The examiner may give instructions, in the context of the instructions described in these regulations, to a student in the RU examination room if a concrete situation should be cause for this. The student is obliged to comply with these instructions.
2. The student who fails to comply with the instructions referred to in paragraph 1 may be denied access to the examination room by or on behalf of the examiner. Not-compliance with the instructions may also lead to a suspicion of fraud in the sense of the Regulations on Fraud (*Regeling Fraude*).

Paragraph 2 House Rules

Article 7. Admission to the examination room and leaving it

1. With respect to entering and leaving the examination rooms, the following applies:
 - a. the examination room is accessible for the student at least 15 minutes before the examination starts;
 - b. except in the circumstances described in paragraphs c and d, the student is no longer admitted into the examination room after the examination has started;
 - c. the student who arrives too late at the examination room is given the opportunity, 15 minutes following the start of the examination, to be as yet admitted into the examination room;
 - d. the student is permitted to use the toilet during the examination;
 - e. the student is not allowed to leave the examination room within the first 30 minutes following the start of the examination,;
2. In special circumstances the examiner may act contrary to the provisions in paragraph 1. If the provisions in paragraph 1 are departed from, the student will be informed of this in due time.

Article 8. Student ID

1. In the examination room the student must be able to furnish proof of identity, at any time, by producing a valid identity document (passport, driver's license, ID-card or residence permit).

2. The student who cannot furnish proof of identity as laid down in the first paragraph of the present article will not be admitted into the examination room or can as yet be denied access to that room.

Article 9. Start and duration of the examination

The examiner starts the examination at the time scheduled. If the examination starts at a later moment in time because of relevant circumstances, the examiner ensures that the scheduled duration of the examination can be fully used by the student.

Article 10. Materials permitted in examinations

1. When taking the examination, the student is not allowed to have materials available that serve or could serve as auxiliary materials for the examination paper, unless the use of that material has been explicitly permitted by the examiner before the start of the examination.
2. Materials for the purpose of these regulations include, amongst other things: textbooks and dictionaries, notes and lecture notes, and watches, laptops, tablets, telephones and other smart devices and/or wearables.

Article 11. Handing in examination papers

1. When the examination ends, the student is obliged to hand in the examination paper.
2. The student may also be requested to hand in other examination materials, such as examination question papers and/or note paper used during the examination.

Article 12. Peace and order and furniture and fixtures in the examination room

1. Both during and after completion of the examination, the examiner ensures that measures are taken that are required for adequate surveillance and for maintaining the necessary peace and order in the examination room. Eating and drinking is allowed during the examination, with due observance of the provisions in these regulations.
2. When examinations take place, each examination room has at least one clock which is clearly visible for every student.

Paragraph 3 Transitional provisions

Not applicable.

Paragraph 4 Final provisions

Article 13. Departure from rules and house rules

In special circumstances the examiner may depart from the provisions in these regulations.

Article 14. Adoption and amendment

1. These regulations are adopted by the dean.
2. In so far as the content of these regulations relates to the duties and powers of the programme's board of examiners, the content must also be confirmed by that board of examiners.

Article 15. Effect

These regulations take effect on September 1, 2019. These regulations then replace any previous regulations.

Article 16. Publication

1. The dean ensures the appropriate publication of these regulations and any amendments of these regulations.
2. For the purpose of proper and clear provision of information to students and prospect students, the dean includes these regulations as an appendix to the Education and Examination Regulations (*Onderwijs- en Examenreglement (OER)*). The board of examiners includes these regulations accordingly as appendix to the rules and guidelines of the programme that are to be laid down by that board.

Thus adopted by the dean on July 2, 2019 and ratified by the board of examiners on September 3, 2019.

Appendix VI Guidelines for Distinctions Molecular Mechanisms of Disease

1. The board of examiners will judge whether the Master's certificate should be awarded the distinctions of cum laude or summa cum laude. Based on the weighted mean of the courses stipulated in Appendix II*, the following judicia can be awarded:
No judicium: the weighted mean of the grades assigned is below 8.0.
Cum laude: the weighted mean of the grades assigned is ≥ 8.0 and < 9.0 .
Summa cum laude: the weighted mean of the grades assigned is ≥ 9.0 .
** This relates to courses assessed with a mark.*
2. In order for the Board to consider any distinction as mentioned in paragraph 1 here above, the results of both research training periods are ≥ 8.0 and the weighted mean of the grades for all courses (obligatory, elective and extracurricular) excluding the research training periods is ≥ 8.0 .
3. In order for the Board to consider any distinction as mentioned in paragraph 1 here above, all results have to be obtained the first time the student takes a course examination; only one resit may have been involved in obtaining any of the results of the master's programme.
4. In order for the Board to consider any distinction as mentioned in paragraph 1 here above, the research question answered in the reports of the research training periods has to be in agreement with the research question as defined in the work plan approved by the board of examiners; in addition the reports of the research training periods have to be handed in for grading on time – 6 weeks after a research training period has been completed – as specified in the Rules and Guidelines set by the board of examiners.
5. The board of examiners can deviate from the criteria in paragraphs 1, 2, 3 and 4 in special circumstances.