

**Education and Examination Regulations 2018-2019 for the programme of the Health Sciences Research Master of the Faculty of Health, Medicine and Life Sciences, Maastricht University for students who start on 1 September 2018, in accordance with Article 7.13 of the Dutch Higher Education and Scientific Research Act (Wet op het Hoger Onderwijs en Wetenschappelijk Onderzoek, WHW)**

These regulations have been adopted by the Dean of the Faculty of Health, Medicine and Life Sciences after advice of or consent from the Programme Committee (*Opleidingscommissie*) and after consent from or in consultation with the Faculty Council (*Faculteitsraad*) on 12 June 2018.

**Contents:**

<b>SECTION 1</b>	<b><u>GENERAL PROVISIONS</u></b>	<b>3</b>
Article 1.1	Applicability of the regulations	3
Article 1.2	Definitions	3
<b>SECTION 2</b>	<b><u>ADMISSION</u></b>	<b>4</b>
Article 2.1	Responsibilities	4
<b>SECTION 3</b>	<b><u>CONTENT AND STRUCTURE OF THE PROGRAMME</u></b>	<b>4</b>
Article 3.1	Aim of the programme	4
Article 3.2	Form of the programme	4
Article 3.3	Language of instruction	4
Article 3.4	Communications and announcement of decisions	4
Article 3.5	Study load	5
Article 3.6	Content, structure and ECTS of the programme	5
Article 3.7	Flexible programme and flexible master	5
Article 3.8	Examination	5
<b>SECTION 4</b>	<b><u>EDUCATION</u></b>	<b>5</b>
Article 4.1	Courses; composition; actual design	5
Article 4.2	Attendance and best-efforts obligation	5
<b>SECTION 5</b>	<b><u>ASSESSMENT</u></b>	<b>5</b>
Article 5.1	General	6
Article 5.2	Grades	6
Article 5.3	Order of exams	6
Article 5.4	Scheduling and frequency of the exams	6
Article 5.5	Form of the exams	6
Article 5.6	Oral exams	6
Article 5.7	Placement and Thesis	7
Article 5.8	Determination and announcement of exam results	7
Article 5.9	Right of inspection	7
Article 5.10	Registration of courses	7
Article 5.11	Period of validity	7
Article 5.12	Invalidation of exams	8
Article 5.13	Retention period for tests	8
Article 5.14	Exemption	8
Article 5.15	Fraud	8
Article 5.16	Unsuitability ( <i>Iudicium abeundi</i> )	8
<b>SECTION 6</b>	<b><u>EXAMINATION</u></b>	<b>9</b>
Article 6.1	Examination	9
Article 6.2	Degree	9
Article 6.3	Certificate and statements	9
Article 6.4	Right of appeal	10
<b>SECTION 7</b>	<b><u>STUDY GUIDANCE</u></b>	<b>10</b>

Article 7.1	Study progress administration	10
Article 7.2	Study guidance	10
<b>SECTION 8</b>	<b><u>TRANSITIONAL AND FINAL PROVISIONS</u></b>	<b>10</b>
Article 8.1	Amendments	10
Article 8.2	Notice	10
Article 8.3	Evaluation	10
Article 8.4	Unforeseen cases/safety net scheme	10
Article 8.5	Effective date	11
Appendix 1	The aim of the programme	12
Appendix 2	The structure of the programme, including the ECTS	15
Appendix 3	Language of instruction	16

## **SECTION 1 GENERAL PROVISIONS**

### **Article 1.1 Applicability of the regulations**

1. These regulations apply to the education, exams and the examinations of the programme of the Health Sciences Research Master, hereafter referred to as 'the programme'.  
The programme is provided by the Faculty of Health, Medicine and Life Sciences of Maastricht University, hereafter referred to as 'the faculty'.
2. These regulations apply to all students who start on 1 September 2018 and participate in the programme in the academic year 2018-2019. For these students this EER replace, in principle, all other regulations.
3. The replacement of the former regulations by these new ones may not disadvantage students that started the programme when former regulations were applicable. In cases where the new regulations disadvantage students, the old regulations are applicable.
4. Contrary to the content of article 1.1 sub 2 and 3, the educational programme which was valid at the moment that the student started with the educational programme, including the exams, is still applied for the student.
5. These regulations also apply to students from other programmes, faculties or institutions of higher education, insofar as they follow components of the programme to which these EER apply.
6. For components of the programme that students follow at another degree programme, faculty or institution of higher education, the EER for the other programme, faculty or institution apply to the component in question.

### **Article 1.2 Definitions**

In these regulations, the following terms and definitions apply:

- a. the Act: the Dutch Higher Education and Scientific Research Act (*Wet op het Hoger Onderwijs en Wetenschappelijk Onderzoek*);
- b. student: a person who is registered at the university for education and/or to take exams and the examination of the programme;
- c. course: a study unit of the programme within the meaning of the Act; and consisting of one or more educational components, such as group meetings, practical training or written papers with the exclusion of the thesis;
- d. course year: year 1 or year 2 of the programme;
- e. academic year: the period from 1 September of a calendar year up to and including 31 August of the following calendar year;
- f. programme: the master's programme referred to in Article 1.1 of these regulations, consisting of a coherent whole of study courses;
- g. specialism, if applicable: any one of the feasible sub-programmes available in a master programme;
- h. exam: a component of the examination as referred to in Article 7.10 of the Act;
- i. educational components/activities: training as referred to in Article 7.13(2)(d) of the Act, in one of the following forms:
  - writing a paper or performing another written assignment;
  - performing a research assignment;
  - participating in field work or a field trip;
  - participating in an activity intended to develop certain skills;
  - participating in tutorials, lectures, project groups and study groups;
  - completing a placement;
  - writing a master's thesis.
- j. placement: a period in which a student performs his or her research, at Maastricht University or another institution;
- k. thesis: a written report, reflecting the work accomplished during a placement period;
- l. registration: the administrative recording of the passing results of an exam;
- m. examination: the final examination of the master's programme;
- n. credit: a unit expressed in ECTS credits, with one credit equalling 28 hours of study;
- o. board of examiners: the board of the programme referred to in Article 7.12 of the Act;
- p. board of admission: the board responsible for judging the admissibility of the candidate to one of the master's programmes;

- q. examiner: the person designated by the board of examiners to administer exams and to determine the results of such exams;
- r. course coordinator: an examiner who is responsible for the content of the education for a particular course;
- s. faculty board: the faculty board referred to in Article 9.12 of the Act;
- t. Rules and Regulations: additional rules associated with the Education and Examination Rules;
- u. UM: Maastricht University;
- v. course catalogue: the programme guide which includes further details about programme-specific provisions and information, which is provided via the student-portal.

The other terms have the meaning given to them by the Act.

## **SECTION 2 ADMISSION**

### **Article 2.1 Responsibilities**

The Dean of the Faculty of Health, Medicine and Life Sciences has given the responsibilities of the admission to the board of admission to oversee the applications for the master's programme. The board of admission will make the final decisions of those applicants who will gain admittance into a master's programme, based upon the admission requirements. These requirements are described on the UM website.

## **SECTION 3 CONTENT AND STRUCTURE OF THE PROGRAMME**

### **Article 3.1 Aim of the programme**

1. The study programme is intended to:
  - provide academic education as set out in the educational concept and profile of Maastricht University;
  - provide a broad-based learning experience within the scientific field of the programme;
  - prepare the student for a professional career as researcher in the field of Health Sciences Research (see also Appendix 1).
2. The programme contains sufficient elements for the academic and intellectual development of students, above all:
  - independent scientific thinking and performance;
  - scientific communication;
  - handling professional knowledge and skills in a social setting.

### **Article 3.2 Form of the programme**

1. The programme is offered on a full-time basis.
2. The programme commences once a year in September.

### **Article 3.3 Language of instruction**

1. Throughout the programme and in all exams the English language will be the standard.
2. It is not allowed to use dictionaries during the exams.

### **Article 3.4 Communications and announcement of decisions**

1. The faculty board, the board of examiners and the examiners may use the student portal and e-mail through the UM account for communications relating to the programme and examinations.
2. The faculty board, the board of examiners and the examiners may use the student portal and e-mail through the UM account to announce decisions.

3. The student must regularly check his/her university e-mail address, the Faculty website and the digital learning environment. Information disseminated via e-mail, the digital learning environment or the website will be assumed to be known.

#### **Article 3.5 Study Load**

The programme has a study load of 120 ECTS.

#### **Article 3.6 Content, structure and ECTS of the programme**

The content, structure and ECTS of the programme are described in Appendix 2.

#### **Article 3.7 Flexible programme and flexible masters**

1. A student registered for one of the faculty's programmes may, under certain conditions, formulate an educational programme of his or her own which is different from the educational programme stated in Appendix 2. The composition of such a programme must be approved beforehand by the board of examiners.
2. The flexible programme must have a study load of 120 credits.
3. The board of examiners will decide whether to grant permission for the student's proposal within four weeks after it receives the proposal.
4. In granting the permission, the board of examiners will indicate which programme offered by the faculty will include the programme formulated by the student for purposes of the Education and Examination Regulations.

#### **Article 3.8 Examination**

1. The courses of the master's programme are listed in Appendix 2.  
A registration for completion for each component of the programme must be obtained:
  - the exams, including active participation in the mandatory activities;
  - completing a placement and writing a master's thesis.
2. The board of examiners, with due regard to the Education and Examination Regulations, lays down guidelines pertaining to the norms for and assessment of examinations for each of the courses referred to in Paragraph 1. These guidelines are incorporated in the Rules and Regulations.

### **SECTION 4 EDUCATION**

#### **Article 4.1 Courses; composition; actual design**

1. For the programme components, courses are given with the study load stated in Appendix 2.
2. The educational programme consists of study groups, practical training, lectures, individual supervision or otherwise.
3. The educational programme includes 40 weeks in the first year and 40 weeks in the second year.

#### **Article 4.2 Attendance and best-efforts obligation**

1. Each student is expected to actively participate in the course he or she is attending.
2. In addition to the general requirement that the student actively participates in the course, the student must participate in at least 75% of the educational activities (with the exclusion of the lectures) unless there are different requirements defined in the course assessment plan.
3. If the student has participated in less than 75% of the activities the course coordinator may give additional assignments to the student.

### **SECTION 5 ASSESSMENT**

**Article 5.1      General**

1. During a course, the student will be tested for academic and intellectual development and the extent to which the student has sufficiently achieved the stated learning objectives.
2. The assessment plan describes the achievements the students must make to pass the course and the criteria on which the student is assessed.
3. The Rules of Procedure at Exams describe the assessment procedure. These rules are published in the student portal.

**Article 5.2      Grades**

1. Grades are awarded on a scale of 1 to 10.
2. The student must receive a final grade of '5.5' or higher to pass the course.
3. When a component of the examination is graded with a qualification, the student has to obtain at least a 'Pass' for this component.
4. The way grades are rounded off is determined in the Rules and Regulations.
5. The highest result attained determines the final grade.

**Article 5.3      Order of exams**

1. Students are not admitted to a course exam unless they have fulfilled the obligation to attend mandatory educational activities for the relevant course. In appropriate cases, a student may be conditionally admitted to an exam at his/her request, pending a final decision on admissibility from the board of examiners.
2. A student will be permitted to start with a placement if he or she has achieved at least 36 ECTS for the preceding master's courses, has passed the module 'Writing a research question and outline' and has submitted a research proposal that is deemed, upon first review, at least 'gradable' by the academic thesis supervisor.
3. Permission to start writing the thesis is only obtained under the condition that the student has received a passing grade for the research proposal.

**Article 5.4      Scheduling and frequency of the exams**

1. Students can take exams twice a year on dates determined by the faculty board: once during or at the end of the course period (first sit for the exam) and once during the academic year (resit option).
2. In exceptional cases, the board of examiners can decide that an exam may be taken at another time than determined in accordance with paragraph 1 of this Article but in any case during the same academic year.

**Article 5.5      Form of the exams**

1. In principle, the exams are written. 'Written exams' also include taking these exams by computer. The examiner may decide that, because the number of students is small or because of the nature and content of a course, an exam will be oral or will include one or more written essays, which may or may not have to be explained orally. The examiner will announce any such decision no later than two weeks before the scheduled exam date.
2. Practical tests may include skills, participation, attitude and professional behaviour. The format and judgement criteria of practical tests will be announced in the (electronic) course book and/or during the introduction to the course.
3. The board of examiners reserves the right to allow other forms of examination, including testing of group work and portfolio. The structure and judgement criteria of the exams will be announced in the student portal.
4. Upon request, students with a disability may take exams in a manner which accommodates their specific disability as much as possible. If necessary, the board of examiners will obtain expert advice before taking a decision in such matters.

**Article 5.6      Oral exams**

1. Oral exams are taken only by one student at a time, unless the board of examiners decides otherwise.
2. An oral exam is given by the examiner in the presence of a lecturer [second examiner], unless the board of examiners has decided otherwise.
3. Oral exams take place in public, unless the board of examiners or the relevant examiner decides otherwise in a special case or if the student objects to this.
4. Contrary to what is described in paragraph 3 an oral exam will not take place in public when this oral exam is a regular part of the assessment of the course.

**Article 5.7 Placement and Thesis**

1. The board of examiners lays down the requirements with regards to the nature and content of the placement in separate rules. These rules are published on the faculty website and are considered to be part of the Rules and Regulations.
2. A placement coordinator is assigned to the master. The placement coordinator is responsible for granting a proposal admissible.
3. The Board of Examiners appoints an examiner as faculty supervisor/1<sup>st</sup> examiner for the placement and thesis and a 2<sup>nd</sup> examiner for the thesis. The faculty supervisor/1<sup>st</sup> examiner has expertise on the thesis topic.
4. The placement coordinator supports the appointment of the faculty supervisor/1<sup>st</sup> examiner for the placement and thesis and the 2<sup>nd</sup> examiner of the thesis.
5. The student may undertake a placement supervised by the faculty only once during the master's programme.
6. Theses written by two or more students are not allowed.

**Article 5.8 Determination and announcement of exam results**

1. The board of examiners determines the standards for assessing each examination component. The standards are included in the Rules and Regulations.
2. The examiner determines the result of a written exam and provides the Education Office with the necessary information to apprise the student of the result within 15 working days of the date on which it was taken.
3. The examiner determines the result of an oral exam immediately after it is taken. If more than one student takes the same exam after each other, this period may be extended by up to five working days.
4. When the result of a written exam is announced, it will be indicated how the student can inspect the exam and file an appeal as referred to in Article 6.4.

**Article 5.9 Right of inspection**

1. Within 10 working days of the date on which the result of a written exam, including a computer-based exam, is announced, students may, upon request, inspect their evaluated work.
2. Together with or before the announcement of the result of a written exam, it is stated how students can inspect their reviewed test.
3. Contrary to what is described in paragraph 1 the term of 10 working days can be extended in particular circumstances (vacation or public holidays). The teacher must announce in time how and when students can inspect their work.

**Article 5.10 Registration of courses**

A registration for completion of a course, and therefore the course-related credits, is obtained once all requirements with regard to the components of the course have been met.

These requirements include:

- *where applicable*: active participation in the group meetings;
- *where applicable*: participation in the practical exercises, including oral and/or written reports;
- *where applicable*: satisfactory completion of papers;
- a final course grade of 5.5 or higher.

**Article 5.11 Period of validity**

1. Exams which have been passed are valid for an unlimited period.  
Contrary to the above, the board of examiners may require the student to take an additional or replacement exam or exam component for an exam which was passed more than six years ago if the student's knowledge or insight that was examined is demonstrably outdated or the skills that were examined are demonstrably outdated.
2. If exceptional circumstances apply as referred to in Article 7.51 paragraph two of the Act, the period of six years in paragraph one will be extended by the duration of the financial support the student receives from the profiling fund.

**Article 5.12      Invalidation of exams**

If an exam involves irregularities that make it impossible to accurately assess the candidate's knowledge, insight and skills, the board of examiners may declare the exam invalid for both the examinee and a group of examinees.

**Article 5.13      Retention period for tests**

1. The exercises, answers and the evaluated work of the written exams will be retained in paper or digital form for two years after the exam/examination result is determined.
2. The final theses and the evaluation of theses will be kept for at least seven years after the evaluation.
3. The procedure concerning to the archiving of exams is published in EleUM.

**Article 5.14      Exemption**

1. The board of examiners may, at a student's request, grant the student an exemption from taking an exam if he or she demonstrates in writing to the board of examiners' satisfaction that he or she previously:
  - either passed an exam for a university programme which was similar in terms of content and level or
  - gained sufficient knowledge and skills relevant to the exam concerned, either through work or professional experience.
2. An exemption may only pertain to an entire course and not a component thereof.
3. At most 20% of the credits for the programme may be earned based on the exemptions granted.
4. The master's thesis is excluded from this exemption option.
5. In order to qualify for an exemption, a student has to submit a written request to the board of examiners within a minimum of 6 weeks prior to the start of the relevant course.
6. The board of examiners will not grant any exemption based on exams passed by a student outside the programme during the period in which the student was barred by the board of examiners from taking exams for the programme because of fraud.

**Article 5.15      Fraud**

1. 'Fraud', including 'plagiarism', means actions or omissions by a student which make it impossible in whole or in part to properly evaluate his or her knowledge, understanding and skills.
2. 'Plagiarism' means the presentation of ideas or words from one's own or someone else's sources without proper acknowledgment of the sources.
3. If the board of examiners determines that a student has engaged in fraud with respect to an exam or exam component, the board of examiners can take appropriate measures.
4. In serious cases of fraud, the board of examiners can propose to UM's Executive Board that the student(s) concerned be permanently deregistered from the programme.
5. In the uniform fraud regulations of the FHML/UM is specified which sanctions the board of examiners can apply.

**Article 5.16      Unsuitability (*Iudicium Abeundi*)**

1. In exceptional circumstances and after carefully weighing the interests at stake, the board of examiners may, stating reasons, ask the dean to request that the Executive Board terminate or deny a student's

registration for a programme if, through his or her conduct or statements, the student shows that he or she is unsuitable to practice one or more professions for which the programme is training the student or is unsuitable for the practical preparation for the profession.

2. If the faculty dean is asked by the Executive Board for a recommendation on a proposed termination or denial of registration based on the reasons stated in paragraph 1, the dean will in turn ask for a recommendation from the board of examiners. The recommendation to the dean will be supported by reasons.

## **SECTION 6      EXAMINATION**

### **Article 6.1      Examination**

1. The board of examiners determines the result and date of the examination and issues the certificate as referred to in Article 6.3 as soon as the student has satisfied the requirements for the examination programme.
2. Prior to determining the result of the examination, the board of examiners may conduct their own investigation of the student's knowledge regarding one or more components or aspects of the programme if and insofar as the results of the relevant tests give reason to do this.
3. To pass the examination, the student must pass all components.
4. To pass the examination and receive the certificate, the student must also have been registered for the programme during the period that the exams were taken.
5. A certificate may only be issued after it has been shown that the student has satisfied all the obligations, including paying the tuition fees.
6. The last day of the month in which the student satisfied all the examination obligations will be considered the examination date (graduation date).
7. Students who have passed the examination and who are entitled to the issuance of a certificate may, stating reasons, ask the board of examiners not to do this yet.

This request must be submitted at least one month before the final assignment is turned in or the final exam is taken.

The board of examiners in any event grants the request:

- if the student is selected by the faculty for a double degree, an extracurricular placement or an extracurricular exchange, or
- if the student has held/will hold a board position for which a financial support from the 'Profileringfondsen' will be granted for at least nine months, or a Student Introduction Committee ('INKOM') board position.

The board of examiners may also grant the request if refusal would result in an exceptional case of extreme unfairness because of the fact that the student concerned could not have taken the automatic graduation into account when he or she was planning his or her study.

### **Article 6.2      Degree**

Students who have passed the examination will be awarded the degree 'Master of Science'.

### **Article 6.3      Certificate and statements**

1. As proof that the examination was passed, the board of examiners issues a certificate, after it has been stated by or on behalf of UM's Executive Board that the procedural requirements for receiving the certificate have been met. The certificate is based on the model that UM's Executive Board has adopted. One certificate will be issued per programme, even if the student completes several specialisms or tracks.
2. The certificate that the examination has been passed also indicates:
  - a. the name of the institution;
  - b. the name of the programme;
  - c. the examination components;
  - d. the degree awarded;
  - e. the date on which the programme was most recently accredited or was subjected to the new programme test;

3. Students who are entitled to the issuance of a certificate may, stating reasons, ask the board of examiners not to do this yet (pursuant to Article 6.1 sub 7).
4. The certificate is signed by the chair of the board of examiners or an appointed substitute and the faculty dean or an appointed substitute.
5. The certificate is awarded in public, unless the board of examiners decides otherwise in exceptional cases.
6. The certificate includes a list of the examination components.
7. The board of examiners includes a diploma supplement as referred to in Article 7.11(4) of the Act with the certificate. This diploma supplement is based on the model adopted by UM's Executive Board, which is in compliance with the agreed European standard format.
8. The board of examiners may award the '*cum laude*' designation in accordance with the provisions in the Rules and Regulations.
9. A student who has passed at least one exam and who cannot be issued a certificate will upon request, receive a statement issued by the board of examiners which indicates the exam(s) which he passed.

#### **Article 6.4 Right of appeal**

Within six weeks after the decision by the examiner and the board of examiners is announced, the student may appeal this decision to UM's Complaint Service Point.

The appeal must be signed, must include a date and the name and address of the party lodging the appeal, must indicate the grounds for the appeal and, if possible, must include a copy of the decision being appealed.

### **SECTION 7 STUDY GUIDANCE**

#### **Article 7.1 Study progress administration**

The faculty records the students' individual study results and makes them available for the student through the student portal.

#### **Article 7.2 Study guidance**

The faculty will provide for the introduction and study guidance for students registered for the programme.

### **SECTION 8 TRANSITIONAL AND FINAL PROVISIONS**

#### **Article 8.1 Amendments**

1. Amendments to these regulations may be adopted in a separate decision by the faculty board, after a recommendation from the programme committee and after consent from or consultation with the faculty council.
2. An amendment in these regulations will not pertain to the current academic year, unless the interests of the students will not reasonably be harmed as a result.
3. In addition, amendments may not affect, to the students' detriment, a decision regarding a student which has been taken by the board of examiners pursuant to these regulations.

#### **Article 8.2 Notice**

The faculty board ensures that proper notice is given of these regulations, the rules and regulations adopted by the board of examiners, and any changes to these documents, by, for example, placing such notice on the faculty website and in the student portal.

#### **Article 8.3 Evaluation**

The faculty board will ensure that the education of the programme is regularly evaluated, assessing at least – for the purpose of monitoring and if necessary adapting the student workload – the amount of time students need to complete their duties as set out therein.

**Article 8.4 Unforeseen cases/safety net scheme**

1. In cases not covered or not clearly covered by these regulations, decisions are taken by or on behalf of the faculty board, after it has consulted with the board of examiners.
2. In individual cases in which application of the Education and Examination Regulations, would lead to manifestly unreasonable results, the board of examiners can deviate from the stated regulations in the student's favour.

**Article 8.5 Effective date**

This Regulation will come into force on the 1<sup>st</sup> of September 2018 and will apply to the academic year 2018/2019.

## **Appendix 1: Aim of the programme**

### Knowledge and understanding

Students have obtained basic knowledge and understanding of:

- HA1. The scope of epidemiology and health economics as scientific disciplines, its concepts, principles and methods, and the uses of epidemiological methods and techniques in various fields of application.
- HA2. Epidemiological and health economic measures of disease frequency, association and effect/impact.
- HA3. Epidemiological and other health sciences study designs, like cross-sectional study, cohort study, case-control study, case-cohort study, diagnostic study, prognostic study and intervention study (controlled trial).
- HA4. Procedures for the collection, processing and management of epidemiological and health economic data.
- HA5. Concepts of validity, bias in both quantitative and qualitative research (e.g., selection bias, information bias, confounding, dependability), effect modification and precision; tools to prevent, identify and adjust for bias (e.g., randomization, blinded measurement, stratified data analysis); and issues regarding the interpretation of biased or imprecise study results (e.g., causal reasoning, generalization, credibility, transferability).
- HA6. Principles of exposure and outcome measurement in health and medicine (clinimetrics) and quality properties of health measurement scales.
- HA7. Epidemiological and statistical methods of data analysis, like person-year analysis, life-table analysis, methods to adjust for confounding (direct and indirect standardization, stratified analysis, multivariable regression analysis techniques), survival analysis, and methods for longitudinal and multi-level data analysis.
- HA8. Principles and methods of systematic literature review and meta-analysis.
- HA9. A broad scope of health sciences research, e.g. the role of qualitative research as standalone discipline or in addition to quantitative research in studying health problems, the role of economic in addition to effectiveness perspectives in evaluating health technologies, the role of social sciences research methods in the investigation of health determinants and the implementation and evaluation of (complex) health interventions, the role of ethics and integrity in health sciences research.
- HA10. The principles and methods of trial-based and model-based cost-effectiveness (decision) analysis.
- HA11. The principles and methods of designing, conducting and analysing qualitative research.
- HA12. Normative and ethical aspects of conducting and publishing research in the health sciences.
- HA13. (Inter)national guidelines regarding conduct and reporting of research in Health Sciences.
- HA14. Elective topics and capita of health sciences research, related to the master's research project (e.g. molecular and genetic epidemiology, applied epidemiology, principles of health intervention development and implementation).

### Applying knowledge and understanding

Students are able to apply the acquired knowledge and understanding of methodological and ethical concepts to:

- HB1. The critical assessment and interpretation of epidemiological and health economic publications and presentations (research protocols, original articles, scientific reviews, health policy documents, statements in the lay press).
- HB2. Designing a sound protocol for any type of epidemiological and/or health economic study – cross-sectional, cohort, case-control, diagnostic, prognostic, intervention, clinimetric, systematic literature review – in various fields of application, including the background, selection and recruitment of study population, choice of measurement instruments, choice of statistical data analysis techniques.

- HB3. The proper conduct and implementation – under supervision - of an epidemiological and/or health economic study of limited extent, covering at least the two final phases of the empirical research cycle (data analysis, critical reporting & presentation of findings).  
Within this context the student should be able to make a data analysis plan, perform calculations and statistical analysis with epidemiological data independently, but coached and confirmed by a supervisor.
- HB4. Active participation in meetings and discussions, and issuing critical comments, reviews and assessment reports on quantitative and qualitative methodological issues.
- HB5. The critical assessment and use of additional research methods and techniques – e.g., qualitative research methods, health technology assessment / health economics methods – within the scope of the thesis.
- HB6. Advance to an increased level of awareness of the ethical consequences of human and animal research as well as to a better implementation of good clinical practice guidelines.
- HB7. Conduct and reporting of research in Health Sciences according to (inter)national guidelines on good publication practice and ethics.

#### Making judgments

Students are able to critically judge:

- HC1. The methodological quality, practical applicability and ethical justification of epidemiological and health sciences research, including specific methodological issues regarding the design, conduct and analysis of epidemiological and other research in the health sciences.
- HC2. The existing evidence for the impact and (causal) effects on health of environmental, behavioural, genetic, molecular and biological risk factors, prognostic factors and planned health interventions.
- HC3. The methodological quality and applicability of health measurement and valuation instruments.
- HC4. The appropriateness of epidemiological and health economic research output for dissemination and application within various settings, e.g., health planning, individual patient care, and health counselling.
- HC5. The potential impact of epidemiological and health economic study activities on study subjects and other persons involved, both at the individual and at the community level (e.g., obtrusiveness of measurement and treatment procedures, privacy considerations, dealing with uncertainty).
- HC6. The methodological quality and appropriateness of various qualitative research designs.
- HC7. The cost-effectiveness of health technologies as a basis for rational decision making in health care.
- HC8. Whether (epidemiologic) research is conducted according to standard practice guidelines for responsible (epidemiological) research (e.g. RERP guidelines of the Netherlands Epidemiological Society).
- HC9. Ethical dilemmas and consequences of health sciences research.
- HC10. The consequences of their own behaviour when practising academic research in the health sciences.

#### Communication

Students are able to adequately communicate and discuss:

- HD1. Methods and results of various types of epidemiological and health economic studies and the interpretation of data with researchers (epidemiologists, health economics, statisticians), experts of related disciplines (e.g., clinicians) and lay people by means of reading, writing, discussions and presentations.
- HD2. Methods and results of other types and aspects of research in the health sciences with researchers, experts from related disciplines (e.g., clinicians) and lay people by means of reading, writing, discussions and presentations.

Learning skills

Students have developed new learning skills, which enable them to:

- HE1. Identify, assess and make themselves familiar with new developments in the field of health sciences research (epidemiology, health economics and qualitative research) in an efficient and critical way.
- HE2. Reflect critically on the quality of their own and others research efforts.
- HE3. Proceed to a more advanced level of methodological knowledge of epidemiology, health technology assessment, qualitative research or other health sciences, understanding and skills, in particular the PhD level.
- HE4. Cooperate with colleagues in an interdisciplinary research team.
- HE5. Plan and develop research projects.

## **Appendix 2: The structure of the programme, including the ECTS**

In most courses also practical training is scheduled and skills are trained. These training and skills are part of the course.

### ***Health Sciences Research Master***

Year 1:

- Introduction to Epidemiology (1 ECTS)
- Intervention Research in Health Care (5 ECTS)
- Observational Research (6 ECTS)
- Advanced Statistical Analysis Techniques (6 ECTS)
- Clinimetrics: from Biomarkers to Quality of Life (5 ECTS)
- Writing a research question and outline (1 ECTS)
- General principles of HTA & Trial-based Evaluation (6 ECTS)
- Ethics of Health Care Research (6 ECTS)
- Modelling in Health Technology Assessment (6 ECTS)
- Qualitative Research (6 ECTS)
- Systematic Literature Review and Meta-analysis (6 ECTS)
- Acquiring Advanced Professional Skills (part 1) (6 ECTS)

Year 2:

- Acquiring advanced professional skills (part 2) (6 ECTS)
- 2 electives (total 12 ECTS)
- Master Research and Thesis (42 ECTS)

### **Appendix 3. Language of instruction**

For an **English only** programme:

#### **Research Master of Health Sciences**

The choice for the language of instruction of the programme is in line with the UM Code of Conduct on language in accordance with the Dutch Higher Education and Research Act (WHW) art. 7.2.

Because of the specific educational nature and profile of the Research Master of Health Sciences, teaching and examinations are conducted in English. This guarantees the quality of education, because:

- The content of the programme has an international orientation and focus. Almost all handbooks, articles and materials are in English language and the academic communication and exchange is in English. Because of the recognition as Research Master students receive additional training in academic English speaking and writing skills.
- The Dutch health sciences community is internationally oriented and the staff is international. The staff is involved in different international collaborations and projects which are often presented to the students. For example, the annual meeting of the Netherlands Epidemiological Society is in English.
- The labour market demand is internationally oriented. Alumni are expected to be able to communicate oral and written in English. Alumni of the master are employed in Germany (e.g. University Hospital Cologne), Sweden (e.g. Karolinska Institutet), Switzerland, United Kingdom, Chili, South Africa, et cetera. To receive personal grants (e.g. NWO) in the professional career, international experience is a vital prerequisite.