# Study Guide 2017-2018

Master of Science in Health Sciences (70 ECTS)
Research Master in Health Sciences (120 ECTS)
Research Master in Clinical Research (120 ECTS)
Postgraduate Programmes (70 ECTS)

## **Specialisations**

Biostatistics Clinical Epidemiology Epidemiology Genetic and Molecular Epidemiology

Health Economic Analysis Medical Psychology Public Health Epidemiology Pharmaco-Epidemiology



## Version 2 - updates August 22, 2017

Page 17, section 2.4.1: information about Teaching and Examination Regulation for iBMG courses.

Page 22, section 3a: correction in introduction, seven specialisations instead of five.

Page 23, section 3a.4: corrected the year (1 or 2) for EWP courses.

Page 25, section 4.4: corrected the year (1 or 2) for EWP courses.

Page 32, section 5.4: corrected the year (1 or 2) for EWP courses.

Annex I: overview of fall courses added (and adjusted numbering of annexes)

## **Netherlands Institute for Health Sciences**

**Study Guide 2017-2018** 

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Every effort has been made to ensure that the information contained in this study guide is accurate at the time of publication. However, the Netherlands Institute for Health Sciences reserves the right to make changes without prior notice.

## Word of welcome

Welcome to the Netherlands Institute for Health Sciences (NIHES); and in addition to the international students: welcome to the Netherlands!

We are delighted you have chosen NIHES to study for your Master in Health Sciences or Clinical Research, or for the Postgraduate programme. Over the past years hundreds of young and talented students, researchers and health professionals from around the world have preceded you. They have benefited from our challenging international research and study environment, which you are now about to experience for yourself.

At NIHES, we owe our broad, international scientific network to the collaboration between our constituent members and to the partnerships with leading universities abroad. This network gives us a faculty of highly successful experts with outstanding academic credentials. It is an honour to have leading international scientists lecture and participate in our research programmes.

This practical guide will help you find your way around. We also hope it will help you to take full advantage of connections in our network. This is what we strongly recommend you to do. Getting acquainted with the international community of health scientists, finding out about interesting research, exchanging ideas and experiences with your fellow students and faculty and, last but not least, enjoying yourself!

The entire NIHES staff sincerely wishes you a valuable and pleasant stay at the Netherlands Institute for Health Sciences.

Professor, Myriam Hunink, MD PhD Director of NIHES

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## 1. Studying at the Netherlands Institute for Health Sciences

#### 1.1 Introduction

The Netherlands Institute for Health Sciences (NIHES) is a collaboration of seven research and six affiliated research departments at Erasmus University Medical Center Rotterdam and Erasmus University Rotterdam sharing their specialised knowledge in quantitative medical and health research.

Seven research departments:

- Epidemiology;
- Public Health;
- Health Policy and Management;
- General Practice;
- Medical Informatics:
- Child and Adolescent Psychiatry/Psychology;
- Psychiatry, section of Medical Psychology and Psychotherapy;

Six affiliated departments:

- Dermatology;
- Paediatrics;
- Plastic and Reconstructive Surgery;
- Rehabilitation Surgery;
- The Cancer Epidemiology Department of the Netherlands Cancer Institute Amsterdam;
- Institute of Medical Education Research Rotterdam (iMERR).

These departments and sections offer a range of research and training programmes in six key disciplines: Epidemiology, Clinical Epidemiology, Genetic Epidemiology, Public Health Epidemiology, Pharmaco-epidemiology and Health Economic Analysis. Furthermore, NIHES closely collaborates with other Research Schools at Erasmus MC. For example, both the Cardiovascular Research School COEUR and the Research School MolMed (Molecular Medicine) contribute to the Research Master in Clinical Research.

NIHES offers Master of Science degree programmes, a Postgraduate programme and short courses. Our short courses take place each year and attract researchers and health professionals from all over the world. Because these courses are also part of our degree programmes, you will be sharing most classes with external participants. In addition, NIHES annually organizes the Erasmus Summer Programme and Erasmus Winter Programme in collaboration with Erasmus MC. Detailed information about the programmes, courses, and application and admission procedures can be found on <a href="https://www.nihes.com">www.nihes.com</a>.

## 1.2 Programmes

The following Master of Science degree programmes are offered. These have all been accredited by the Netherlands Flemish Accreditation Organisation (NVAO) and registered in the Dutch Central Register for Higher Education Programmes (CROHO).

- The one-year, full-time Master of Science programme in Health Sciences (13 months, 70 ECTS, CROHO number 75042), available in seven specialisations: Epidemiology, Clinical Epidemiology, Genetic Epidemiology, Public Health Epidemiology, Pharmaco-epidemiology, Biostatistics and Medical Psychology. This programme is open to graduates with an appropriate Master's degree, and to researchers and health professionals with relevant research or working experience.
  - The part-time executive Master of Science in Health Sciences (70 ECTS) is intended for participants who wish to customize the full-time programme to their own busy schedule, by spreading it over a longer period of time. It is geared towards professionals who have already authored scientific publications. There a different options: in the part-time two-year Summer School Programme (70 ECTS) the curriculum of the above one-year Master of Science programme in Health Sciences in the specialisations Epidemiology, Clinical Epidemiology, or Genetic Epidemiology is spread over three consecutive summers, two winters and electives. In addition, it is possible in all specialisations to design a personal programme that is tailor-made to fit your schedule.
- The two-year, full-time Research Master programme in Health Sciences (120 ECTS), available in five specialisations (Epidemiology, Clinical Epidemiology, Genetic Epidemiology, Public Health Epidemiology and Health Economic Analysis). This programme is intended for graduates with an appropriate Bachelor's degree and no prior research or work experience (CROHO number 60120).
  - Adapted Research Master programme in Health Sciences (120 ECTS) for excellent medical students at Erasmus MC. This programme (available in all specialisations) is combined with the Master in Medicine at Erasmus MC.
- The two-year, full-time Research Master Programme Clinical Research (120 ECTS). This programme is intended for graduates with an appropriate Bachelor's degree and no prior research or work experience (CROHO number 60312).
  - Adapted Research Master programme Clinical Research (120 ECTS) for excellent medical students at Erasmus MC. This programme is combined with the Master in Medicine at Erasmus MC.

The one-year, full-time Postgraduate programme (70 ECTS) (former DSc programme) is especially suited if you wish to acquire more research experience or increase your chances of qualifying for a PhD research project after your Master's. The programme is offered in four key disciplines of NIHES: Epidemiology, Clinical Epidemiology, Genetic Epidemiology, and Public Health Epidemiology, and leads to a Postgraduate Certificate in one of the key disciplines.

## 1.3 How to use the Study Guide

This study guide informs current Master students (Master of Science and Research Master) and Postgraduate students about the general rules of NIHES and gives them detailed information about the Master degree programmes and the Postgraduate Programme.

Chapter 2 provides general information applicable to all programmes. Programme-specific information can be found in chapters 3 to 6:

- 3 Master of Science in Health Sciences (MSc HS) (70 ECTS) 3a. Executive Programme (MSc HS) (70 ECTS)
- 4 Research Master in Health Sciences (RM HS) (120 ECTS)4a. RM HS for excellent medical students at Erasmus MC (120 ECTS)
- Research Master in Clinical Research (RM CR) (120 ECTS)
   RM CR for excellent medical students at Erasmus MC (120 ECTS)
- 6. Postgraduate Programme (70 ECTS) (former DSc programme)

You can check your degree programme in Osiris. For information about Osiris see section 2.1.1.

Note that variations to the programmes are explained in the respective parts of chapters 3, 4 and 5. Also note that the rules and regulations for these variant programmes may differ from the general rules.

Chapters 7 and 8 provide information about the graduation and the aftermath of graduation.

In the annexes, you will find contact information of the NIHES organisation, maps showing how to get to Erasmus MC and how to move around within the Erasmus MC, as well as detailed descriptions of the courses offered by NIHES.

## 2. General Information

This chapter gives general information about the information systems, courses, research, and examination procedures and rules. Go to one of the chapters 3 to 6 to find specific information about your programme.

## 2.1 Information systems and communication

#### 2.1.1 Osiris

Osiris is a student information system used by most faculties of Erasmus University Rotterdam. You will receive a login code for the Osiris environment.

The Osiris system is used for the following purposes:

- Application procedure via Studielink and thus Osiris for Research Master students;
- Administration of students' programmes and progress (courses, research etc.);
- Administration of planned courses;
- Registration of exam results;
- General communication from NIHES to you;
- Application for elective courses.

Both you as a student as well as the NIHES administration and the programme management can access Osiris. Among other things, you can:

- check your degree programme and your related exam programme;
- get an overview of the courses in your programme;
- check your progress in your exam programme;
- check your exam results;
- see how many ECTS points are still open for electives.

All exam programmes are given in the programme-specific information section of chapters 3 to 6 of this guide. NIHES course codes in Osiris are preceded by MCER, e.g.: MCER.ESP01 for Principles of Research in Medicine and Epidemiology (ESP01) or MCER.CE02-2017-for Clinical Epidemiology (CE02).

#### 2.1.2 Communication

NIHES only communicates with you via your student email address, which contains your student number. Because of privacy, NIHES will not answer emails from other email addresses. Therefore it is important for you to keep your student email address as it is.

## 2.1.3 Canvas

You will receive a login code for the NIHES' Learning Environment, called Canvas. Apart from general information about NIHES and e.g. Teaching and Examination regulations, Canvas provides details about course locations, date and time of the lectures, time and location of examinations, reviews and resits, as well as course materials. Course information will be made available at least one week before the start of a course.

## 2.2 Course information

In this section, general information concerning the courses is described. Examination procedures and rules can be found in section  $\underline{2.4}$ .

## 2.2.1 Courses

The following categories of courses and programme components are distinguished:

- Common core: the courses and programme components which are equivalent for all specialisations within your programme;
- Required: the courses and programme components which are required for your specific specialisation;
- Electives: all courses you need to elect to tailor your programme.

#### 2.2.1.1 Common core

The common core of all Master programmes consists of the basics in study design and biostatistics. Depending on your programme the common core may contain more components. Specific information for your programme can be found in one of the chapters 3 to 5. For Postgraduate students all programmes are equal and courses are required or elective courses (see chapter 6).

#### Introduction to R module

R is a programming language and software environment for statistical computing and graphics. The R language is widely used among statisticians for data analysis and therefore part of the NIHES programmes. NIHES offers a self-

paced online module "Introduction to R" preparation. In this module you get instructions how to install and get used to R. You will be enrolled in the R online module, if you participate in:

- Clinical Epidemiology (CE02-2017);
- Biostatistical Methods II: Classical Regression Models (EP03);
- Intermediate course in R (BST02);
- Repeated Measurements (CE08);
- Bayesian Statistics (CE09).

## 2.2.1.2 Required

Each programme has various specialisations with specialisation-specific required courses (see chapters 3 to 6). The required courses for all specialisations consist of:

- Introductory courses Erasmus Summer Programme;
- Required courses in the fall term directly after your introductory Erasmus Summer Programme (ESP). In these required courses you learn the basics of your specialisation.

For some programmes and specialisations there are also required courses in the spring term.

#### Introductory courses Erasmus Summer Programme

All NIHES students start with a compulsory selection of courses offered in the three-week Erasmus Summer Programme (ESP). You will get a comprehensive, up-to-date introduction to the principles and methods of applied quantitative research in medicine and health care. The key areas are biostatistics, clinical research, epidemiology, human genetics and health services, and public health research. Your introductory programme will be based on your programme and specialisation (see chapters 3 to 6).

The Erasmus Summer Programme is open to health professionals worldwide. Over 500 participants attend each year. You and other Master and Postgraduate students will thus be sharing courses with health professionals with various backgrounds and specialisations.

#### 2.2.1.3 Electives

The elective courses are meant to tailor your programme to your interests and professional needs. For the specialisation Epidemiology, in the fall term you have to choose between CE01 & CE02, or HS02. All other electives of NIHES take place in the winter and spring terms and in your second Erasmus Summer Programme in the following month of August. The electives in the Erasmus Summer Programme may also be exchanged for more additional advanced courses in winter and spring. For the exact numbers of days and credits, check the relevant timetables for your programme in chapters 3 to 6 or in Osiris.

Registration for the elective courses takes place in October/November each year. Registration for the Erasmus Summer Programme is open in spring. You will automatically receive the final course list and necessary information about the registration procedures. Always check in the academic calendar on our website (<a href="www.nihes.com">www.nihes.com</a>) if you meet the prerequisites for the elective courses you wish to attend. If you wish to take elective courses at other schools or institutes, check the information in Canvas about electives. The information for the current academic year is published in October/November.

## 2.2.2 Course attendance

Depending on the course, attendance (or attendance at certain course days) is compulsory or not. Specific information per course will be given in Canvas. A student should register their attendance on the attendance list on all compulsory course days of their courses.

## 2.2.3 Cancelling your participation in a course

If you are unable to attend a course, please notify the NIHES programme officers at the Educational Support Center by e-mail (nihes@erasmusmc.nl) at least two weeks before the start of the course. An administration fee of \$\infty\$50 will be charged for course cancellations made less than two weeks before the start of the course.

## 2.2.4 Course exemptions

To be exempted from a course (or courses), you must send a formal written request at the latest two months before the start date of the course. Your request should include the following:

- 1. The title(s) of the course(s) you wish to be exempted from:
- 2. Per course a list of corresponding courses you already successfully passed in a previous programme, including course descriptions and literature used.

<sup>&</sup>lt;sup>1</sup> Please note that graduation is possible only when all invoices have been paid.

Please send your request to the Examination Board, (email: <a href="mailto:examinationboard@erasmusmc.nl">examinationboard@erasmusmc.nl</a>) mentioning your student number. Please note that all information should be in English! If needed the Examination Board will ask for our advice

#### 2.2.5 Course evaluations

Because we consider evaluation an important part of education, the evaluations in our programme are compulsory. For the fall and spring courses or other components in your programme you will receive an email from Evasys (the evaluation system) with a link to the digital evaluation form, which you are required to complete. Further information will be given in Canvas and in the email. Your input is very valuable and helps us to consistently improve our courses.

At the start of each year a student panel with student representatives from all programmes and specialisations is set up to evaluate the programme in general. All students receive an invitation to apply in the fall. Next to the student panel there is the Education Board of the five Research Masters of Erasmus MC. You can read more about the student panel and Education Board Research Masters in the General Information in Canvas.

#### 2.2.6 Recommended and additional books

With a few exceptions, all course materials are included in the NIHES tuition fee and will be made available in Canvas. Below are the exceptions, books which are not compulsory but nevertheless are recommended or additional for first semester courses:

#### Recommended for all courses:

- Collins Cobuild English Dictionary for Advanced Learners, The University of Birmingham, Collins Cobuild. (ISBN 10: 0003751155 / ISBN 13: 9780003751154).

Additional reading for Biostatistical Methods I: Basic Principles (CC02):

- For a general overview: "Medical statistics at a glance, A. Petrie and C. Sabin", text and workbook (ISBN 10: 111850335X and ISBN 13: 9781118503355)
- For more in-depth background information: "Statistical Methods in Medical Research, P. Armitage, 4th edition (ISBN 10: 0632052570 / ISBN 13: 9780632052578)" or "An Introduction to Medical Statistics, Martin Bland, 3rd edition (ISBN 10: 0192632698 / ISBN 13: 9780192632692)".

For Clinical Epidemiology (CE02) we strongly recommend you to buy (ordering may take some time):

- Decision Making in Health and Medicine. M. Hunink and others. 2nd Revised edition. ISBN 13: 9781107690479

#### 2.2.7 Computer software

Students at Erasmus University Rotterdam and Erasmus MC, can buy software such as SPSS and SAS at a discount, via <a href="https://www.surfspot.nl">www.surfspot.nl</a>.

For students of Erasmus University Rotterdam:

- At log-in, select "Erasmus Universiteit Rotterdam" under "Hogeschool & Universiteit instelling";
- Click on "inloggen";
- Use your Erna ID and Password to log in.

For students with a micro section number of Erasmus MC:

- At log-in, select "Erasmus MC" under "Hogeschool & Universiteit instelling";
- Click on "inloggen";
- Under "Gebruikersnaam" fill in your microsection number. Under "Wachtwoord" fill in your password for your Erasmus MC login.

## 2.3 Research

The NIHES programmes are characterized by a strong emphasis on research projects. NIHES covers a broad and varied range of research, from major neurological and cardiovascular diseases to the endocrine determinants of diseases; from paediatric studies to end-of-life decisions in medical practice; and from the social determinants of health and disease to the side effects of drugs. Below you find the general rules that apply to the research projects; go to chapters 3 to 6 to find specific information for your programme. Section 2.4 describes how your research project is assessed.

## 2.3.1 Choosing your research subject

The following is applicable for Master in Health Sciences students and Postgraduate students: in October or November you will be assigned a personal tutor after having discussed your research interests with a programme coordinator or programme director.

To prepare for this, we strongly recommend you to take a look at the Research Themes brochure available on the NIHES website.

Please note for all Master students: you can only start your research project after you successfully attended all compulsory courses of the first semester. Exempted from this rule are NIHES PhD candidates and executive programme students.

#### 2.3.2 Personal tutor

You will work on your research project under the guidance and supervision of the personal tutor assigned to you (see 2.3.1 above). All tutors are senior staff members at one of NIHES' participating institutes. Each tutor has considerable experience (at least at PhD level) in one or more specific research subjects. You will also work with a junior tutor, with whom you will have contact more frequently and who will supervise you more directly on your research project.

On the basis of your research ambitions, the programme coordinator together with the programme director will recommend a field of research and a tutor. The intended tutor will receive your resume. From that point on, it is up to your tutor and you to arrange further collaboration, and to inform the programme coordinator of what you have agreed on.

The primary tasks of the tutor are:

- to support and supervise the student during the research phase;
- to keep track of the content of the student's training programme;
- to meet the student at least once every two weeks for at least one hour;
- to arrange for the student: a desk and computer, usually at the tutor's own institute or department;
- to arrange that his or her student receives all the necessary computer software, i.e. in addition to the standard software available (see below);
- to monitor and report on the student's progress and results in research (the tutor also receives input from NIHES on the progress of the student at the start of the 2<sup>nd</sup> semester);
- to give feedback on the research proposal and assess the discussion research proposal;
- to assess the midterm presentation;
- to assess the student's research project;
- to confirm that the student has presented his/her research paper at the department in question;
- to assess the student's research paper;
- to sign the research proposal and paper;
- to fill in the research assessment form and assign a grade to the research project.

#### Furthermore, the tutor:

- may share tasks with other tutors, with the proviso that, as first tutor, he or she at all times retains full responsibility;
- should inform NIHES (<u>nihes@erasmusmc.nl</u>) instantly in case of any changes in contact details, e.g. institutional and e-mail addresses;
- should inform NIHES in case of problems with the student's progress;
- should confirm his or her presence or the presence of a representative at the graduation ceremony;
- should prepare a student address for the graduation ceremony.

### 2.3.3 Practical research

As soon as you and your tutor have decided on the topic to pursue, you will start working on your research project. You will be asked to formulate a research question, write a research proposal and design a study. As full-time Master student, you continue your research project directly after approval of the research proposal. You will write a research paper under your tutor's guidance, in the format of a draft version of a scientific publication. It may be possible for you to collect and analyse data yourself, but in most cases you will carry out your project using existing data. You will work closely together with the research group at your tutor's institute/department, and have full access to the computer facilities for data management and analysis. You will regularly meet with your tutor, especially in the beginning.

Make sure at the beginning of your research period that your project and paper can be assessed on the criteria mentioned in section 2.3.7.

The following sub-sections provide more details about the requirements for your research project and are all assessments that are part of your research project.

## 2.3.4 Your research proposal<sup>1</sup>

All first-year Master students have to write a research proposal in collaboration with the tutor. Your tutor will provide feedback on your research proposal. After you adjusted your proposal, you will present it to your tutor and a

<sup>&</sup>lt;sup>1</sup> Postgraduate students are not required to hand in a research proposal. Part-time Master of Science students have to hand in their proposal at the latest in January before their planned graduation.

representative of your research group. The adjusted research proposal must be handed in as digital copy, signed for approval by your tutor.

Deadline for signed copy research proposal: Tuesday 30 January 2018.

The research proposal should comprise of a maximum of 4 pages (A4, single-spaced text) and contain the following information:

- Objectives;
- Project group;
- Study design;
- Data-collection procedure;
- Data-analysis procedure;
- Time schedule.

Further details will be given in Osiris Case in the beginning of December.

#### 2.3.5 Midterm presentation of your research

All students who started in 2016 or later have to give a midterm presentation when they are about halfway with their research project. Further information will be provided in Canvas.

For students who started before 2016 this is not part of the assessments for their research project.

## 2.3.5 End presentation of your research<sup>1</sup>

All Master students are required to present the findings of the research project to the tutor's research group. Tutor's confirmation that the presentation took place will be done by him/her in Osiris Case.

When presenting your research findings you always need to mention:

- 1. The name of the institute where the research was carried out;
- 2. The Netherlands Institute for Health Sciences (NIHES) and Erasmus MC:
- 3. If applicable, the name of the student's home institute.

#### 2.3.6 Research paper

The research project has to culminate in a draft version of a research paper, or more than one paper, including all required elements for publication in an international English-language scientific journal with an impact factor and a good reputation in its field. You will be listed as the sole author of this/these paper(s), with acknowledgement of your tutor.

When preparing your paper, please adhere to the guidelines in the so-called AMA Manual of Style published by the American Medical Association.

For Research Master in Health Sciences students (RM HS, 120 ECTS): submit your research paper digitally in Osiris Case **before July 2, 2018**.

RM Health Sciences students who started in 2016 or later will have to defend their research project and paper in July 2018. Further details will follow in Osiris Case. You defence has to take place **before July 23, 2018**.

For Master of Science in Health Sciences (MSc HS, 70 ECTS) - and Postgraduate students: submit your research paper (Master students) or 2 research papers (Postgraduate students) digitally in Osiris Case **before July 23, 2018**.

For RM Clinical Research students: submit your research paper digitally in Canvas at least 10 days before your defence. Specific information on the defence and procedure will be published in Canvas.

For all students:

- In the event of problems during the research phase, student and tutor should both report to the programme coordinator immediately. CR students should also report to their advisor.

#### 2.3.7 Research Assessment by the tutor

This section contains information and instructions for tutors and 2<sup>nd</sup> assessors.

All tutors will assess their students on the basis of commitment and motivation, and on the knowledge and creativity they have demonstrated during the research period.

Thus, the students research project will be assessed by their tutor on:

<sup>&</sup>lt;sup>1</sup> Postgraduate students do not need to present their research project

- effort:
- motivation;
- extent of knowledge;
- creativity;
- self-guidance or level of independence.

The students research paper will be assessed by both their tutor and a 2<sup>nd</sup> assessor on:

- abstract;
- grasp of literature;
- problem statement/research question;
- analysis;
- methods:
- presentation of results;
- interpretation /discussion.

#### Assessment will take place:

- in Osiris Case done by both tutor and 2<sup>nd</sup> assessor;
- for RM Health Sciences students (start 2016 and later), during their defence, done by both tutor and 2<sup>nd</sup> assessor.
- for RM Clinical Research students, during their defence, see section <u>5.3.9</u>.

During the defence of the RM student's research paper will be assessed by their tutor and the  $2^{nd}$  assessor on the criteria for research paper stated above.

The deadlines for the tutor and the 2<sup>nd</sup> assessor sending in the assessment in Osiris Case are:

- For Research Master in Health Sciences students who can and want to graduate in August 2018,: before July 9, 2018;
- For Master in Health Sciences students and Postgraduate students who can and want to graduate in August 2018,: **before July 30, 2018**;
- For RM Clinical Research, digitally in Canvas; at least 10 days before the defence.

The defence of RM Health Sciences students who started in 2016 or later has to take place **before July 23**, **2018**. Further details will be available due time in Osiris Case.

The final grade for your research period is based on the assessments of your research paper and project and the final check and approval of the science director. For more information check the Teaching and Examination Regulations.

## 2.3.8 Research Seminars for Research Master students

Throughout the programme research seminars will be organized. All RM students must attend at least 12 seminars per year, thus 24 in total. A seminar should at least take one hour. Visiting conference meetings instead is also allowed and counts for one seminar per conference day, also if it takes more than one hour. On each occasion the student should collect proof of attendance, either from the organizers or from the lecturer in question. Research seminars are organized by the research departments, you can ask your tutor for more information about seminars at his/her department. RM students Health Sciences must register attended seminars in a seminar notebook; RM students Clinical Research in the Personal Education Plan (PEP, see <a href="chapter 5">chapter 5</a>). Both can be downloaded from Canvas. The completed PEP or seminar notebook should be handed in at the NIHES administrative office or via Canvas at least 5 weeks before the planned graduation.

## 2.3.9 Shared responsibility

If you have any questions or if you are experiencing problems, please contact your tutor and the programme coordinator. RM CR students should contact the tutor and advisor in first instance. If necessary, the programme coordinator will consult with the programme director.

Only your programme coordinator, in consultation with the programme director, is authorized to decide on deviations from the rule that a student may start the research project only when all compulsory courses have been attended (see paragraph <u>2.4.3</u>).

PLEASE NOTE: For students with a temporary Dutch residence permit the following rule applies: Dutch education institutes are obliged to inform the Netherlands Immigration and Naturalization Service (IND) about the study progress of international students with a Dutch residence permit for study purposes. Insufficient study results (<50%) may lead to the withdrawal of a student's residence permit. To comply with this rule, a NIHES programme coordinator

will ask all tutors of international students half way through the programme about the students' progress in their research.

## 2.4 Examinations, procedures and rules

In this section general examination information is given as well as a summary of the procedures.

Most courses have an examination: usually a written examination and/or assignment(s) and/or presentations. To pass an examination, you have to score a "pass" (marked as 'a/p' on your grades list), or obtain the grade 6.0 or higher. For an overview of the courses and examinations, check the relevant information in Canvas. If a student does not meet the attendance requirement for a course (see 2.2.2), the course will not count towards the degree, even if the student passes the examination. Redoing the course or taking a substitute course may have financial consequences for you.

For courses without an examination, i.e. most courses in the Erasmus Summer Programme<sup>1</sup>, a 'pass' grade is required (marked as 'a/p' on your grades list), which can be obtained only if you have attended the full course. If you did not fulfil the course attendance the course and it was a compulsory course, you need to re-attend/redo this specific course, e.g. in the upcoming year or do a substituting assignment. If the course concerned was an elective course, you need to get the course credits by either redoing the course or do a substituting assignment, or by choosing another elective course. Redoing the course or taking a substitute course may have financial consequences for you.

### 2.4.1 Examination policy

The examination policy is laid down in the following documents:

- Teaching and Examination Regulation (TER) Research Masters Erasmus MC for the Research Masters Health Sciences and Clinical Research;
- Teaching and Examination Regulation (TER) MSc in Health Sciences (70 ECTS) for the MSc in Health Sciences. These rules also apply to the Postgraduate programme.

You can find both documents in the General Information of NIHES pages on Canvas. The most important rules are stated in <u>2.4.2</u>, but we advise you to read the Teaching and Examination Regulations related to your programme. Details on the Examination Board can also be found in Canvas.

For courses done at iBMG (instituut voor Beleid & Management Gezondheidszorg) by students Health Economic Analysis, the Teaching and Examination Regulation of iBMG applies.

Among others the following information concerning requests for the Examination Board (<a href="mailto:examinationboard@erasmusmc.nl">examinationboard@erasmusmc.nl</a>, mention your student number in communications) can be found in the TER and in General Information in Canvas:

- exemption from a course;
- request to count an elective at another institute or university as an elective in your NIHES programme;
- application for extra facilities when taking exams (because of e.g. handicaps or dyslexia);
- requests for a 4<sup>th</sup> attempt to do an exam;
- extension of validity of your exam results.

In addition, you can lodge a formal complaint with the Examination Board (e.g. regarding exam procedures). However, as stated before, we advise you to read the Teaching and Examination Regulations related to your programme.

## 2.4.2 Examinations and resits

Please note the following rules and procedures regarding examinations and resits:

- A student participating in a course is automatically registered for the first examination at the end of the course. If a student cannot participate, he or she needs to inform NIHES about his or her absence in advance. Without a motivated request to NIHES in advance which is approved by one of the programme officers of NIHES, a failing grade will be registered as the result for the missed exam:
- A student needs to be present 15 minutes prior to the exam to register;
- A student's result for an exam is published within 22 working days after the date of the exam;
- Reviews are scheduled approximately 1 to 3 weeks after the exam results have been published;
- Requests for re-evaluation of a student's exam can only be submitted during the review of the exam concerned;
- A student needs to register for every resit by registering via Osiris;
- A student can resit an examination twice. For most courses a resit is scheduled in advance (see Canvas for details):
- A second resit in the same course year is offered only to those students who may be able to graduate in the upcoming month of August and have taken the first exam and resit (or whose absence was approved);

<sup>&</sup>lt;sup>1</sup> For the following ESP courses you will need to take a written examination: the statistics courses in the Executive Programme: Introduction to Biostatistics (ESP03); Regression Analysis (ESP09).

- The result for a second resit (which is the third opportunity to take the exam) is an attended/pass or fail.

## 2.4.3 Additional students' rights and duties

#### Each student:

- may start his or her research project only when all compulsory first semester courses have been attended. (This rule does not apply to part time students or executive students);
- is expected to show maximum application and commitment;
- must guarantee strict confidentiality with regard to information obtained during the research phase (research data, draft articles, etc.);
- will decide in consultation with the tutor on the journal to which the article will be submitted;
- is allowed to present his or her research findings at a congress or other event only after careful consultation with his or her tutor (Please note that participation fees and other related expenses cannot be recovered from NIHES);
- should inform NIHES instantly of any changes in contact details, e.g. home or e-mail addresses;
- should inform NIHES in case of problems affecting study progress.

## 3 Master of Science in Health Sciences (70 ECTS)

The Master of Science programme in Health Sciences (70 ECTS) is offered in two learning modes: a one-year full-time variant <sup>1</sup>, and the executive programme variant (70 ECTS). <u>Chapter 3a</u> gives specific information on the executive Programme.

The one-year full-time programme has the following specialisations:

- Epidemiology;
- Clinical Epidemiology;
- Genetic Epidemiology;
- Public Health Epidemiology;
- Pharmaco-epidemiology;
- Biostatistics:
- Medical Psychology.

## 3.1 Aims of the programme

This MSc programme aims at training students who are well educated in research methodology. Upon graduation you will be able to successfully pursue a scientific career. The programme provides you with a solid theoretical, methodological and statistical basis for designing and implementing a research project and will teach you how to best publish the results of your research project. The programme complies with the requirements at an (inter)national master's level through the choice of lecturers. In the course of the programme you will acquire the following competencies:

- Ability to formulate a relevant problem and translate it into a scientific question;
- Ability to perform an extensive study of the literature concerning a problem;
- Ability to translate a scientific question into a research protocol;
- Acquisition of sufficient knowledge of existing methods of scientific research, biostatistical analytical methods, laws, regulations and ethics, and the abilities to use such knowledge in a research protocol;
- Ability to conduct the research, to collect and analyse data, and to draw conclusions. Ability to write a Master's thesis, including the objective(s) of the investigation, a summary of the literature, materials, methods, results, discussion and conclusions of the research project, and to present these findings at scientific meetings. Publication of the research findings in an international peer-reviewed journal is encouraged.
- The ability to assess and be critical on research.

## 3.2 Specific course information

All information in section 2.2 is applicable to MSc students in Health Sciences. The MSc in Health Sciences students additionally need to attend and pass the Introduction to Medical Writing course (see below).

## 3.2.1 Introduction to Medical Writing (MCER.SC02-2015)

This course is compulsory for all MSc students. The course focuses on the writing of correct and readable scientific articles in English. Erasmus MC PhD students who have successfully completed the Erasmus MC course on Biomedical English writing and Communication can apply for an exemption from MCER.SC02-2015.

## 3.3 Specific Research information

All information concerning the research project in section 2.3 is applicable to MSc students in Health Sciences.

<sup>&</sup>lt;sup>1</sup> The full-time variant can be spread out over more than one year, to be agreed with your programme coordinator

# 3.4 Programme overview MSc HS (70 ECTS)

Exam programme in Osiris is NIHES-MHS2017. For dates and overview fall courses, check annex I.

LXaiii progra	mme in Osiris is NIHES-MHS2017. For dates and overview fall courses, che	<u> </u>				<u> </u>	·	
	Master of Science in Health Sciences (70	DECIS) -	start 20	017				
Calendar	Programme			ECTS* s	specialisat	tion		
	COMMON CORE	EP	CE	GE	PH	PE	Bstat	MP
Aug 2017	MCER.ESP01: Principles of Research in Medicine and Epidemiology	0,7	0,7	0,7	0,7	0,7	0,7	0,7
Sep 2017	MCER.CC01-2017: Study Design	4,3	4,3	4,3	4,3	4,3	4,3	4,3
Sep-Oct 2017	MCER.CC02: Biostatistical Methods I: Basic Principles	5,7	5,7	5,7	5,7	5,7	5,7	5,7
Nov-Dec 2017	MCER.EP03: Biostatistical Methods II: Classical Regression Models	4,3	4,3	4,3	4,3	4,3	4,3	4,3
Jan-Jul 2018	MCER.M-RES-2017: Research	34,0	34,0	34,0	34,0	34,0	34,0	34,0
May-Jun 2018	MCER.SC02-2015: Introduction to Medical Writing	2,0	2,0	2,0	2,0	2,0	2,0	2,0
	Common core TOTAL	51,0	51,0	51,0	51,0	51,0	51,0	51,0
	REQUIRED							
Aug 2017	MCER.ESP11: Methods of Public Health Research	0,7	0,7		0,7			0,7
Aug 2017	MCER.ESP14: Clinical Trials		0,7				0,7	
Aug 2017	MCER.ESP21: Pharmaco-epidemiology					0,7		0,7
Aug 2017	MCER.ESP25: Health Economics		0,7			0,7		
Aug 2017	MCER.ESP40: Case-control Studies					0,7		
Aug 2017	MCER.ESP41: Introduction to Global Public Health	0,7			0,7			
Aug 2017	MCER.ESP42: Methods of Health Services Research				0,7			
Aug 2017	MCER.ESP43: Principles of Genetic Epidemiology			0,7				
Aug 2017	MCER.ESP45: Primary and Secondary Prevention Research	0,7			0,7			0,7
Aug 2017	MCER.ESP57: Genomics in Molecular Medicine			1,4				
Aug 2017	MCER.ESP61: Social Epidemiology	0,7			0,7			0,7
Aug 2017	MCER.ESP63: Advances in Genomics Research			0,4				
Aug 2017	MCER.ESP65: The Practice of Epidemiologic Analysis		0,7			0,7		
Aug 2017	MCER.ESP70: Fundamentals of Medical Decision Making	0,7	0,7			0,7		0,7
Aug 2017	MCER.ESP74: Genome-wide Association Studies			0,7				
Aug 2017	MCER.ESP75: Human Epigenomics			0,7				
Aug 2017	MCER.BST01: Review of Mathematics and Introduction to Statistics						1,4	
Oct 2017	MCER.CE01: Clinical Translation of Epidemiology		2,0				2,0	
Oct-Nov 2017	MCER.CE02-2017: Clinical Epidemiology		3,7				3,7	
Oct 2017	MCER.GE14: Linux for Scientists			0,6				
Oct-Nov 2017	MCER.GE02-2017: Genetic and Molecular Analysis			5,1				
Oct-Nov 2017	MCER.HS02: Public Health Research: part a, b and c				5,7			
Oct-Dec 2017	MCER.EU2P-D4M1: Principles of Identifying and Recognizing Adverse Events and Safety Signals					3,0		
Oct-Dec 2017	MCER.EU2P-D5M1: Introduction to Benefit-Risk Assessment and Pharmacoeconomics Communication in Decision Making					3,0		

Nov 2017	MCER.HS03a-2016: International Comparison of Health Care Systems				1,4			
Nov 2017	MCER.MP02: Qualitative Research							1,4
Winter 2018	MCER.EP01: Principles in Causal Inference	1,4	1,4				1,4	
Winter 2018	MCER.GE03: Advances in Genome Wide Association Studies			1,4				
Winter 2018	MCER.GE05: Family Based Genetic Analysis			1,4				
Winter 2018	MCER.EWP03: Pharmaco-epidemiology and Drug Safety					1,9		
Winter 2018	MCER.BST02: Intermediate Course in R						1,4	
Winter-spring 2018	MCER.EU2P-D4M2: Substantiation and Quantification of Risks					6,0		
Winter-spring 2018	MCER.MP03-2016: Psychopharmacology							1,4
Spring 2018	MCER.GE13: An introduction to the Analysis of Next-generation Sequencing Data			1,4				
Spring 2018	MCER.PU03: Site Visit to the Municipal Health Center				0,3			
Spring 2018	MCER.PU04: Integration Module				0,3			
Spring 2018	MCER.CE08: Repeated Measurements						1,4	
Spring 2018	MCER.CE09-2016: Bayesian Statistics						1,4	
Spring 2018	MCER.EP16-2017: Missing Values in Clinical Research						1,4	
Spring 2018	MCER.MP05: Preventing Failed Intervention Research							1,4
Spring 2018	MCER.HS11: Quality of Life Measurement							0,9
Aug 2018	MCER.ESP38: Conceptual Foundation of Epidemiologic Study Design	0,7						
Aug 2018	MCER.ESP48-2017: Causal Inference	1,4						
Aug 2018	MCER.ESP69: Causal Mediation Analysis	0,7						
	Required TOTAL	7,7	10,6	15,2	11,2	17,4	14,8	14,3
	ELECTIVES							
Oct 2017	MCER.CE01: Clinical Translation of Epidemiology AND							
Oct-Nov 2017	MCER.CE02-2017: Clinical Epidemiology	5,7						
	OR	3,7						
Oct-Nov 2017	MCER.HS02: Public Health Research: part a, b and c							
Winter & spring2018	Advanced elective courses	4,2	4,2		3,6	1,6		0,5
Aug 2018	Elective ESP courses (can be exchanged for winter/spring electives)	1,4	4,2	3,8	4,2		4,2	4,2
	Highly recommended courses and electives:							
Sep 2017	Eu2P Freshers' Week (Introductory lectures)					0,0		
Winter 2018	MCER.EWP02-2016: Advanced Topics in Decision Making in Medicine		2,4					
Apr-Jun 2017	EU2P-D4M3: Identifying Susceptibility for Adverse Drug Reactions					3,0		
	Electives TOTAL	11,3	8,4	3,8	7,8	1,6	4,2	4,7
	Total ECTS	70,0	70,0	70,0	70,0	70,0	70,0	70,0

\* 1.4 ECTS = 1 week

## 3a Executive programme, MSc in Health Sciences

The executive programme is a part-time variant of the MSc in Health Sciences of 70 ECTS. There are different options (see section  $\underline{1.2}$ ): a Summer School programme (programmes specified in this section  $\underline{3a.4}$  and a tailor-made programme.

The Summer School programme has the following specialisations:

- Epidemiology;
- Clinical Epidemiology, and;
- Genetic Epidemiology.

The tailor-made programme is available in all seven specialisations and is designed in consultation with a programme coordinator to fit your personal schedule.

## 3a.1 Aims of the programme

The aims are the same as for the one-year full-time MSc programme in Health Sciences (see section 3.1).

## 3a.2 Specific course information

All information in sections 2.2 and 3.2 is applicable to Executive programme students.

In the Summer School programme, some courses of the MSc in Health Sciences in fall are replaced by other courses in the Erasmus Summer Programme and winter and spring courses. For detailed information see sections 3a.4. Your courses on statistics are scheduled in the Erasmus Summer Programme and in the winter. These courses have a written examination.

- Introduction to Biostatistics (ESP03);
- Regression Analysis (ESP09);
- Survival Analysis (EWP24).

## 3a.3 Specific research information

All stipulations in sections 2.3 apply to Executive programme students. Executive programme students are allowed to start their research, even if not yet compulsory courses were taken. You will be able to perform your research project in your own institute or university. You will be assigned to a tutor within Erasmus MC, who will guide you during your research project, together with the supervisor at your home institution or university.

## 3a.4 Programme overview Executive Programme (MSc HS, 70 ECTS)

Exam programme in Osiris is NIHES-MHS-SSP2017.For dates and overview fall courses, check annex I.

Calendar	Programme	ECTS* specialisation									
	COMMON CORE	EP	CE	G							
Aug 2017	MCER.ESP01: Principles of Research in Medicine and Epidemiology	0,7	0,7	0,							
Aug-Sep 2017	MCER.CC01-2017: Study Design	4,3	4,3	4,							
Aug 2018	MCER.ESP03: Introduction to Data-analysis	1,0	1,0	1,							
Aug 2018	MCER.ESP09: Regression Analysis	1,9	1,9	1,							
Aug 2018	MCER.ESP15: Topic in Meta-analysis	0,7	0,7	0,							
Winter 2019	MCER.EWP24: Survival Analysis	1,9	1,9	1,							
Sep 2017- Jul 2019	MCER.SUSC-RES-2017: research	36,4	36,4	36,							
Jul 2017	Common core TOTAL	46,9	46,9	46,							
	REQUIRED		,								
Aug 2017	MCER.ESP11: Methods of Public Health Research	0,7	0,7								
Aug 2017 Aug 2017	MCER.ESP14: Clinical Trials	0,7	0,7								
Aug 2017 Aug 2017	MCER.ESP25: Health Economics	+ +	0,7								
Aug 2017 Aug 2017	MCER.ESP41: Introduction to Global Public Health	0,7	0,7								
Aug 2017 Aug 2017	MCER.ESP43: Principles of Genetic Epidemiology	0,7		0,							
Aug 2017 Aug 2017	MCER.ESP45: Primary and Secondary Prevention Research	0,7									
	MCER.ESP57: Genomics in Molecular Medicine	0,7		1							
Aug 2017 Aug 2017	MCER.ESP61: Social Epidemiology	0,7		1,							
Aug 2017 Aug 2017	MCER.ESP63: Advances in Genomics Research	0,7		0,							
Aug 2017 Aug 2017			0,7	0,							
	MCER.ESP65: The Practice of Epidemiologic Analysis	0.7									
Aug 2017	MCER.ESP70: Fundamentals of Medical Decision Making	0,7	0,7								
Aug 2017	MCER.ESP74: Genome-wide Association Studies			0,							
Aug 2017	MCER.ESP75: Human Epigenomics	2.4	2.4	0,							
Winter 2018	MCER.EWP02-2016: Advanced Topics in Decision Making in Medicine	2,4	2,4								
Winter 2018	MCER.EWP05-2016: Diagnostic Research - TO BE REPLACED	1,4	1,4								
Winter 2018	MCER.EWP10: Advanced Topics in Clinical Trials	1,9	1,9								
Winter 2018	MCER.GE03: Advances in Genome Wide Association Studies	++		1,							
Oct 2018	MCER.GE14: Linux for Scientists			0,							
Oct-Nov 2018	MCER.GE02-2017: Genetic and Molecular Epidemiology	+		5,							
Nov 2018	MCER.GEO8: SNPs and Human Diseases			1,							
Winter 2019	MCER.EWP03: Pharmaco-epidemiology and Drug Safety	1,9									
Winter 2019	MCER.EWP13: Advanced Analysis of Prognosis Studies	0,9	0,9								
Winter 2019	MCER.EWP25-2011: Principles of Epidemiologic Data-analysis	0,7									
Spring 2019	MCER.CE08: Repeated Measurements		1,4								
Aug 2019	MCER.ESP38: Conceptual Foundation of Epidemiologic Study Design	0,7									
Aug 2019	MCER.ESP48-2017: Causal Inference	1,4									
Aug 2019	MCER.ESP69: Causal Mediation Analysis	0,7									
	Required TOTAL	15,5	11,5	12,							
	ELECTIVES										
Winter 2018	MCER.GE05: Family Based Genetic Analysis	4		_							
	or	4		1,							
Spring 2018	MCER.GE13: An introduction to the Analysis of Next-generation Sequencing Data										
Winter & spring 2018 and 2019	Advanced elective courses	6,2	7,4	5,							
Aug 2018	Elective ESP courses (can be exchanged for winter/spring electives)	1,4	4,2	4,							
	Highly recommended electives										
Winter 2018	MCER.EWP25-2011: Principles of Epidemiologic Data-analysis		0,7								
	Electives TOTAL	7,6	11,6	10,							
	Total ECTS	70,0	70,0	70,							
Specialization	ns: EP = Epidemiology, CE = Clinical Epidemiology, GE = Genetic and Molecular										

## 4. Research Master in Health Sciences (120 ECTS)

The RM in Health Sciences (120 ECTS) is offered in two learning modes: a two-year fulltime variant, and a variant for excellent medical students. Chapter 4a gives specific information on the variant for excellent medical students. The two-year year fulltime programme has the following specialisations:

- Epidemiology;
- Clinical Epidemiology;
- Genetic Epidemiology;
- Public Health Epidemiology;
- Health Economic Analysis.

## 4.1 Aims of the programme

The RM programme in Health Sciences aims to provide students with a thorough understanding of methods in clinical research and sufficient knowledge of clinical specialist areas, for example medical technology, immunology or molecular biology. On the basis of this knowledge, the student will be prepared to write a research protocol and to perform research. Students should acquire the following competencies:

- Ability to formulate a clinical problem and translate it into a scientific question;
- Ability to perform an extensive study of the literature concerning a problem;
- Ability to translate a scientific question into a research protocol;
- Acquisition of sufficient knowledge of existing methods of clinical scientific research, biostatistical analytical methods, laws, regulations and ethics and the abilities to use such knowledge in a research protocol;
- Ability to conduct the research, collect and analyse data, and draw conclusions;
- Ability to write a Master's thesis, including the objective(s) of the investigation, a summary of the literature, materials, methods, results, discussion and conclusions of the research project and to present these findings at scientific meetings. Publication of the research findings in an international peer-reviewed journal is encouraged;
- The ability to assess and be critical on research.

This skills set will enable students to become researchers with the ability to complete a PhD programme.

## 4.2 Specific course information

All information in section 2.2 is applicable to RM in Health Sciences students. Additionally they are required to attend and pass the Scientific Writing in English for Publication course (see below).

For courses done at iBMG (instituut voor Beleid & Management Gezondheidszorg) by students Health Economic Analysis, the Teaching and Examination Regulation of iBMG applies.

#### 4.2.1 Scientific Writing in English for Publication (SC07)

This course is compulsory for all 2<sup>nd</sup> year RM students. It consists of four separate days in November, December and January and focuses on the writing of correct and readable scientific articles in English.

## 4.3 Specific research information

All information in section 2.3 is applicable to RM in Health Sciences students.

## 4.4 Programme overview RM HS (120 ECTS)

Exam programme in Osiris is NIHES-RMHS2017. For dates and overview fall courses, check annex I.

	Research Master in Health Sciences (120	ECTS) - sta	art 201	7			
Calendar	Programme		E	CTS* spec			
	COMMON CORE	EP	CE	GE	PH	HEA	Medicals
Aug 2017	MCER.ESP01: Principles of Research in Medicine and Epidemiology	0,7	0,7	0,7	0,7	0,7	0,7
Aug-Sep 2017	MCER.CC01-2017: Study Design	4,3	4,3	4,3	4,3	4,3	4,3
Sep-Oct 2017	MCER.CC02: Biostatistical Methods I: Basic Principles	5,7	5,7	5,7	5,7	5,7	5,7
Nov-Dec 2017	MCER.EP03: Biostatistical Methods II: Classical Regression Models	4,3	4,3	4,3	4,3	4,3	4,3
Nov 2018- Jan 2019	MCER.SC07: Scientific Writing in English for Publication	2,0	2,0	2,0	2,0	2,0	2,0
Sep 2017- Jun 2019	MCER.SEM: 24 research seminars	0,8	0,8	0,8	0,8	0,8	0,8
	Common core TOTAL	17,8	17,8	17,8	17,8	17,8	17,8
	REQUIRED						
Aug 2017	MC ER.ESP11: Methods of Public Health Research	0,7	0,7		0,7	0,7	
Aug 2017	MCER.ESP14: Clinical Trials		0,7				
Aug 2017	MC ER.ESP25: Health Economics		0,7			0,7	
Aug 2017	MCER.ESP41: Introduction to Global Public Health	0,7			0,7	0,7	
Aug 2017	MC ER.ESP42: Methods of Health Services Research				0,7		
Aug 2017	MCER.ESP43: Principles of Genetic Epidemiology			0,7			
Aug 2017	MCER.ESP45: Primary and Secondary Prevention Research	0,7			0,7		
Aug 2017	MC ER.ESP57: Genomics in Molecular Medicine			1,4			
Aug 2017	MCER.ESP61: Social Epidemiology	0,7			0,7		1
Aug 2017	MCER.ESP63: Advances in Genomics Research			0,4			1
Aug 2017	MCER.ESP65: The Practice of Epidemiologic Analysis		0,7				1
Aug 2017	MCER.ESP70: Fundamentals of Medical Decision Making	0,7	0,7			0,7	1
Aug 2017	MCER.ESP74: Genome-wide Association Studies			0,7			1
Aug 2017	MCER.ESP75: Human Epigenomics			0,7			1
Oct 2017	MCER.CE01: Clinical Translation of Epidemiology		2,0				1
Oct-Nov 2017	MCER.CE02-2017: Clinical Epidemiology		3,7				
Oct 2017	MCER.GE14: Linux for Scientists			0,6			
Oct-Nov 2017	MCER.GE02-2017: Genetic and Molecular Epidemiology			5,1			
Oct-Nov 2017	MCER.HS02: Public Health Research: part a, b and c				5,7		
Oct-Dec 2017	GW4568M: Economics of Health and Health Care					5,0	
Oct-Dec 2017	GW4546M: HealthTechnology Assessment					5,0	me according
Nov 2017	MCER.GE08: SNPs and Human Diseases			1,4			to
Nov 2017	MCER.HS03a-2016: International Comparison of Health Care Systems				1,4		specialisa tion
Winter 2018	MCER.EP01: Principles in Causal Inference	1,4	1,4				tion
Winter 2018	MCER.GE03: Advances in Genome Wide Association Studies			1,4			
Winter 2018	MCER.GE05: Family Based Genetic Analysis			1,4			
Spring 2018	MCER.PU06: Public Health in Low and Middle Income Countries				3,0		
Spring 2018	MCER.PU03: Site Visit to the Municipal Health Center				0,3		
Aug 2018	MCER.ESP38: Conceptual Foundation of Epidemiologic Study Design	0,7					1
Aug 2018	MCER.ESP48-2017: Causal Inference	1,4				1,4	1
Aug 2018	MCER.ESP69: Causal Mediation Analysis	0,7					1
Winter 2019	MCER.EWP03: Pharmaco-epidemiology and Drug Safety	1,9					1
Winter 2019	MCER.EWP10: Advanced Topics in Clinical Trials	1,9	1,9				1
Winter 2019	MCER.EWP13: Advanced Analysis of Prognosis Studies	0,9	0,9				1
Winter 2019	MCER.EWP25-2011: Principles of Epidemiologic Data-analysis	0,7					
Winter-spring 2019	MCER.CE08: Repeated Measurements		1,4				
Spring 2019	GW4567M: Economics and Financing Health Care Systems					5,0	1
Spring 2019	MCER.GE13: An introduction to the Analysis of Next-generation Sequencing Data			1,4			1
Spring 2019	MC ER.PU04: Integration Module				0,3		1
Jan 2018- Jul 2019	MCER.RM-RES-2017: Research	75,0	75,0	75,0	75,0	75,0	
Jan 2018- Jul 2019	MCER.RM-RES-MED-2017						75,0
JGI 2017	Required TOTAL	88,1	89,8	90,2	89,2	94,2	

	ELECTIVES						
Oct 2017	MCER.CE01: Clinical Translation of Epidemiology AND	5,7					
Oct-Nov 2017	MCER.CE02-2017: Clinical Epidemiology						
	OR						
Oct-Nov 2017	MCER.HS02: Public Health Research: part a, b and c						program me
	Two of the following 5 electives:						according
	GW4548M: Advanced Economic Evaluation - 5 ECTS						to specialisa
Spring 2018	GW4580M: Patient Preferences in the Delivery of Health Care - 5 ECTS					10.0	tion
Spring 2018	GW4582M: Global Health Economics - 5 ECTS					10,0	
	GW4587M: Participating in HTA Research (5 ECTS) limited number of students allowed						
	GW4575M: Pharmaceutical Pricing and Market Access (PPMH) - 5 ECTS						
Winter & spring 2018 and 2019	Advanced elective courses	4,2	8,2	7,8	8,8		
Aug 2018	Elective ESP courses (can be exchanged for winter/spring electives)	4,2	4,2	4,2	4,2		
	Highly recommended courses and electives:						
Winter 2018	MCER.EWP02-2016: Advanced Topics in Decision Making in Medicine		2,4				
Winter 2018	MCER.EWP25-2011: Principles of Epidemiologic Data-analysis		0,7				
	Electives TOTAL	14,1	12,4	12,0	13,0	10,0	
	Total ECTS	120,0	120,0	120,0	120,0	122,0	120,0

Specialisations: EP = Epidemiology, CE = Clinical Epidemiology, GE = Genetic and Molecular Epidemiology (previously Genetic Epidemiology), PH = Public Health Epidemiology (previously Public Health), HEA = Health Economic Analysis

\* 1.4 ECTS = 1 week

## 4a RM in Health Sciences, medical students Erasmus MC

The RM Programme Health Sciences for medical students at Erasmus MC is a special programme of 120 ECTS for excellent medical students at Erasmus MC and is scheduled between their Bachelor in Medicine and their medical Master programme. Students can follow one of the five specialisations: Epidemiology, Clinical Epidemiology, Genetic Epidemiology, Public Health or Health Economic Analysis. The research component comprises 75 ECTS, just like the regular RM programme in Health Sciences, but differs in assessment component, because of the final exam (see section 4a.2.2). In total, the Research Master combined with the medical Master runs 4 years. A limited number of students can be admitted to this programme.

For the programme overview check the tables of section 4.4.

## 4a.1 Aims of the programme

The aims of the programme for excellent medical students at Erasmus MC are the same for all RM in Health Sciences students (See section 4.1).

The ultimate goal of the Research Master in Health Sciences for excellent medical students is to scout excellent students at an early age, challenge them to become clinical investigators, foster them during their research- and clinical career and motivate them to become academic specialists and possibly future professors of medicine.

## 4a.2 Specific course information

All information in section  $\underline{2.2}$  and section  $\underline{4.2}$  is applicable to this programme. Additionally the following information is applicable.

The Research Master in Health Sciences students additionally are required to attend and pass the Scientific Writing in English for Publication course (see section 4.2.1).

#### 4a.2.1 Course exemptions from courses of your Master in Medicine

Please be aware that this information below may be subject to change. For correct information it is best you check the website of your Master in Medicine.

Upon successful completion of all courses mentioned below, you can be exempted from "thema Master 1a Methoden van klinisch en epidemiologisch onderzoek" of your Master in Medicine . For students who pass these courses after their first exam, NIHES will send a group request for exemption to the Examination Board of the Bachelor and Master in Medicine. Students who do not pass the exams in once need to send an exemption request themselves. The courses involved are:

- The introductory Erasmus Summer Programme;
- Study Design (CC01);
- Biostatistical Methods I: Basic Principles (CC02).

For other exemptions for the medical programme, a request should be submitted to the Examination Board of Medicine. It is the responsibility of the student to request these exemptions, i.e. upon completion of the research project for your Research Master programme, you may request an exemption of the research project in your medicine programme (keuzeonderzoek), as well as for the elective internship (keuze-coschap).

#### 4a.2.2 Final Exam

The final exam is a concluding oral exam for which you are required to give a presentation, and subsequently discuss your project with the exam committee. You are expected to explain your research project in brief and then to relate your research to:

- The theory and practice of your Master in Medicine and Research Master;
- The competencies you have gained in your Master in Medicine and Research Master;
- The consequences for your profession;
- The consequences for you and your career.

2<sup>nd</sup> year Research Master students will be enrolled in the information about the Final Exam in Canvas in the fall. Check the information in Canvas for application for the final exam (three months prior to actually taking the final exam). You can take the final exam after your graduated for your Master in Medicine.

## 4a.3 Specific research information

All information in sections <u>2.3</u> and <u>4.3</u> is applicable to Research Master students Health Sciences for medical students at Erasmus MC. Additionally the following information is applicable.

#### 4a.3.1 Research proposal

Deadline for handing in your research proposal is mentioned in chapter 2.3.

## 4a.4 Combination of the programme with the regular medical curriculum

The figure on the next page shows the schedule of the Research master programme Health Sciences, combined with the medical curriculum at Erasmus MC. For students who started their Research Master in 2016 or earlier we refer to the study guide of 2016-2017 or earlier.

																					EC	TS re	sear	ch ma	ster																										
																								Yea	ar 1	Yea	r2 Y	ear 3	/4	Tota	al																				
																	Comr	mon o	core (	cours	es)				15		2,8			17	7,8																				
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M1-courses		ESP		ļ			C	C01.	CCO	2. CE	01, CE	02. F	P01.	EP03	3																		Ac	dvan	ced e	lectiv	e cou	rses													
M1-research									,		.,					oropo	sal																		Resea																
RM1-seminars									Rese	arch s	semina	ırs																							searc			3													
CTS RM	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4			1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4		
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Year 3	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Med MA2											nterns																																								
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Year 4	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
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RM2-finalisation																																																			

## 5. Research Master in Clinical Research (120 ECTS)

The Research Master in Clinical Research (120 ECTS) is available in two learning modes: a two-year fulltime variant, and a variant for excellent medical students (120 ECTS). Chapter <u>5a</u> gives specific information on the schedule of the Research Master programme Clinical Research, combined with the medical curriculum at Erasmus MC.

## 5.1 Aims of the programme

The Research Master programme in Clinical Research aims to provide students with a thorough understanding of methods in clinical research and sufficient knowledge of clinical specialist areas, for example medical technology, immunology or molecular biology. On the basis of this knowledge, the student will be prepared to write a research protocol and to perform research. Students should acquire the following competencies:

- Ability to formulate a clinical problem and translate it into a scientific question;
- Ability to perform an extensive study of the literature concerning a clinical problem;
- Ability to translate a scientific question into a research protocol;
- Acquisition of sufficient knowledge of existing methods of clinical scientific research, biostatistical analytical methods, laws, regulations and ethics and the abilities to use such knowledge in a research protocol;
- Ability to conduct the research, collect and analyse data, and draw conclusions;
- Ability to write a Master's thesis, including the objective(s) of the investigation, a summary of the literature, materials, methods, results, discussion and conclusions of the research project and to present these findings at scientific meetings. Publication of the research findings in an international peer-reviewed journal is encouraged;
- The ability to assess and be critical on research.

This skills set will enable students to become researchers with the ability to complete a PhD programme.

## 5.2 Specific course information

All information in section 2.2 is applicable to Research Master students in Clinical Research. The Research Master in Clinical Research students additionally are required to attend and pass the Scientific Writing in English for Publication course (see below).

## 5.2.1 Scientific Writing in English for Publication (SC07)

This course is compulsory for all Research Master students. It consists of four separate days in November, December and January and focuses on the writing of correct and readable scientific articles in English.

#### 5.3 Specific research information

The research information for Clinical Research students is somewhat different from that for Health Sciences students. Below you find an overview of the specific requirements and responsibilities.

## 5.3.1 Clinical Research Advisory Board

The Clinical Research Advisory Board guides the study progress of the Clinical Research students. The Board meets every few months. Furthermore, members of the Board are part of the defence committee.

The selection committee will choose an advisor of the Clinical Research Advisory Board based on your research ambitions.

## 5.3.2 Advisor Clinical Research

The advisor will receive your curriculum vitae. From that point on, it is up to your advisor and you to search for a suitable research project and tutor. When you started your RM Clinical Research in 2016, you need to inform your NIHES programme officer at <a href="mailto:nihes@erasmusmc.nl">nihes@erasmusmc.nl</a> about your choice of tutor 29 October 2017 the latest.

Primary tasks of the advisor are:

- to find a tutor on the basis of the students preferences and possibilities of the research group/department;
- to keep informed about the study progress;
- to agree upon the research proposal and to have regular meetings with student and tutor about the study progress;
- to sign for approval on several aspects in the Personal Education Programme (see sub-section below);
- to answer questions and assist the student in solving problems that are not directly connected to the research project and tasks of the tutor;
- to be present at the symposium.

#### 5.3.3 Personal tutor

You will work on your research project under the guidance and supervision of the personal tutor to whom you are assigned in discussion with your advisor. All tutors are senior faculty members at the Erasmus University. Each tutor has considerable experience (usually minimally at PhD level) in one or more specific research subjects.

The primary tasks of the tutor are described in sub-section <u>2.3.2</u>. Additionally, tutors of the RM Clinical Research students have the following responsibilities:

- to monitor and report on the student's progress and results together with the advisor;
- to sign for approval on several aspects in the Personal Education Programme (see sub-section below);
- to report the research progress to the advisor of the Clinical Research Advisory Board;
- to be present at the final defence meeting of the student.

#### 5.3.4 Personal Education Programme

You need to download the Personal Educational Plan (PEP), which is available in General Information in Canvas. In the PEP you are expected to plan your personal programme. The following topics are covered: meetings with your advisor and tutor, planning elective courses and registering attended elective courses and research seminars. You may take elective courses at the different research schools and research masters in Erasmus MC, provided that the course organization and your tutor and advisor have given permission. The student is responsible for organising the meetings according to the PEP, for adding the summaries and for obtaining signatures from the advisor and tutor where necessary. Attended seminars must be registered in the PEP. The student is requested to collect proof of attendance or a signature of the lecturer of the seminar (for more information on seminars see section 2.5 'seminars').

#### 5.3.5 Practical research

Sub-section <u>2.3.3</u> is applicable to the RM Clinical Research. Additionally, you are required to make an appointment with your tutor and advisor twice a year, first to discuss your research proposal and afterwards to monitor the progress of your research project.

## 5.3.6 Your research proposal

See sub-section 2.3.4.

### 5.3.7 Symposium/Midterm presentation

Besides a presentation of the research proposal and a presentation on your research department (see section 5.3), each year a symposium is held for medical students who are planning to finish their research project for the Research Master Health Sciences or Clinical Research. Students are required to present the research project in the presence of tutors and advisors. The date will be announced.

## 5.3.8 Presenting your research

See sub-section 2.3.5.

#### 5.3.9 Research paper

See sub-section 2.3.6.

## 5.3.10 Research Assessment

See sub-section 2.3.7.

Additionally, you have to defend your research paper in front of a committee with members of the Clinical Research Advisory Board and your tutor. In due time several dates will be announced, and you are expected to pick one in consultation with your tutor.

The committee will assess your defence on:

- Presentation;
- Discussion;
- Overview on topic;
- Ideas about future research.

The final grade for your research project is the average of these assessments. The assessment and the final grade will be checked and approved by the Clinical Research Advisory Board and your tutor. The final grade is classified as mentioned in sub-section 2.3.7.

Note that Clinical Research students must always mention or refer to "Erasmus MC" when presenting or publishing their research findings.

## 5.4 Programme overview RM CR

Exam programme in Osiris is NIHES-RMCR2017. For dates and overview fall courses, check annex I.

Calendar	Programme	EC.	TS*
	COMMON CORE		Medicals
Aug 2017	MCER.ESP01: Principles of Research in Medicine and Epidemiology	0,7	0,7
Aug-Sep	MCER.CC01-2017: Study Design	4,3	
2017 Sep-Oct			
2017	MCER.CC02: Biostatistical Methods I: Basic Principles	5,7	5,7
Nov-Dec 2017	MCER.EP03: Biostatistical Methods II: Classical Regression Models	4,3	4,3
Nov 2018- Jan 2019	MCER.SC07: Scientific Writing in English for Publication	2,0	2,0
Sep 2017- Jun 2019	MCER.SEM: 24 research seminars	0,8	0,8
	Common core TOTAL	17,8	17,8
	REQUIRED		
Aug 2017	MCER.ESP11: Methods of Public Health Research	0,7	0,7
Aug 2017	MCER.ESP14: Clinical Trials	0,7	0,7
Aug 2017	MCER.ESP65: The Practice of Epidemiologic Analysis	0,7	0,7
Aug 2017	MCER.ESP70: Fundamentals of Medical Decision Making	0,7	0,7
Aug 2017	MCER.ESP76: Value Based Healthcare, from theory to implementation	0,7	0,7
Oct 2017	MCER.CE01: Clinical Translation of Epidemiology	2,0	2,0
Oct-Nov 2017	MCER.CE02-2017: Clinical Epidemiology	3,7	3,7
Winter 2018	MCER.EP01: Principles in Causal Inference	1,4	1,4
Winter 2019	MCER.EWP03: Pharmaco-epidemiology and Drug Safety	1,9	1,9
Winter 2019	MCER.EWP10: Advanced Topics in Clinical Trials	1,9	1,9
Winter 2019	MCER.EWP13: Advanced Analysis of Prognosis Studies	0,9	0,9
Winter 2019	MCER.EWP25-2011: Principles of Epidemiologic Data-analysis	0,7	0,7
Jan 2018- Jul 2019	MCER.RM-RES-2017	75,0	
Jan 2018- Jul 2019	MCER.RM-RES-MED-2017		75,0
	Required TOTAL	91,0	91,0
	ELECTIVES		
Winter & spring 2018 and 2019	Advanced elective courses	7,0	7,0
Aug 2018	Elective ESP courses (can be exchanged for winter/spring electives)	4,2	4,2
	Electives TOTAL	11,2	11,2
	Total ECTS	120,0	120,0

## 5a RM in Clinical Research, medical students Erasmus MC

The Research Master Programme Clinical Research for medical students at Erasmus MC is a special programme of 120 ECTS for excellent medical students at Erasmus MC and runs parallel to their medical master programme. In total, the Research Master, combined with the medical Master, runs 4 years. A limited number of students can be admitted to this programme. Other students should apply for the general Research Master in Clinical Research.

For the programme overview check the tables of section 5.4.

## 5a.1 Aims of the programme

The aims of the programme for excellent medical students at Erasmus MC are the same for all research Master students Clinical Research (See section 5.1).

The ultimate goal of the Research Master in Clinical Research for excellent medical students is to scout talented students at an early age, challenge them to become clinical investigators, foster them during their research- and clinical career and motivate them to become academic specialists and possibly future professors of medicine.

## 5a.2 Specific course information

All information in section  $\underline{2.2}$  and section  $\underline{5.2}$  is applicable to Research Master students Clinical Research for medical students at Erasmus MC. Additionally the following information is applicable.

## 5a.2.1 Course exemptions from courses of your Master of Science in Medicine

Please be aware that this information below may be subject to change. For correct information it is best you check the website of your Master in Medicine.

Upon successful completion of all courses mentioned below, you can be exempted from "thema Master 1a Methoden van klinisch en epidemiologisch onderzoek" of your Master in Medicine. For students who pass these courses after their first exam, NIHES will send a group request for exemption to the Examination Board of the Bachelor and Master in Medicine. Students who do not pass the exams in once need to send an exemption request themselves. The courses involved are:

- The introductory Erasmus Summer Programme;
- Study Design (CC01);
- Biostatistical Methods I: Basic Principles (CC02).

For other exemptions for the medical programme, a request should be submitted to the Examination Board of Medicine. It is the responsibility of the student to request these exemptions, i.e. upon completion of the research project for your Research Master programme, you may request an exemption of the research project in your medicine programme (keuzeonderzoek), as well as for the elective internship (keuze-coschap).

#### 5a.2.3 Final Exam

The final exam is a concluding oral exam for which you are required to give a presentation, and subsequently discuss your project with the exam committee. You are expected to explain your research project in brief and then to relate your research to:

- The theory and practice of your Master in Medicine and Research Master;
- The competencies you have gained in your Master in Medicine and Research Master;
- The consequences for your profession;
- The consequences for you and your career.

## 5a.3 Specific research information

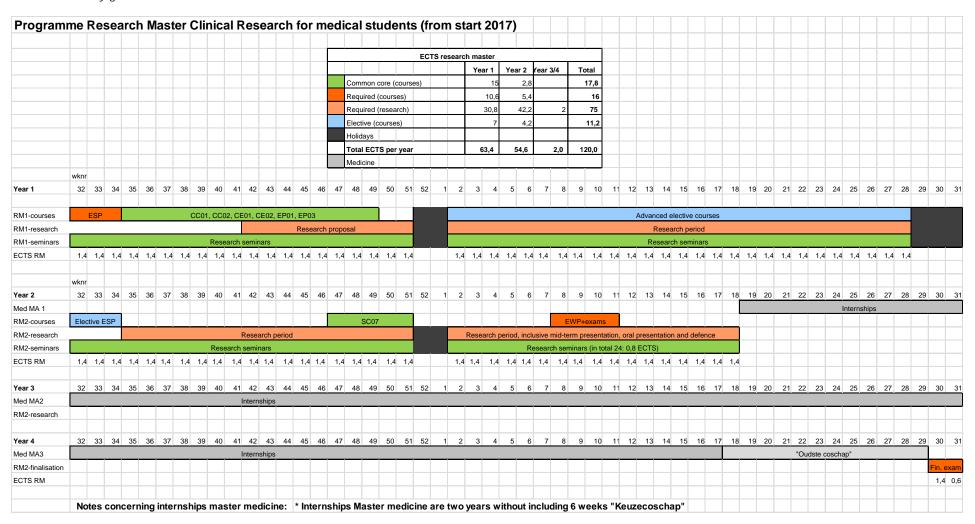
All information in section 5.3 is applicable to Research Master students Clinical Research for medical students at Erasmus MC. Additionally the following information is applicable.

#### 5a.3.1 Research proposal

Deadline for handing in your research proposal is mentioned in chapter 2.3.4.

## 5a.4Combination of the programme with the regular medical curriculum

The figure below shows the schedule of the RM CR, combined with the medical curriculum at Erasmus MC. For students who started their Research Master in 2013 or earlier we refer to the study guide of 2016-2017 or earlier.



## 6. Postgraduate Programme (70 ECTS)

Our one-year, full-time Postgraduate programme (70 ECTS) (formerly DSc programme) is for Master graduates and runs from August 2017 until the end of August 2018. It is almost entirely devoted to research, either at one of the departments or research groups affiliated with NIHES, or at your home institution. Either way, you will be guided and supervised by a senior scientist, your tutor.

The programme is available in four key disciplines of NIHES:

- Epidemiology;
- Clinical Epidemiology;
- Genetic Epidemiology;
- Public Health Epidemiology.

Upon successful completion you will be awarded a Postgraduate Certificate<sup>1</sup> by the Erasmus University Rotterdam in the discipline of your choice. You compose your Postgraduate programme by choosing the subject for your research project and elective courses. The programme outline, the application and admission procedures, and an online application form are available on the NIHES website.

## 6.1 Aims of the programmes

- Acquire post-MSc research experience;
- Increase chances of qualifying for a PhD research project;
- Ability to independently conduct the research, collect and analyse data, and draw conclusions;
- Ability to write two research papers, including the objective(s) of the investigation, a summary of the literature, materials, methods, results, discussion and conclusions of the research project and to present these findings at scientific meetings. Publication of the research findings in an international peer-reviewed journal is encouraged.

## 6.2 Specific course information

The information in section 2.2 is applicable to Postgraduate students. You will attend a selection of advanced courses in the Erasmus Summer Programme, a course on data-analysis and electives.

## 6.3 Specific research information

The information in section 2.3 is applicable to Postgraduate students. The research project culminates in the writing of two articles that should be ready for submission to an international scientific journal.

<sup>&</sup>lt;sup>1</sup> Please note that the Postgraduate programme is not accredited, nor is the diploma legally recognized. This non-degree programme is recognized only by the Erasmus University Rotterdam.

# 6.4 Programme Overview Postgraduate programme (70 ECTS)

For dates and overview fall courses, check annex I.

	Postgraduate Programme (70 ECTS)	
Calendar	Programme	ECTS*
	REQUIRED	_
Aug 2017	MCER.ESP38: Conceptual Foundation of Epidemiologic Study Design	0,7
Aug 2017	MCER.ESP48-2017: Causal Inference	1,4
Aug 2017	MCER.ESP69: Causal Mediation Analysis	0,7
August 2018	MCER.BST01: Review of Mathematics and Introduction to Statistics	1,4
Winter 2018	MCER.EWP25: Principle of Epidemiologic Data-analysis	0,7
Winter 2018	MCER.BST02: Intermediate Course in R	1,4
Spring 2018	MCER.CE09-2016: Bayesian Statistics	1,4
Sep 2017 - Jul 2018	Research period	60,9
	Required TOTAL	68,6
	ELECTIVES	
Winter & spring 2018	Advanced elective courses	1,4
	Total ECTS	70
* 1.4 ECTS =	= 1 week	

## 7. Graduation

## 7.1 Requirements

To complete your programme, you are required to attend the NIHES Graduation Ceremony. This is held at the end of August in the afternoon and includes a festive drink after the ceremony.

Registration for the Graduation Ceremony is possible once the following conditions have been met:

- You have successfully completed all compulsory and elective courses and research requirements included in your programme;
- You have presented your research to your department, and this is confirmed by your tutor in the Research Assessment Form (not required for Postgraduate students);
- You have successfully completed your research paper (or papers);
- You have submitted your research paper (for Master students) or 2 papers (for Postgraduate students) in Osiris Case or Canvas before the deadline, please note that in July your tutor may be on holiday; for RM Health Sciences and RM Clinical Research students: in time for your defence);
- You have settled all NIHES tuition fees:
- For RM Health Sciences and RM Clinical Research students: you have successfully defended your research paper to a committee:
- For students Health Sciences and Postgraduate students: Your tutor and second tutor have assessed and approved your paper(s).

In April/May you will receive full details about the graduation ceremony including registration.

#### 7.2 NIHES Awards

Each year, during the Graduation Ceremony two awards are presented.

Two NIHES Awards:

- to the graduate of the Master of Science in Health Sciences (70 ECTS), who is the author of the best research paper written under the guidance of a NIHES tutor in the current academic year;
- to the graduate of the Research Master in Health Sciences (120 ECTS) or Research Master in Clinical Research (120 ECTS), who is the author of the best research paper written under the guidance of a NIHES tutor in the current academic year.

Each award consists of a certificate and €500.

For the NIHES Awards, all tutors and scientific staff involved in the Master of Science in Health Sciences and Master of Science in Clinical Research programmes may nominate one or more students they believe to be eligible for an award. The best articles will be selected by an Award Committee chaired by Professor Hunink, NIHES Director.

### 7.3 Your diploma or certificate

At the graduation ceremony Master students will receive their diploma, together with a grades list and diploma supplement. Postgraduatte students will receive their certificate, also together with a grades list and certificate supplement.

Note that you need to legalize those documents to be able to use them abroad for study or work. More information about legalisation can be found on the website of the Dutch Education Regulation DUO, under "Legalization of your Dutch educational documents".

## 8. After graduation

## 8.1 Continue your research training at NIHES

## 8.1.1 Postgraduate programme

If you successfully finished your Master of Science Programme and would like to acquire more research experience or increase your chances of qualifying for a PhD research project, consider continuing towards a Postgraduate at NIHES. This additional year of research training is almost entirely devoted to research. More information about the programme can be found in <a href="mailto:chapter6">chapter 6</a>. If you are interested, please contact the NIHES programme coordinator to discuss your eligibility. Note that the application deadline is 1 May.

### 8.1.2 PhD research project

Graduates who wish to go on to take a PhD should discuss this with their tutor. Depending on the research projects and options available, students may be eligible for a PhD position at one of the institutes participating in NIHES. Please note that NIHES does NOT itself offer and/or mediates for PhD positions.

#### 8.1.3 Additional courses for PhD candidates

We highly recommend PhD candidates from the universities/institutes participating in or affiliated with NIHES to take one or both additional courses:

- Bayesian Statistics (CE09);
- Principles of Epidemiologic Data-analysis (EWP25).

Participation should be confirmed at the NIHES administrative office, Educational Support Center at least 4 weeks in advance.

## 8.2 Cancelling your enrolment

Graduates in the Research Master programmes (120 ECTS) need to check the General Information in Canvas for more information about enrolment after graduation.

## 8.3 Stay in touch!

Networking is key! Not only does NIHES like to keep track of its alumni and engage with them through our various communication channels such as LinkedIn, Facebook, YouTube and Twitter, but we also want to keep on building our esteemed network of alumni. This network also allows you the ease of staying in contact with your fellow students, other alumni and professors. It is also an invaluable network that can undoubtedly support you throughout your career. So if you have not already connected with us, we highly recommend you do!

Find us on:
LinkedIn /NIHES – Netherlands Institute for Health Sciences
Facebook /NIHESnI
YouTube /nihesnI
Twitter @NIHESnI

After your graduation, please let us know every now and then how you are doing (for example a short testimonial with your picture) – we like to applaud our alumni

... and our best wishes for your future career!

# Annex I: Fall schedule 2017

	August		September		October				T -	November				December	
М				2 CC02											
Т	1				3		CC02								
w	2				4				1		GE02-2012				
Т	3		i		5		CC02		2	CE02-2017	GE02-2012	HS02c			
F	4		1	CC01/ESP stat	6		CC02		3	CE02-2017	GE02-2012	HS02c	1	EP03	
	·			ex					-						
М	7	ESP	4	CC01	9					CE02-2017	GE02 presentations		4		
Т	8	ESP	5	CC01	10				7	CE02-2017			5		
W	9	ESP	6		11				8				6		
Т	10	ESP	7	CC01	12	Ex CC02 (evening)			9		GE02 exam (evening)	HS02 exam (evening)	7	Ex EP03	
F	11	ESP	8	CC01	13				10	CE02 assignm.			8	Ex EP03	
M	14	ESP	11		16	CE01	GE14	HS02a	13		GE08	HS03a	11		
Т	15	ESP	12		17	CE01	GE14	HS02a	14		GE08	HS03a	12		
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М	28	CC01	25	CC02		CE02-2017	GE02-2012	HS02c	27	EP03			25	Christmas Day	
Т	29	CC01	26	CC02		CE02-2017	GE02-2012	HS02c	28	EP03			26	Boxing day	
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<u> </u>				3332									_,		
BSTO?	ı	=Review of M	lather	matics and Introd	uction	to Statistics	(online)								
ESP	.,			Programme											
CC01		=Study Desig			L										
CC02				nods II: Basic Pri		S									
CEO1		=Clinical Translation of Epidemiology													
	CE02-2017 = Clinical Epidemiology GE02-2012 = Genetic-Epidemiologic Research Methods														
	GE08 =SNPs and Human Diseases				Cinou	,									
GE14															
HS02	а	=PHR: Analysis of Public Health													
HS02															
HS02		=PHR: Intervention Development and Evaluation													
HS03		=International Comparison of Health Care Systems													
EP01 EP03		=Principles in Causal Inference (in February 2018)  =Biostatistical Methods II: Classical Regression Models													
SC07							ar RM students) - I	last 2 course days	in lan	uary 2018					
3007		-Scientific WI	ming	iii Liigiisii ioi Pub	nica i lu	ni (ibi zilu ye	ai Nivi StudelitS) - I	iasi z course days	iii Jall	uary 2016					

## Annex II: Contact details

### NIHES administrative office

The Educational Support Center takes care of the NIHES administration. It is situated on the second floor of the Education Center (Fe209) of Erasmus MC. Erasmus MC and its medical faculty are located on the Hoboken campus of Erasmus University Rotterdam.

Visiting address

Educational Support Center (ESC) Front Desk, 2nd floor Education Center Wytemaweg 80,

3015 CN Rotterdam
The Netherlands

Phone: +31 (0)10 - 703 8450 Fax: +31 (0)10 - 704 4680 E-mail: nihes@erasmusmc.nl Postal address

NIHES

Educational Support Center (ESC)

Room Fe209 PO Box 2040 3000 CA Rotterdam The Netherlands

Opening hours front desk NIHES: weekdays from 9.30 - 16.00 hours (may be subject to change)  $2^{nd}$  floor Education Center, Room Fe209

You can contact the NIHES Administrative office by e-mail or phone or during the opening hours at the front desk. You can also make an appointment to speak to one of the programme officers. The programme coordinators are available by appointment. For contact details see below.

#### Address NIHES

If you want your family and friends to write to you at NIHES, they should use the following address:

[your first name + family name] c/o Netherlands Institute for Health Sciences Educational Support Center (ESC) Room Fe209 PO Box 2040 3000 CA Rotterdam The Netherlands

#### Coordinator Team Graduate School

Available on weekdays, except Friday

Marian Prochazka-Venema Quarda Jaddi-Kassrioui

Available on weekdays, except Fridays Available on weekdays, except Wednesdays

Educational Support Center Educational Support Center

Room: Fe209 Room: Fe209

 Phone: 010 - 703 8450
 Phone: 010 - 703 8305

 E-mail: nihes@erasmusmc.nl
 E-mail: nihes@erasmusmc.nl

Programme Officers

Elena O'Neill Kim Verdel, MSc

Available on weekdays, except Tuesday Available on weekdays, except Thursday

Educational Support Center Educational Support Center

Room: Fe209 Room: Fe209

Phone: 010 – 704 4288 Phone: 010 – 704 4158
E-mail: nihes@erasmusmc.nl E-mail: nihes@erasmusmc.nl

Ruben van der Wolf, BA Mona Richter-Meulemans

Educational Support Center Educational Support Center

Room: Fe209 Room: Fe209

Phone: 010 – 703 8450 Phone: 010 – 703 8273 E-mail: nihes@erasmusmc.nl E-mail: nihes@erasmusmc.nl

## NIHES staff

The NIHES staff is situated in Erasmus MC, NA-building, 24th floor. An appointment can be made by emailing or phoning the NIHES administration (nihes@erasmusmc.nl; phone 010-703 8450)

Science Director

Prof. Myriam Hunink Available by appointment

NIHES Coordinator

Annet Bout-Tellegen, PhD

Available by appointment on Mondays, Tuesdays and

Thursdays

Managing Director Koos Lubbe, MSc

Available by appointment

Administrative Support

Sanne Ruseler

Available on Mondays, Tuesdays and Thursdays

Programme Coordinators

Astrid Vrakking, PhD Available on weekdays, except Fridays

Neeltje Huijing - Schrofer, MSc Available from Monday to Wednesday Vacancy

Scientific Researcher

Eline Krijkamp Available on weekdays

Financial Affairs

Lenie Kroon-Pelser

Available on weekdays except Wednesday

### Helpdesk

Helpdesk Computer Support: icthelpdesk@erasmusmc.nl / Phone: 010 - 704 4442

## Confidential counsellor

NIHES confidential counsellor Ed van Beeck, MD PhD Phone: 010 – 703 8471

E-mail: <u>e.vanbeeck@erasmusmc.nl</u>

### NIHES Programme Directors

A programme director is a senior faculty member and expert in one of NIHES' core disciplines. Each has final responsibility for the content and quality of the programmes in his or her discipline. The programme directors also act as intermediaries between individual students and their tutors (and are themselves sometimes tutors). Between them, the programme directors constitute the Committee of Programme Directors, which, jointly with the two programme coordinators (see above), is charged with the selection and admission of new students, with monitoring student progress and with the awarding of degrees.

## Programme Director Epidemiology

Prof. Arfan Ikram, MD PhD Professor of Neuro-epidemiology

Erasmus MC

Department of Epidemiology

#### Programme Director Genetic Epidemiology

Cornelia van Duijn, PhD

Professor of Genetic Epidemiology

Erasmus MC

Department of Epidemiology

#### Programme Director Medical Psychology

Jan van Busschbach, PhD Professor of Medical Psychology

Erasmus MC

Department of Psychiatry-section of Medical Psychology

and Psychotherapy

### Programme Directors Pharmaco- epidemiology

Bruno Stricker, PhD

Professor of Pharmaco- epidemiology

Erasmus MC

Department of Medical Informatics

### Programme Director Clinical Epidemiology

Myriam Hunink, MD PhD

Professor of Radiology and Clinical Epidemiology

Erasmus MC

Department of Epidemiology

#### Programme Director Public Health Epidemiology

Alex Burdorf, Ir. PhD

Professor of Determinants in Public Health

Erasmus MC

Department of Public Health

### Programme Director Biostatistics

Dimitris Rizopoulos, PhD

Associate Professor of Biostatistics

Erasmus MC

Department of Biostatistics

### Programme Director Health Economic Analysis

Arthur Attema, PhD

Assistant professor iBMG/iMTA Erasmus University Rotterdam Department of Health Economics

## Clinical Research Advisory Board

The Clinical Research Advisory Board consists of the following persons:

### Programme Director Research Master Clinical Research

Prof. Aart Jan van der Lely, MD, PhD

Professor of Endocrinology

Erasmus MC

Department of Endocrinology

### Other members of the Clinical Research Advisory Board

Prof. Eric (H.) Boersma, ir., PhD,

Professor of Clinical epidemiology of cardiovascular

diseases

Erasmus MC

**COEUR** 

Department Thorax Epidemiology

Prof. Leo J. Hofland, MD, PhD,

Professor of Experimental Neuroendocrinology

Erasmus MC

Department of Endocrinology

Prof. Maikel P. Peppelenbosch, MD, PhD,

Professor of experimental Gastroenterology

Erasmus MC

Department of Gastroenterology & Hepatology

Adrie J.M. Verhoeven, PhD,

Assistant professor of Internal Medicine

Erasmus MC

COEUR

Department of Internal Medicine

Virgil A.S.H. Dalm, MD, PhD, Clinical Immunologist

Erasmus MC

Department of Immunology

Prof. Johan F. Lange, MD, PhD,

Professor of Surgery

Erasmus MC

Department of Surgery

Prof. Ivo P. Touw, MD, PhD,

Professor of Experimental Hematology

Erasmus MC

Department of Hematology

# Annex III Definitions / descriptions

#### Advisor Clinical Research

The advisor Clinical Research is a member of the Clinical Research Advisory Board. The programme director of the Research Master programme Clinical Research assigns an advisor to a student. The advisor may also be the tutor. During part I of the programme, the advisor is the intermediate for the student, and facilitates the contacts with the different disciplines of the departments involved in the Clinical Research programme. The student and the advisor record relevant information in the Personal Education Programme (PEP). The advisor is an intermediary who discusses the training programme and openings for research with the student, proposes subjects and contact persons for research and facilitates contacts, sees to the monitoring aspect, and will lend a helping ear when problems arise.

#### Clinical Research Advisory Board

The Advisory Board is in charge of the organisation and coordination of the Clinical Research programme and of monitoring the study progress of the students in the Clinical Research programme. The Advisory Board has regular meetings discussing the organisation of the programme, study progress of the students, and granting certificates according to the relevant rules and regulations.

#### Chairpersons Health Sciences

Chairpersons Health Sciences are in charge with the organisation and coordination of the programme Health Sciences and with monitoring the study progress of the students and with granting certificates according to the relevant rules and regulations.

#### NIHES Coordinator

The NIHES coordinator coordinates NIHES affairs and NIHES staff.

#### Personal Education Plan

You will receive a Personal Educational Plan (PEP) in which you are expected to plan your personal programme via Canvas. The following topics are covered: meetings with your advisor and tutor, planning elective courses and registering attended elective courses and research seminars. You may take elective courses at the different research schools and research masters in Erasmus MC, provided that the course organization and your tutor and advisor have given permission. The student is responsible for organising the meetings according to the PEP, for adding the summaries and for obtaining signatures from the advisor and tutor where necessary. Attended seminars must be registered in the PEP. The student is requested to collect proof of attendance or a signature of the lecturer of the seminar (for more information on seminars see section 2.3.8 'seminars'.

#### Programme Coordinator

The programme coordinator is an intermediary between students and programme directors. She monitors the progress of the students in the Master programme or Postgraduate programme. The programme coordinator is the point of contact for questions on the programme or the research phase.

### Programme Director

The programme director has final responsibility for the content and quality of the programmes in his or her discipline. The programme director can act as intermediary between a student and his or her tutor (and Advisor Clinical Research for Clinical Research students). The programme director, together with the programme coordinators is charged with assessing student progress and granting of certificates according to the relevant rules and regulations.

## Programme Officer

The programme officers are members of Team Graduate School of the Educational Support Center (ESC) (see Annex I for address). A programme officer takes care of the day-to-day organization of the study programmes, courses, graduations, etc. He or she carries out these activities in close collaboration with the programme coordinators, course coordinators, lecturers and other parties involved. Students can contact the programme officers with questions relating to their study programme, courses, registration, visa, accommodation and fellowships.

#### Second assessor

A faculty member at one of the NIHES' participating institutes can be second assessor of the research paper. He or she assesses the research paper of the student independently. He or she has a doctorate degree and is experienced (senior level) in one or more specific research subjects.

#### Student

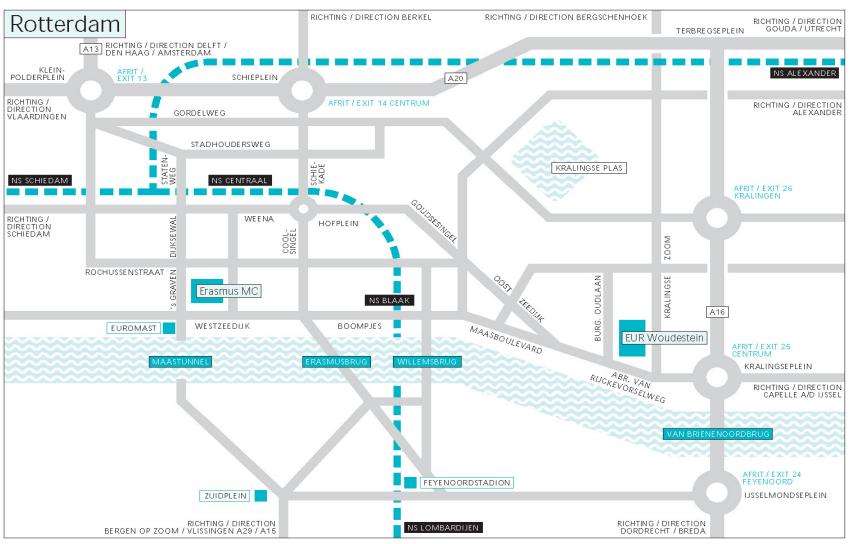
The student is participant in a Master programme or Postgraduate programme.

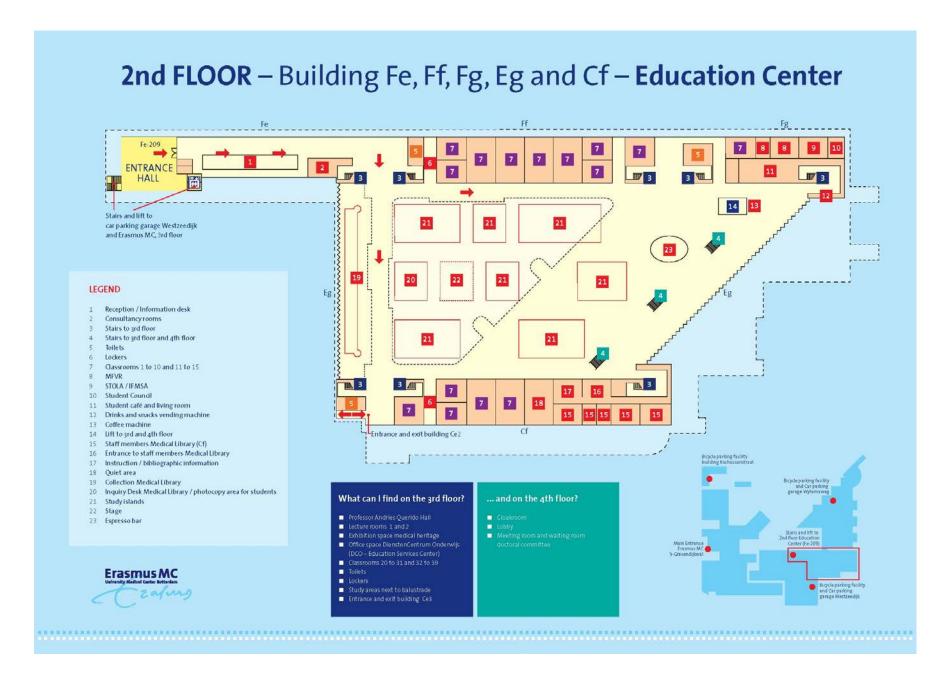
#### Tutor

A student's tutor for the research phase of the programme. He or she is employed at an institute participating in one of the Research Master programmes, holds a doctorate degree and is well experienced (senior level) in one or more

specific research subjects. The tutor sees to the monitoring aspect and will lend a helping ear when problems arise during the research phase of the programme.

# **Annex IV Maps**





## Annex V: Course links NIHES courses 2017-2018

BST01: Review of Mathematics and Introduction to Statistics

BST02: Intermediate Course in R

CC01-2017: Study Design

CC02: Biostatistical Methods I: Basic Principles

CC02a: Biostatistical Methods I: Basic Principles part a

CE01: Clinical Translation of Epidemiology

CE02-2017: Clinical Epidemiology

CE05: Epidemiology of Infectious Diseases

**CE08: Repeated Measurements** 

CE09-2012: Bayesian Statistics

D4M1: Principles of Identifying and Recognizing Adverse Events and Safety Signals

D4M2: Substantiation and Quantification of Risks

D4M3: Identifying Susceptibility for Adverse Drug Reactions

D5M1: Introduction to Benefit-Risk Assessment and Pharmacoeconomics in Decision Making

**EP01: Principles in Causal Inference** 

EP03: Biostatistical Methods II: Classical Regression Models

EP12: Psychiatric Epidemiology

EP13: Cancer Epidemiology EP16-2017: Missing Values in Clinical Research

EP19: Women's Health

EP20: Cardiovascular Epidemiology

ESP01: Principles of Research in Medicine and Epidemiology

ESP03: Introduction to Data-analysis

ESP09: Regression Analysis

ESP11: Methods of Public Health Research

ESP14: Clinical Trials

ESP15: Topics in Meta-analysis

ESP21: Pharmaco-epidemiology

ESP25: Health Economics

ESP38: Conceptual Foundation of Epidemiologic Study Design

ESP39: Cohort Studies

ESP40: Case-control Studies

ESP41: Introduction to Global Public Health

ESP42: Methods of Health Services Research

ESP43: Principles of Genetic Epidemiology

ESP45: Primary and Secondary Prevention Research

ESP48: Causal Inference

ESP53: History of Epidemiologic Ideas

ESP57: Genomics in Molecular Medicine

ESP61: Social Epidemiology

ESP62: Markers and Prediction Research

ESP63: Masterclass: Advances in Genomics Research

ESP64: Erasmus Summer Lectures

ESP65: The Practice of Epidemiologic Analysis

ESP66: Logistic Regression

ESP68: Introduction to Bayesian Methods in Clinical Research

ESP69: Causal Mediation Analysis

ESP70: Fundamentals of Medical Decision Making

ESP72: Joint Models for Longitudinal and Survival Data

ESP74: Genome Wide Association Studies

ESP75: Human Epigenomics

ESP76: Value Based Health Care: from theory to implementation

EWP02-2016: Advanced Topics in Decision Making in Medicine

EWP03: Pharmaco-epidemiology and Drug Safety

**EWP10: Advanced Topics in Clinical Trials** 

EWP13: Advanced Analysis of Prognosis Studies

EWP25-2011: Principles of Epidemiologic Data Analysis

GE02-2017: Genetic-epidemiologic Research Methods

GE03: Advances in Genome-Wide Association Studies

GE05: Family-based Genetic Analysis

GE08: SNPs and Human Diseases

**GE10**: Mendelian Randomization

### GE13: An Introduction to the Analysis of Next Generation Sequencing Data

**GE14: Linux for Scientists** 

GW4546M: Health Technology Assessment

GW4548M: Advanced Economic Evaluation

GW4567M: Economics and Financing Health Care Systems

GW4568M: Economics of Health and Health Care

GW4575M: Pharmaceutical Pricing and Market Access (PPMH)

GW4580M: Patient Preferences in the Delivery of Health Care

GW4582M: Global Health Economics

GW4587M: Participating in HTA Research

HS02a: Analysis of Population Health

**HS02b**: Analysis of Determinants

HS02c: Intervention Development and Evaluation

HS03a: International Comparison of Health Care Systems

HS04: Medical Demography

HS05: Planning and Evaluation of Screening

HS09: Maternal and Child Health

HS11: Quality of Life Measurement

HS15: Health Services: Research and Practice

HS18: From Problem to Solution in Public Health

MP01-2017: Introduction to Medical Psychology

MP03: Psychopharmacology

MP05: Preventing Failed Interventions in Behavioral Research

PU03: Site Visit to the Municipal Health Service Rotterdam

PU04: Integration module

PU06: Public Health in Low and Middle Income Countries

SC02: Introduction to Medical Writing

SC07: Scientific Writing in English for Publication