

Additional Information Research Masters Website Archive OER 2022-2023

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1 Clinical Research

1.1 Admission

Please note that as of the academic year 2026-2027 the research master in Clinical Research will be incorporated into the Health Sciences programme as a major in the same capacity. Prospective students interested in the Clinical Research Programme for the academic year 2023-2024, please follow current application procedure. Prospective students interested in Clinical Research for academic years after 2023 can apply for the Health Science programme.

1.1.1 Admission Requirements Research Master in Clinical Research

- You have a Bachelor degree from a school of medicine, biomedical sciences or medical biology, or a broad bachelor education with sufficient basic subjects in medicine and/or biomedical sciences and/or medical biology.
- You have affinity with research, as demonstrated by your motivation letter.
- You have a good working command of the English language, both oral and written.

1.2 Application

When you register, we will ask for your academic credentials: a letter of motivation, CV, grade list, and certificates. All complete applications that reach us before the deadline, will be carefully assessed by an Admissions Committee. Your chosen programme's homepage will have details on how and when to apply. For additional information please follow this link (https://www.nihes.com/application-admission/how-to-apply/#Master.).

1.3 Programme overview

1.3.1 Education objectives

There is a great need for clinicians who can combine patient care and research. This Research Master uses an interdisciplinary blend of biostatistics, epidemiology, clinical trial design, medical informatics, and health services research, to prepare the students for a career in patient-oriented and translational research, as well as more traditional clinical investigation.

1.3.2 Programme objectives

- The student is able to translate a clinically relevant problem into a scientific research question.
- The student is able to translate a scientific research question into a research protocol and/or
 proposal which can be studied in clinical practice, choosing appropriate methodology for the
 specific setting and patient population.
- The student is able to conduct a systematic literature review of a clinical issue.
- The student has knowledge about quantitative methods and the ability to apply this knowledge in preparing, performing, analysing and interpreting research.
- The student understands core concepts of etiologic (causality), prognostic, diagnostic, prevention, and intervention research.
- The student has knowledge of regulations and ethical rules applicable to the fields of clinical research, and is able to apply this knowledge, e.g. in writing a protocol for a medical ethics approval or designing a study according to GCP regulations.
- The student is able to collaborate with fellow members of a research group in order to set up and conduct a research project, to collect data, and to analyse these data to draw conclusions.



- The student is able to write a draft manuscript or Master of Science thesis.
- The student is able to present the research findings in an engaging way with a specific focus on the clinical readership.
- The student is able to respond to criticism in a constructive and productive manner.
- The student is able to critically review and assess the relevance of scientific results.
- The student engages in personal and professional development.

1.3.3 Curriculum overview

Research Master in Clinical Research – 120 EC points – 2022 - 2024

Calendar	Course code	Course	ED	Regular programme	Erasmus MC medical
Aug 2022	ESP01	Principles of Research in Medicine and Epidemiology	0,7	0,7	0,7
Aug 2022	ESP11	Methods of Public Health Research	0,7	0,7	0,7
Aug 2022	ESP43	Principles of Genetic Epidemiology	0,7	0,7	0,7
Aug 2022	ESP61	Social Epidemiology	0,7	0,7	0,7
Aug 2022	ESP65	Practice of Epidemiology Analysis	0,7	0,7	0,7
Aug 2022	ESP70	Fundamentals of Medical Decision Making	0,7	0,7	0,7
Aug 2022	CK001	Review of Mathematics and Introduction to Statistics	1,0	1,0	1,0
Fall 2022	CK010	Study Design	4,0	4,0	4,0
Fall 2022	CK020	Biostatistics I	4,5	4,5	4,5
Fall 2022	CK030	Biostatistics II	4,5	4,5	4,5
Fall 2022	CK040	Clinical Epidemiology	3,0	3,0	3,0
Fall 2022	CK050	Principles of Public Health	3,0	3,0	3,0
Jan 2023	CK060	Selected Topics in Epidemiology	3,0	3,0	3,0
Fall 2022	CK070	Core competences exam	1,0	1,0	1,0
Jan 2024	CK080	Core competences video	1,0	1,0	1,0
Winter-spring 2024	LLS02	Scientific Writing in English for Publication	2,0	2,0	2,0
Fall 2022-Jul 2024	LLS03	Personal Education Plan	1,1	1,2	1,1
Fall 2022-Jul 2023	LLS05	Intervision	0,4	0,4	0,4
Winter-spring 2023	LLS06	Scientific Integrity	0,3	0,3	0,3
Fall 2022	LLS07	Intercultural Communication	0,2	0,2	0,2
Sep 2023-Jul 2024		Lifelong Learning Skills elective courses	1,0	1,0	1,0
Fall 2022-Jul 2024	RM-RES	Research	65,8	65,8	
Fall 2022-Jul 2024	RM-RES- MED	Research (medical students)	63,8		63,8
After MSc Med	1 FE	Final Exam (medical students)	2,0		2,0



Jan 2023-Aug 2024	Elective courses*	20,0	20,0	20,0	
TOTAL EC points			120,0	120,0	
* Students are allowed to exceed the amount of elective EC points by max 2.8 EC					
Year 1 = August 2022 until July 2023					
Year 2 = August 2023 until August 2024					



2 Health Sciences

2.1 Admission

You should fit the following criteria:

- You have a bachelor's degree in clinical medicine, public health, health sciences, clinical technology, nutrition, (medical) biology, pharmacy, human movement sciences, psychology, health economics, or a broad bachelor's education (e.g. university college) with subjects in these disciplines;
- You have affinity with research;
- A letter of motivation, CV, grades list and certificates are requested as part of the selection procedure for admission;
- You have a good working command of the English language, both oral and written.

2.2 Application

When you register, we will ask for your academic credentials: a letter of motivation, CV, grade list, and certificates. All complete applications that reach us before the deadline, will be carefully assessed by an Admissions Committee. Your chosen programme's homepage will have details on how and when to apply. For additional information please follow <u>this link</u> (https://www.nihes.com/application-admission/how-to-apply/#MasterOpens%20external.).

2.3 Programme overview

The Research Master programme in Health Sciences aims to provide students with a thorough understanding of methods in either clinical or public health research. Majors include clinical epidemiology, epidemiology, public health epidemiology, genomic & molecular epidemiology, medical psychology, biostatistics and health decision sciences & technology assessment. After completion, candidates will have the knowledge, understanding and skills to propose state-of-the-art studies, write excellent study protocols, perform the research, analyze the data using modern statistical techniques, make defensible causal inferences, come to justified conclusions, and write outstanding research papers. Depending on the choice of major, the candidate will focus on for example clinical trials, population studies, public health interventions, or modeling studies.

2.3.1 Programme objectives

- The student is able to translate a (clinical) epidemiologic, public health or health care problem into a scientific research question.
- The student is able to translate a scientific research question in the area of (clinical) epidemiology, public health or health care into a research protocol and/or proposal.
- The student is able to conduct a systematic literature review of a clinical or public health issue.
- The student has knowledge about quantitative methods and the ability to apply this knowledge in preparing, performing, analysing and interpreting research.
- The student understands core concepts of etiologic (causality), prognostic, diagnostic, prevention, and intervention research.
- The student has knowledge of regulations and ethical rules applicable to the fields of clinical and public health research, and is able to apply this knowledge.
- The student is able to collaborate with fellow members of a research group in order to set up and conduct a research project, to collect data, and to analyse these data to draw conclusions.
- The student is able to write a draft manuscript or Master of Science thesis, based on a (clinical) epidemiologic, public health or health care subject.



- The student is able to present the research findings in an engaging way.
- The student is able to respond to criticism in a constructive and productive manner.
- The student is able to critically review and assess the relevance of scientific results.
- The student engages in personal and professional development

2.3.2 Majors

Please see below for information about the major within this Master Programme. Whether a major is offered full-time or part-time, is indicated accordingly. Read more about the majors <u>here</u> (https://www.eur.nl/en/erasmusmc/research-master/health-sciences/specialisations).

Majors	Full-time	Part-time
Clinical Epidemiology	Full-time	Part-time
Epidemiology	Full-time	Part-time
Genomic & Molecular Epidemiology	Full-time	Part-time
Medical Psychology	Full-time	Part-time
Health Decision Sciences & Technology Assessment	Full-time	Part-time
Biostatistics	Full-time	Part-time
Public Health Epidemiology	Full-time	Part-time

2.3.3 Curriculum Overview

Research Master in Clinical Research – 120 EC points – 2022 - 2024

Calendar	Course code	Course	ED	Regular programme	Erasmus MC medical
Aug 2022	ESP01	Principles of Research in Medicine and Epidemiology	0,7	0,7	0,7
Aug 2022	ESP11	Methods of Public Health Research	0,7	0,7	0,7
Aug 2022	ESP43	Principles of Genetic Epidemiology	0,7	0,7	0,7
Aug 2022	ESP61	Social Epidemiology	0,7	0,7	0,7
Aug 2022	ESP65	Practice of Epidemiology Analysis	0,7	0,7	0,7
Aug 2022	ESP70	Fundamentals of Medical Decision Making	0,7	0,7	0,7
Aug 2022	CK001	Review of Mathematics and Introduction to Statistics	1,0	1,0	1,0
Fall 2022	CK010	Study Design	4,0	4,0	4,0
Fall 2022	CK020	Biostatistics I	4,5	4,5	4,5
Fall 2022	CK030	Biostatistics II	4,5	4,5	4,5
Fall 2022	CK040	Clinical Epidemiology	3,0	3,0	3,0
Fall 2022	CK050	Principles of Public Health	3,0	3,0	3,0
Jan 2023	CK060	Selected Topics in Epidemiology	3,0	3,0	3,0
Fall 2022	CK070	Core competences exam	1,0	1,0	1,0



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Jan 2024	CK080	Core competences video	1,0	1,0	1,0
Winter-spring 2024	LLS02	Scientific Writing in English for Publication	2,0	2,0	2,0
Fall 2022-Jul 2024	LLS03	Personal Education Plan	1,1	1,2	1,1
Fall 2022-Jul 2023	LLS05	Intervision	0,4	0,4	0,4
Winter-spring 2023	LLS06	Scientific Integrity	0,3	0,3	0,3
Fall 2022	LLS07	Intercultural Communication	0,2	0,2	0,2
Sep 2023-Jul 2024		Lifelong Learning Skills elective courses	1,0	1,0	1,0
Fall 2022-Jul 2024	RM-RES	Research	65,8	65,8	
Fall 2022-Jul 2024	RM-RES- MED	Research (medical students)	63,8		63,8
After MSc Med	FE	Final Exam (medical students)	2,0		2,0
Jan 2023-Aug 2024		Elective courses*	20,0	20,0	20,0
TOTAL EC po	ints			120,0	120,0
* Students are allowed to exceed the amount of elective EC points by max 2.8 EC					

Research Master in Clinical Research – 120 EC points – 2022 - 2024

Year 1 = August 2022 until July 2023

Year 2 = August 2023 until August 2024



3 Heath Sciences Post Master

3.1 Admission

Admission requirements Post-master Health Sciences

- You have a relevant Master's degree from a discipline in or related to clinical medicine or public health (medical doctor, health sciences, nutrition, biology, pharmacy, environmental sciences, social sciences, economics, psychology, etc.).
- You have experience with performing research and have interest in performing quantitative research.
- You have already (co-)authored a few scientific publications.
- You have a good working command of the English language, both oral and written.

3.2 Application

Do you meet the requirements? Start your application in <u>Studielink</u> (https://www.studielink.nl/). After your application in Studielink, Erasmus University Rotterdam will inform you about the next steps. Read more about <u>Application Master Health Sciences</u> (https://www.nihes.com/application-admission/how-to-apply/).

3.3 Programme overview

3.3.1 Education objectives

This MSc programme focuses on training students who are already educated in research methodology, but wish to take a step further in developing a successful career in health science research. This programme is also interesting if you want to enhance your chances of pursuing a PhD.

- In the course of the programme you will acquire the following competencies:
- Ability to formulate a clinical or public health 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 quantitative skills;
- Ability to make causal inferences;
- Ability to critically appraise published research;
- 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.

3.3.2 Specialisations

Please see below for information about the specialisation within this Master Programme. Whether a specialisation is offered full-time or part-time, is indicated accordingly.

Specialisation	Full-time	Part-time
Clinical Epidemiology	Full-time	Part-time
Epidemiology	Full-time	Part-time



Specialisation	Full-time	Part-time
Genetic & Molecular Epidemiology	Full-time	Part-time
Medical Psychology	Full-time	Part-time
Health Decision Sciences	Full-time	Part-time
Biostatistics	Full-time	Part-time
Public Health Epidemiology	Full-time	Part-time

3.3.3 Curriculum Overview

Research Master in Health Sciences – 70 EC points – 2022 - 2024

Calendar	Course code	Course	EC
Aug 2022	ESP01	Principles of Research in Medicine and Epidemiology	0,7
Aug 2022	ESP11	Methods of Public Health Research	0,7
Aug 2022	ESP43	Principles of Genetic Epidemiology	0,7
Aug 2022	ESP61	Social Epidemiology	0,7
Aug 2022	ESP65	Practice of Epidemiology Analysis	0,7
Aug 2022	ESP70	Fundamentals of Medical Decision Making	0,7
Aug 2022	CK001	Review of Mathematics and Introduction to Statistics	1,0
Fall 2022	CK010	Study Design	4,0
Fall 2022	CK020	Biostatistics I	4,5
Fall 2022	CK030	Biostatistics II	4,5
Fall 2022	CK040	Clinical Epidemiology	3,0
Fall 2022	CK050	Principles of Public Health	3,0
Jan 2023	CK060	Selected Topics in Epidemiology	3,0
Fall 2022	CK070	Core competences exam	1,0
Winter- spring 2024	LLS01	Introduction to Medical Writing	2,0
Sep 2022- Jul 2024	LLS04	Portfolio	1,1
Fall 2022-Ju 2023	LLS05	Intervision	0,4



Research Master in Health Sciences – 70 EC points – 2022 - 2024

TOTAL EC points		70,0
Jan 2023- Aug 2024	Elective courses****	10,0
Fall 2022-Jul 2024 M-RES	Research	28,7
Fall 2022 LLS07	Intercultural Communication	0,2
Winter- spring 2023	Scientific Integrity	0,3

TOTAL EC points

**** Students are allowed to exceed the amount of elective EX points by max 1.4 EC

This 13-month programme runs from August 2022 until August 2023 and can be followed parttime. Note that some courses need to be followed in a specific order as earlier courses are prerequisites for later courses.



4 Infection and Immunity

4.1 Admission

4.1.1 Admission requirements

To be considered for our Infection & Immunity research master program you must meet the following requirements:

- An academic bachelor's degree (with a minimum of 180 ECs) in Medicine, Biology, Biomedical Sciences, (bio)chemistry, or related studies
- If you hold an applied bachelor's degree (HLO) from laboratory colleges or equivalent

4.1.2 English proficiency

To participate in the educational programmes and tests, sufficient command of the English language is required. This requirement is deemed to have been met if you have a pre-university education [VWO] diploma and English was one of the courses included in the assessment obtaining that diploma.

International applicants from countries where English is not the official language must submit one of the following:

- A diploma from an English language secondary school at pre-university level within or without the Netherlands or a Bachelor's degree from a University of Applied Science where the subject of English was part of the tests to obtain that diploma;
- Certificate of a computer-based Test of English as a Foreign Language (TOEFL) with a score of 232 or higher with partial scores of minimally 23;
- Certificate of an internet-based TOEFL with a score of 90 or higher with partial scores of minimally 22;
- Certificate of a paper-based TOEFL with a score of 575 or higher with partial scores of minimally 57;
- Certificate of an International English Language Testing System (IELTS) with a score of 6.5 or higher with partial scores of minimally 6.0;
- Certificate of a Cambridge proficiency test with level C1 or higher.

4.1.3 Motivation

Demonstrate your specific interest in experimental and applied infection & immunity research by describing your academic interest and stating your reasons to apply for our program in a letter of intent/motivation letter.

4.1.4 Selection of applicants

A selection committee will rank all applicants based on their performance in their bachelor's program, their curriculum vitae and motivation. There will be a parallel ranking for non-EU students.

The most eligible applicants will be invited for an interview. This interview will be added to your overall competence chart and will be part of the final decision for admission to our research master program. The top 20 applicants of the selection committee will be admitted to our research master program. The other applicants will be on a ranked waiting list. Invited applicants have to make a commitment decision before June 1. Open/newly available positions will be filled by the applicants on the waiting list in order of ranking.



4.2 Application

As of November 1, we will start taking in applications for the next academic year. Students need to apply for our program through an online application system.

You can hand in an application via Studielink. Afterwards, you will receive a follow up email from EUR with a student number and a link to the application portal.

In the application portal you need to upload the following documents:

- A motivation letter;
- A copy of your CV;
- A copy of your transcript and diploma;
- In case you have not graduated yet, a graduation statement with your future graduation date;
- At least 2 letters of recommendation from your professors, teachers or supervisors;
- Copy of the personal data page in your passport (non-EU) or ID-card;
- In case English is not your first language, a document providing proof of English proficiency.

<u>Apply</u> (https://www.studielink.nl/).

Should you have any questions, you are welcome to contact the programme officer by email: <u>msc.infection.immunity@erasmusmc.nl.</u>

Application deadline: 1 April (non-EU and EU students)

4.3 Programme overview

4.3.1 Education objectives

Research Master thesis. In-depth knowledge of, and experience in, translational research.

4.3.2 Curriculum Overview

Year 1

Course Code	Course Name	EC Points
MSCII-100	First Summer Course	8.6
MSCII-101	Population Dynamics in Infection and Immunity	3.6
MSCII-102	Biomedical Research Techniques (BRT)	1.5
MSCII-103	SPSS	1.0
MSCII-104	Biomedical English writing	2.0
MSCII-105	PubMed, Endnote and 'Drown or not'	0.6
MSCII-106	Survival analysis	0.5
MSCII-107	Round table discussion and lab rotation	4.0
MSCII-108	First Winter Course	8.6
	Elective Courses	6.0
MSCII-109	First round Journal Clubs	1.0



MSCII-110	Lab research project 5 months*		25.2
Total Year 1			62.6
Year 2			
Course Code	Course Name		EC Points
MSCII-207	Second Summer Course		8.6
MSCII-208	Second Winter Course		6.8
MSCII-209	Second round Journal Clubs		1.0
MSCII-210	Lab research project year 2		41.0
Total Year 2			57.4
Total			120.0
Alternative program	n for medical students		
Calendar	Course Code	Course Name	EC Points
	MSCII-110-M	Lab research project year 1	29.0
	MSCII-210M	Lab research project year 2	37.2



5 Molecular Medicine

5.1 Admission

The application deadline for the academic year 2023-2024 is May 1 2023 for EU students and March 1 2023 for non-EU students. Apply via <u>Studielink</u> (https://www.studielink.nl/).

Admission Requirements Research Master in Molecular Medicine

- BSc in any of the biomedical sciences (e.g. biology, biochemistry, medicine or related fields), or
- BASc from Dutch vocational training program in biomedical laboratory techniques (HBO-BML)
- personal motivation, assessed by written statement and/or interview
- letters of reference
- TOEFL 575 / 232 / 90 or IELTS 6.5, or comparable English proficiency (*not applicable for native speakers and Dutch students*)
- overall performance in previous educational programs
- in some cases: a written entrance examination

On the basis of your application we may invite you for a (online) interview.

5.2 Application

5.2.1 Selection criteria

Check the admission tab for the selection criteria.

5.2.2 Application procedure

Apply via <u>Studielink</u> (https://www.studielink.nl/). Make sure to include **all** the following required documents:

- 1. Letter of motivation (max. 500 words)
- 2. One or two letters of recommendation
- 3. Extensive curriculum vitae (résumé), including work, research and computer experience
- 4. Official transcript of diplomas and reports (list of grades)
- 5. Translated transcript of diplomas and reports
- 6. For Chinese Students a NESO certificate
- 7. English test certificate (TOEFL 575 / 232 / 90 or IELTS 6.5 or comparable English proficiency) not applicable for native speakers and Dutch students
- 8. Copy of passport
- 9. Passport photograph

On the basis of your application we may invite you for an (online) interview.

5.2.3 Erasmus MC medical students

Selected Erasmus MC students of Medicine have the opportunity to follow the whole year 1 of the MSc Molecular Medicine program, followed by the master of Medicine.

You are advised to participate in a research-oriented minor during bachelor 3 of the medical curriculum (minor biomedical research in practice).

Exemption

You will be exempt from the medical master electives (Keuze-onderzoek, 30 EC points), provided that you successfully finish your first research project within the MSc Molecular Medicine Program.

Year 2 of the MSc Molecular Medicine Program, a full-year research project leading up to the MSc thesis, is performed after finishing Medicine. Upon graduation, you may get the chance to continue a scientific



career as a PhD student.

5.2.4 Other BSc graduates

Prospective international or Dutch students should have a bachelor's degree or an equivalent level of training in the life sciences, such as biology, biomedicine, medicine, or related fields.

5.2.5 Dutch HBO-BML graduates

BASc students in Biomedical Lab Techniques, from the Hogeschool Rotterdam or other relevant higher vocational training program (HBO) within The Netherlands, may apply. In addition to the general selection criteria, a letter of reference from your mentor is required and a written entrance examination.

5.2.6 WUR-MBT students

MSc students in Biotechnology and Molecular Life Sciences from Wageningen University are offered the possibility to specialise in 'Molecular Medicine'. This is a joint programme between Wageningen University and Erasmus MC. Students will graduate in Wageningen.

Interested students can contact the MSc Biotechnology coordinator, Dr Sonja Isken.

5.3 Programme overview

5.3.1 Curriculum

The MSc Molecular Medicine program is a two-year research master's program of 120 EC points, representing a total study load of 3,360 hours.

At the start of the program, during the course Introduction Weeks, you will get to know the program organizers and course directors, and familiarize yourself with the basic and translational research laboratories within our institute. Several MSc faculty will hold short presentations, to give you a broader view of possible lines of investigation, and enable you to make an informed choice for the research projects ahead.

Year 1			
Calendar	Course code	Course Name	EC Points
	MM-IW	Introduction Weeks	2.0
	MM-MBC-A	Molecular Biology of the Cell - A	5.0
	MM-MBC-B	Molecular Biology of the Cell – B	5.0
	MM-GEN	Genetics	4.0
	MM-DB	Developmental Biology	2.0
		DB – Review Presentation	1.0
	MM-CRT-F	Contemporary Research Topics – Faculty sessions	4.0
	MM-BOD	Biology of Disease	3.0
	MM-RES1	Lab Research Project Year 1	24.0
	MM-PS	Presentation Skills	2.0
	MM-P1	Research Progress Presentation – YR1	2.0
	MM-RW	Report Writing	2.0
		Research Report	4.0
		Total Year 1	60.0
		Year 2	
	Course Code	Course Name	EC Points
	MM-CS	Courses and Seminars	4,0



MM-LR	Literature Review	4,0
MM-PP	Writing a Project Proposal	2,0
MM-P2	Research Progress Presentation - YR2	2,0
MM-RES2	Lab Research Project Year 2	38,0
MM-MSTH	Master of Science thesis	8,0
	Master of Science thesis – Presentation	2,0
	Total Year 2	60,0

5.3.2 Education objectives

- MSc Thesis with the quality of a publication in an international journal.
- Master degree MSc.



6 Neuroscience

6.1 Admission

6.1.1 Admission requirements

To be considered for our Neuroscience research master program you must meet the following requirements:

- An academic bachelor's degree (with a minimum of 180 ECs) in a Life Sciences discipline (see <u>here</u> (https://en.wikipedia.org/wiki/List_of_life_sciences)) including Nanobiology, Bioengineering;
- A bachelor's degree in Psychology with a biological psychology profile, or if you hold a Bachelor's degree in Sciences and have substantial knowledge of biology*;
- If you hold an applied bachelor's degree (HLO) in Biology or in Life Sciences, a minimum GPA of 8 (Dutch EC-system) is required.
- *) Biology at least at pre-university (VWO) level.

6.1.2 English proficiency

International applicants from countries where English is not the official language and whose Bachelor's program was not officially taught in English must take a TOEFL, IELTS or Cambridge proficiency test. The result of the TOEFL test must be at least 575 (paper based) with partial scores of at least 57, or a score of 232 (computer based) with partial scores of at least 23. The applicant must achieve a minimum score of 90 for the online test with a minimum partial score of 22. The achieved Cambridge proficiency level should be C1. The result of the IELTS test must be at least 6.5 with partial scores of at least 6.0.

6.1.3 Motivation

Demonstrate your specific interest in experimental and applied neuroscience research by describing your academic interest and stating your reasons to apply for our program in a letter of intent/motivation letter. Several documents are required with your application and need to be uploaded (please see the <u>checklist</u> (https://www.eur.nl/sites/corporate/files/2020-10/checklist-required-documents-for-uploading-rm-neuroscience-programme-2021.pdf)).

6.1.4 Selection of applicants

A selection committee will rank all applicants based on their performance in their bachelor's program, their curriculum vitae and motivation. There will be a parallel ranking for non-EU students. (Financial statement of non-EU students will be part of their ranking.)

The most eligible applicants will be invited for an interview. This interview will be added to your overall competence chart and will be part of the final decision for admission to our research master program. The top 20 applicants of the selection committee will be admitted to our research master program. The other applicants will be on a ranked waiting list. Invited applicants have to make a commitment decision before June 1. Open/newly available positions will be filled by the applicants on the waiting list in order of ranking.

Self-assessment of prior knowledge

The Neuroscience research master program will assume that applicants possess basic knowledge of essential biology, biophysics and mathematics. A self-assessment is designed to help you decide if you



meet these essential requirements. We invite you to do our anonymous self-test below and check whether your prior knowledge matches the required level of our program. Your test results are linked to an advice from us, which we hope you will take seriously. Self-assessment

6.2 Application

As of November 1, we will start taking in applications for the next academic year. Students need to apply for our program through an online application system.

Please take into account that in order to complete your application, additional questions in Erasmus University's Admissions Portal need to be answered. The Erasmus University will guide you through the process. This means that you need to start your application at least 5 days before the deadline. After the deadline the portal will be closed and applying is no longer possible.

Do not forget to include all required documents that are mentioned in the form <u>checklist</u> (https://www.eur.nl/sites/corporate/files/2020-10/checklist-required-documents-for-uploading-rmneuroscience-programme-2021.pdf)). Incomplete registrations cannot be processed. <u>Apply</u> (http://www.studielink.nl/).

Should you have any questions, you are welcome to contact the Neuroscience coordinator by email: <u>masterneuroscience@erasmusmc.nl.</u>

Application deadlines

March 1 (non-EU students); April 1 (EU students). <u>P.S. Don't forget to take the anonymous selftest!</u> (https://www.surveymonkey.com/r/68JBX9J)

6.3 Programme Overview

The research master Neuroscience aims to teach and train talented students in the rapidly expanding field of Neuroscience

6.3.1 Curriculum

After the introduction week, the core of the first year program consists of 10 modules of 3 to 8 weeks each, with lectures, self-study problems with group discussions, and training of practical skills. Textbooks used are Principles of Neuroscience, written by Nobel prize winner Eric Kandel and colleagues, and Neuroscience by Dale Purves et al. In addition, selected review and methodology papers reflecting the state-of-the-art in a particular area of neuroscience will be studied and discussed. Presentation skills are trained in journal clubs and tutor sessions.

During the second semester you will elaborate on the research proposal you prepared during the first semester. Guided by your supervisor you will do an extensive literature search, come up with relevant and related novel questions, and design an experimental plan how to tackle these questions. Please see <u>here</u> (https://www.eur.nl/en/erasmusmc/research-master/neuroscience/during-your-studies) for our course offerings

6.3.2 Curriculum Overview

Research Master in Neuroscience - 2022 - 2024

Year 1



Research Master in Neuroscience – 2022 - 2024

Course Code	Course Name	EC Points
RMNS-1.0	Introduction Week	0
RMNS-1.1	Basic (Neuro)Science: Scientific Method + 2 Elective Courses	3
RMNS-1.1.1	Scientific Method (33% compulsory)	1
RMNS-1.1.2	Basic Statistics (Choice 33%)	
RMNS-1.1.3	Basic Molecular Biology (Choice 33%)	2
RMNS-1.1.4	Basic Neurophysiology (Choice 33%)	
RMNS-1.2	Neural Signaling and Neural Computation	6
RMNS-1.3	Structure and Organization of the Nervous System	3
RMNS-1.4	Sensorimotor Systems	7
RMNS-1.5-21	The Changing Brain	7
RMNS-1.6-21	Complex Brain Functions	6
RMNS-1.7	Scientific Writing	3
RMNS-1.8	Labtalks en Seminars - Year 1	2
RMNS-1.9-21	Research Training - Year 1	15
RMNS-1.10	Research Proposal	8
Total Year 1		60

Second Year Neuroscience

Attend workshops of your choice. Workshops are indicated below. Three of the 10 points can be obtained outside the RM Neuroscience program offer (f.e. Animal welfare or eBrok course). One of these 3 points can be obtained by attending a neuroscience conference and presenting data at the conference.

Research Master in Neuroscience - 2022 - 2024

Elective Workshops

Course Code	Course Name	EC Points
RMNS-2.3	Neuro Histology and Neuro Pathology	2
RMNS-2.4	Eye Movements of Mice and Men	1
RMNS-2.5	Statistics Advanced Level	1
RMNS-2.6	f-MRI Analysis Techniques	1
RMNS-2.7	Linear Systems	2



Research Master in Neuroscience - 2022 - 2024

RMNS-2.8	Molecular Neuro Biology/Advanced	1
RMNS-2.10	Genetics and Neurological Diseases	1
RMNS-2.11	Tools and Therapy in Psychiatry	1
RMNS-2.12	Hippocampal Field Recording	1
RMNS-2.14A	Introduction of Matlab/Beginners	1
RMNS-2.14B	Data analysis with Matlab/Advanced	1
RMNS-2.15	Career Outside Academia	1
RMNS-2.16	Neuro-Informatics	1
RMNS-2.17	Introduction to Labview	2
RMNS-2.18	Nerve Conduction Studies	1
RMNS-2.19	High-Performance Brain Simulation	1
RMNS-2.20	Optical Imaging (Live Cell Microscopy)	2
RMNS-2.21	History of Neursocience	1
External Elective	Workshops**	
External Elective Course Code	Workshops** Course Name	EC Points
		EC Points
Course Code	Course Name	
Course Code RMNS-2.1	Course Name Poster Presentation at Conference	1
Course Code RMNS-2.1 RMNS-2.2	Course Name Poster Presentation at Conference External Workshop	1 1
Course Code RMNS-2.1 RMNS-2.2 RMNS-2.9	Course Name Poster Presentation at Conference External Workshop Animal Welfare, Art. 9 eBrok	1 1 3
Course Code RMNS-2.1 RMNS-2.2 RMNS-2.9 RMNS-2.13	Course Name Poster Presentation at Conference External Workshop Animal Welfare, Art. 9 eBrok	1 1 3
Course Code RMNS-2.1 RMNS-2.2 RMNS-2.9 RMNS-2.13 Compulsory com	Course Name Poster Presentation at Conference External Workshop Animal Welfare, Art. 9 eBrok pontents	1 1 3 1,5
Course Code RMNS-2.1 RMNS-2.2 RMNS-2.9 RMNS-2.13 Compulsory con Course Code	Course Name Poster Presentation at Conference External Workshop Animal Welfare, Art. 9 eBrok pontents Course Name	1 1 3 1,5 EC Points
Course Code RMNS-2.1 RMNS-2.2 RMNS-2.9 RMNS-2.13 Compulsory con Course Code RMNS-3.1	Course Name Poster Presentation at Conference External Workshop Animal Welfare, Art. 9 eBrok pontents Course Name Research Training - Year 2	1 1 3 1,5 EC Points 37
Course Code RMNS-2.1 RMNS-2.2 RMNS-2.9 RMNS-2.13 Compulsory con Course Code RMNS-3.1 RMNS-3.2	Course Name Poster Presentation at Conference External Workshop Animal Welfare, Art. 9 eBrok pontents Course Name Research Training - Year 2 Labtalks en Seminars - Year 2	1 1 3 1,5 EC Points 37 3
Course Code RMNS-2.1 RMNS-2.2 RMNS-2.9 RMNS-2.13 Compulsory con Course Code RMNS-3.1 RMNS-3.2	Course Name Poster Presentation at Conference External Workshop Animal Welfare, Art. 9 eBrok pontents Course Name Research Training - Year 2 Labtalks en Seminars - Year 2 Master Thesis	1 1 3 1,5 EC Points 37 3

6.3.3 Remarks

3.2 Lab talks, seminars and journal club (3 EC)



Before every seminar of the Neuroscience seminar series, students will discuss one of the papers of the seminar speaker during a supervised journal club.

Workshops (10 EC)

A total of 10 EC points need to be obtained by following workshops and courses.

** 3 of the 10 points can be obtained outside the RM Neuroscience program offer. 1 of these 3 point can be obtained by attending a neuroscience conference and presenting data at the conference.



7 Genomics in Society

7.1 Admission

7.1.1 Admission requirements Research Master Genomics in Society

We welcome applications from prospective students with a wide variety of backgrounds. Our aim is to be accessible to all students fitting our requirements, irrespective of self-confidence, social background or courage. Each application is considered carefully, taking the individual potential of the applicant into account. You are eligible for admission to this programme if you meet the following criteria: 1.a. An academic bachelor's degree in Biomedical Sciences, Psychology or Sociology, Pedagogical Sciences, or a broad academic bachelor's education with subjects in these disciplines. OR

1.b. Background knowledge in statistics and/or research methodology if you hold an academic bachelor's degree in Medicine, Criminology, Life Sciences or Social Sciences. We ask you to provide evidence of an equivalent of at least 10 EC education in statistics and/or research methodology.

2. Demonstrable affinity with the research field genomics in society

We ask you to demonstrate your affinity with genomics in society by submitting a motivation letter. Please use the template provided on the application page.

3. An intrinsic attraction to our educational vision and purpose

You are required to submit a narrative CV (see template on application page) with a focus on your personal development. We organise a personal meet & greet between each prospective student and some of our core teachers where your motivation letter and CV will be discussed. You will write the motivation letter on the day of the meet & greet and therefore do not need to submit it in the application process. This meet & greet serves as an opportunity for the applicant and teachers to mutually determine how well the goals of the programme match with the personal goals of the applicant.

4. English language proficiency

International applicants from countries where English is not the official language and whose Bachelor's program was not officially taught in English must take a TOEFL, IELTS or Cambridge proficiency test. The result of the TOEFL test must be at least 575 (paper based) with partial scores of at least 57, or a score of 232 (computer based) with partial scores of at least 23. The applicant must achieve a minimum score of 90 for the online test with a minimum partial score of 22. The achieved Cambridge proficiency level should be C1. The result of the IELTS test must be at least 6.5 with partial scores of at least 6.0.

7.2 Application

7.2.1 Application requirements Research Master Genomics in Society

As of November 1, we will start taking in applications for the next academic year. Students need to apply for our programme through an online application system. You can hand in an application via <u>Studielink</u> (https://www.studielink.nl/). Afterwards, you will receive a follow up email from EUR with a student number and a link to the application portal. After you have submitted your application, the programme's admissions committee will assess your request for admission. The processing of your application will take approximately four to six weeks after the applicable deadline. You will be informed about the outcome by email.

Do not forget to include all required documents as described in the admissions' criteria:



- A certified copy of diploma*
- Translated diploma if not in Dutch or English
- <u>Narrative CV</u> (https://www.eur.nl/en/erasmusmc/media/2022-02instructionsnarrativecvresearchmastergenomicsinsociety) (<u>Examples</u> (https://www.eur.nl/en/erasmusmc/media/2022-04-examples-gis-retrospectivenarrative-cvs))
- Proof of English language proficiency**

7.2.2 Application deadline:

- 1 May 2023 EEA applicants
- 1 March 2023 non-EEA applicants
- * If you do not have a diploma yet, you are allowed to provide a certified copy of your grades.
- **Only applicable for international students.

7.3 Programme overview

Genomics in Society

" Talk with people, instead of about people."

7.3.1 What does the curriculum entail?

In year one you will learn in-depth about genomics, about impact research and about ethics, governance and the psychological impact of genetics. In addition, the Genomics & the City assignment will provide you with the knowledge and competences to bridge the gap between genomics and society. As such, the Genomics & the City assignment leads to attainment of the 'in society' end term of the curriculum. You will identify and work on concrete societal issues in the field of genomics in teams of about 5 students guided by a mentor and in co-creation with societal stakeholders. You will learn to employ a variety of research skills to identify and analyze genomic issues in society. Also, you will learn to employ research methods to innovate and design empirically underpinned solutions to improve the issue. As such, you will learn how genomics can contribute to society and what is needed to build bridges between the different perspectives of research and societal stakeholders. The Genomics & the City assignment requires you to integrate knowledge and skills of research, genomics, psychology, ethics, science communication, governance, and innovation.

In year two you will enroll in deepening courses on genomics in society, while you will bring impact research to one of our existing research groups of which you will be a full-fledged member. You will learn from faculty members with international experience whose research groups have international contacts and will yourself collaborate with (inter)national research groups while building bridges to societal stakeholders. Your supervisors will offer access to the working field and offer their insights into the power dynamics* of the field as part of your impact plan approach. Going through the research cycle, you will work towards a thesis that has the format of a paper suitable for publication in an international, peer-reviewed journal, and you will plan for societal impact through both the process of your research and utilization of its results. You will be free to enroll in electives for broadening or deepening your knowledge and we have exchange opportunities with the other research masters of the Erasmus MC Graduate School as well as research master programs outside of the EUR.

Year two ends with the course 'Innovation' which aims to bring all your learnings and products to the level of entrepreneurship. You will analyze what is needed for implementation in terms of infrastructure, scalability, policy and regulation and societal support. Also you will gain awareness of the value of your intellectual property.



7.3.2 Curriculum

Genomics in Society Year 1 Introduction(first week) Period 2 Period 3 Period 4 Period 1 Genomics Track (20 ECs) Genomic Methodology 4 ECs Genomic Engineering 4 ECs **Basics of Life Forensic Genomics** 4 ECs 4 ECs The Basics of Clinical Genetics 4 ECs Creating Common Language Research Track(8 ECs) **Research Design** 8 ECs Set up Buddy System In Society Track (12 ECs) Psychological Aspects of Heredity 4 ECs Governance Start Professional 4 ECs Development Ethics & Genomics 4 ECs Genomics and the City (GATC) Assignment (20 ECs) **GATC Team Building** Phase 1 Phase 2 Phase 3 Phase 4 Design Prototype Identify Analyze

Genomics in Society Year 2

Period 1	Period 2	Period 3	Period 4
Genomics Track (15 Ecs)			
Statistics for Genomics 5 ECs	Advanced Genomics M & Population Gen 6 ECs		Innovation 5 ECs
Electives (14.5 ECs)			
	Electives 13.5 ECs		Intergration Assignment 0,5 ECs
Research Internship (30 ECs)			
	Master Thesis 30 ECs		



8 Additional Information

8.1 Scholarships

Erasmus MC offers a few scholarships/grants to prospective, international students. Tuition fee waivers, however, are not available. <u>Read more about scholarships here</u> (https://www.eur.nl/en/erasmusmc/programmes/practical-matters/scholarships).

8.2 Cum Laude

The research master programmes Genomics in Society, Infection & Immunity, Molecular Medicine and Neuroscience award Cum Laude (see <u>Rules and Regulations Examinations Research Masters</u> (https://www.eur.nl/en/erasmusmc/programmes/rules-and-regulations)). The research master programmes Health Sciences and Clinical Research and de post master Health Sciences (70 EC) award Cum Laude only to students who started their master before the study year 2021-2022. As of 2021-2022 a revised curriculum has started for both programmes without the option to award cum laude.

8.3 Detailed course descriptions

Detailed course descriptions exist for each master's programme. Current students can find these descriptions on educational platform, such as Canvas, SIN-online of an online student manual. The descriptions for the master programmes Health Sciences (research master and postmaster), Clinical Research, Infection & Immunity and Genomics in Society programs are found on Canvas. The course descriptions of the Molecular Medicine master's program are found on the online student manual and on SIN-online.

8.4 Iudicium Abeundi

The ludicium Abeundi refers to the termination of, or the refusal of enrollment as a student or as an external student at the educational institution on the grounds of conduct and/or statements that render him or her unsuitable for the practice of the profession for which the Program is training. Background and details on this procedure are given in the national Protocol Iudicium Abeundi. Read more over the procedure at Erasmus MC in de documents below (one in Dutch, one in English).

8.4.1 Downloads

ludicium-abeundi-en.pdf https://www.eur.nl/en/erasmusmc/media/2023-05-ludicium-abeundi-en iudicium-abeundi-NL.pdf https://www.eur.nl/en/erasmusmc/media/2023-05-iudicium-abeundi



9 Confidential counsellors

9.1 Direct contact with a confidant at Erasmus MC

Students who are confronted with inappropriate behavior in any form can contact one of the confidants at Erasmus MC directly. The contact details are listed below. If it is not clear who to contact, a message with name and phone number can be sent to studieadviseur.gnk@erasmusmc.nl (this is a confidential address managed by the study advisors in Medicine). Contact will then be made by the study advisor with the goal of outlining an appropriate follow-up course of action.

9.2 Complaints Committee inappropriate behaviour

P.O. Box 2060 3000 CA Rotterdam The Netherlands

Anke Vink	Advisor	Telephone: 06 229 27 07 E-mail: j.vink@erasmusmc.nl
Debra Young	Staff advisor contract management Service Company – Purchasing & Facility Management	Telephone: 06 285 864 39 E-mail: d.young@erasmusmc.nl
Liesbeth Eerland	Medical Social Worker	Telephone: 06 500 322 89 E-mail: b.eerland@erasmusmc.nl
Rebekka da Costa	Advisor business operations Thema Dijkzigt	Telephone: 06 285 865 06 E-mail: r.dacosta@erasmusmc.nl
Ron de Bruir	Principal Investigator/ scientific researcher department Heelkunde	Telephone: 06 486 183 08 E-mail: r.w.f.debruin@erasmusmc.nl