



# Study handbook

Ph.D. Medical Research - International Health (Ph.D. MR – IH)



CIH<sup>LMU</sup> Center for International Health,  
Ludwig-Maximilians-Universität München  
Institute of Infectious Diseases and Tropical Medicine

The study handbook for the Ph.D. Program Medical Research – International Health (Ph.D. MR – IH) contains important information about the organization and curricular structure of the program. It provides orientation for everyone involved in the program, from future to current students, as well as for all academic supervisors, lecturers and other staff of the University Hospital of Ludwig-Maximilians-Universität (LMU) Munich.

The Teaching and Training Unit at the Institute of Infectious Disease and Tropical Medicine at the University Hospital LMU Munich prepared this study handbook. Please note that it is not legally binding. Only the official publications of the study and examination regulations of the Ph.D. MR - IH program in German are legally binding. If you have any further questions or need advice, please do not hesitate to contact the Ph.D. MR - IH Program Coordination. We look forward to hearing from you.

For up-to-date information, activities and events of the CIH<sup>LMU</sup> Center for International Health, please visit our website: <https://lmu-klinikum.de/cih-lmu>

Ph.D. MR - IH Program Coordination  
Teaching & Training Unit at the Institute of Infectious Diseases and Tropical Medicine  
University Hospital, LMU Munich

Leopoldstraße 5  
80802 Munich  
E-Mail: [cih.phd@lrz.uni-muenchen.de](mailto:cih.phd@lrz.uni-muenchen.de)  
Telephone: +49 (0)89 4400 59830



# Table of contents

<b>TABLE OF CONTENTS .....</b>	<b>3</b>
<b>WELCOME .....</b>	<b>1</b>
<b>INTRODUCING OURSELVES.....</b>	<b>2</b>
THE LUDWIG-MAXIMILIANS-UNIVERSITÄT (LMU) MÜNCHEN.....	2
THE MUNICH MEDICAL RESEARCH SCHOOL (MMRS) .....	3
THE CIH <sup>LMU</sup> CENTER FOR INTERNATIONAL HEALTH .....	4
<b>VISION AND AIM OF THE PH.D. MR - IH PROGRAM .....</b>	<b>5</b>
<b>BEFORE YOUR STUDY .....</b>	<b>7</b>
INTRODUCING THE CIH <sup>LMU</sup> PH.D. PROGRAM MR – IH .....	7
APPLICATION AND SELECTION.....	8
ACCEPTANCE .....	8
<b>AFTER YOUR STUDY .....</b>	<b>9</b>
<b>MODULE BLOCK I IN MUNICH.....</b>	<b>10</b>
LEAVING FOR MUNICH.....	10
COMPUTERS AND SOFTWARE .....	11
ARRIVAL IN MUNICH .....	11
ACCOMMODATION IN MUNICH .....	12
EXPENSES AND FEES .....	12
USEFUL CONTACTS .....	13
THE FIRST WEEKS IN MUNICH .....	14
<i>Enrolment .....</i>	<i>14</i>
<i>Introduction to International Health Facilities .....</i>	<i>14</i>
<i>MMRS Opening Ceremony.....</i>	<i>14</i>
<i>LMUcard .....</i>	<i>15</i>
<i>Public Transportation.....</i>	<i>16</i>
<i>Student canteen.....</i>	<i>18</i>
<i>German Language Classes .....</i>	<i>18</i>
<i>Google calendar and LMU learning platform Moodle.....</i>	<i>18</i>
<i>LMU University library .....</i>	<i>19</i>
<i>Bavarian State Library.....</i>	<i>19</i>
<i>LMU Writing Center .....</i>	<i>19</i>
<i>LMU International Student Guide .....</i>	<i>20</i>
<i>LRZ e-mail account.....</i>	<i>20</i>
<b>LEAVING MUNICH AFTER MODULE BLOCK I AND II .....</b>	<b>20</b>
<b>CURRICULUM OF THE PH.D. MR – IH PROGRAM .....</b>	<b>21</b>
PROGRAM DESIGN .....	21
MODULE BLOCK I (MB I).....	22
<i>Orientation courses.....</i>	<i>22</i>
<i>Advanced Methods .....</i>	<i>24</i>
RESEARCH PERIOD I (RP I) .....	26
<i>Research Progress Reports (RPRs).....</i>	<i>26</i>
<i>Workshop Participation .....</i>	<i>26</i>

MODULE BLOCK II (MB II) .....	26
<i>Research Skills</i> .....	27
<i>Soft Skills</i> .....	27
<i>Advanced Modules</i> .....	27
<i>Research Project Presentation II</i> .....	27
<i>Project Management- Symposium Planning &amp; Execution</i> .....	28
RESEARCH PERIOD II (RP II) .....	29
<i>Conference Participation</i> .....	29
GRADUATION.....	29
<i>Ph.D. thesis (dissertation)</i> .....	29
<i>Review Period</i> .....	30
<i>Ph.D. thesis disputation</i> .....	30
STUDY AND EXAMINATION PERFORMANCE .....	31
<i>Overall grade</i> .....	31
<i>Examination procedure</i> .....	31
<i>Repetition of examinations</i> .....	31
<i>Attendance policy</i> .....	31
EXTENSION: RESEARCH PERIOD III AND IV (RP III AND IV) .....	32
<b>THE PH.D. CANDIDATES' RESPONSIBILITIES .....</b>	<b>33</b>
<b>FINALIZATION.....</b>	<b>34</b>
TERMINOLOGY .....	34
<i>Doctoral Committee</i> .....	34
<i>Supervisory Committee</i> .....	34
<i>Examination Committee</i> .....	34
THESIS PREPARATION.....	35
<i>Monographic thesis</i> .....	35
<i>Cumulative thesis</i> .....	37
THESIS SUBMISSION.....	39
<i>Application for admission</i> .....	39
<i>Plagiarism check</i> .....	39
<i>Documents that you need to submit</i> .....	40
THESIS EVALUATION AND REVISION.....	43
ORAL DEFENSE (DISPUTATION) .....	45
DELIVERY OF THE STATUTORY COPIES TO THE LMU LIBRARY .....	46
<i>Registration</i> .....	46
<i>Submitting your thesis to the LMU University Library</i> .....	47
<i>Submission form for electronic theses</i> .....	47
<i>Blocking note due to a patent application</i> .....	48
<i>Blocking note due to publishing in a journal</i> .....	48
<i>Contacting the Department of Dissertations</i> .....	48
ISSUING OF THE PH.D. CERTIFICATE .....	49
PROCEDURE IN CASE OF PROLONGED STUDIES .....	50
<b>LEAVE OF ABSENCE .....</b>	<b>51</b>
APPLYING FOR LEAVE OF ABSENCE AT LMU.....	51
<i>Application deadlines</i> .....	51
<i>Fees and continuation of registration</i> .....	51
REASONS FOR GRANTING A LEAVE OF ABSENCE .....	52
APPLYING FOR A LEAVE OF ABSENCE TO THE CIH <sup>LMU</sup> PH.D. PROGRAM COORDINATION .....	52
<b>DETAILED MODULE DESCRIPTIONS.....</b>	<b>53</b>

CORE COURSE MODULES .....	53
<i>Orientation Courses</i> .....	53
<i>Advanced Methods</i> .....	56
ADVANCED MODULES (AM) .....	58
<b>APPENDICES .....</b>	<b>59</b>
EUROPEAN CREDIT TRANSFER SYSTEM (ECTS): PH.D. MR – IH CREDITING .....	59
GERMAN GRADING SYSTEM FOR UNIVERSITIES .....	60
MODULE OVERVIEW .....	61
DETERMINING THE RANK OF A JOURNAL IN THE JOURNAL CITATION REPORTS .....	62
FINALIZATION CHECKLISTS .....	67
TTU GUIDANCE ON AI.....	68

# Welcome

Dear students,

Welcome to our Ph.D. Medical Research - International Health program!

Studying is an exciting process in which you can follow your own interest, deepen your prior knowledge and achieve your educational and professional goals. With a Ph.D. in International Health, you have chosen a very important and highly topical field of study. Since 2010, the CIH<sup>LMU</sup> Ph.D. Program Medical Research – International Health offers academic education and a research environment to scientists from low- and middle-income countries, focusing on the UN Millennium Development Goals and the post-2015 Development Agenda. The Teaching & Training Unit at the Institute of Infectious Diseases and Tropical Medicine, as a member institution of the CIH<sup>LMU</sup> Center for International Health, is always committed to bring inspired people together in programs like this one, and we are very much looking forward to accompany you on this journey.

The program offers a multidisciplinary focus on all relevant aspects of International Health. You will participate in lectures and discussions on current global health issues and gain insights into professional research methods. In addition, you will be able to further shape and deepen your soft skills, which are essential for scientific and interpersonal communication. Professional and experienced lecturers lead all seminars and lectures. Most of them will certainly be able to bring several years of practical experience to the discussions themselves.

With a limited number of places each year, we ensure that participants receive individual and close attention from the program coordination. In addition, the limited number of participants provides the opportunity for everyone to actively participate in the seminars, lectures and discussions. Another special feature of the program is the interaction with other international students from diverse academic backgrounds and countries. Equipped with this knowledge and experience, you will eventually be able to shape the future of International Health.

We are very pleased to welcome you to this vibrant learning environment as Ph.D. MR - IH student and wish you all the best during your studies at the Teaching & Training Unit of the Institute of Infectious and Tropical Medicine of the University Hospital of Ludwig-Maximilians-University Munich.

**Prof. Dr. med. Michael Hoelscher**  
Director of the Institute of  
Infectious Diseases and Tropical  
Medicine

**PD Dr. med. Guenter Froeschl**  
Director of the Teaching & Training Unit,  
Board Member of the CIH<sup>LMU</sup>

**Adea Borova**  
Ph.D. MR - IH Program  
Coordinator

# Introducing ourselves

## The Ludwig-Maximilians-Universität (LMU) München

Ludwig-Maximilians-Universität München is one of the leading research universities in Europe, looking back on a ~550-year tradition. Since its foundation in Ingolstadt in 1472, it has been committed to the highest international standards of excellence in research and teaching.



When Duke Ludwig IX the Rich of Bavaria-Landshut obtained papal permission to found Bavaria's first university in 1472, no one could have imagined that the institution would relocate twice in the following five hundred years and become one of Germany's largest universities and one of the country's most important research centers. 300 years after its founding, the university first moved to Landshut before being relocated to the heart of the monarchy's residential city of Munich at the beginning of the 19<sup>th</sup> century. Subjected to the dictates of the National Socialists, the university experienced the darkest period of its history in the 1930s and 1940s. Despite extensive destruction during the war, the university was the

venue for the Bavarian Constitutional Convention of 1946, which was held in the Aula Maxima. Thanks to the combined efforts of many, the LMU was rebuilt and developed into one of the leading universities in Europe in the following decades.

Today, with its highly diversified array of disciplines, organized in 18 faculties, it has outstanding potential for pioneering research and enjoys a high reputation for its extensive range of subjects. Its vibrant campuses are distributed in and around Munich, a city renowned for culture and the sciences. Here you can learn from leading academics at one of Germany's most renowned universities. Study in the heart of Munich while gaining first-hand practical experience.

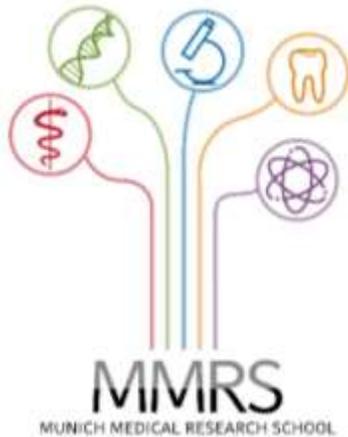
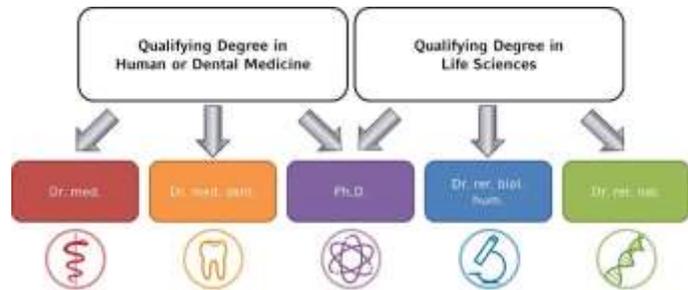


In 2020, more than 52,450 students were enrolled and 780 professors were conducting research and teaching at LMU. LMU continues to build on its distinctive identity and core competencies in research and teaching to meet both future academic challenges and the complex demands of our changing world.

For more information on LMU's history please visit: <https://www.lmu.de/en/about-lmu/lmu-at-a-glance/history/index.html#>

## The Munich Medical Research School (MMRS)

The Munich Medical Research School is a central institution of the LMU Medical Faculty. It is designed as an umbrella structure for all doctoral programs in the field of human medicine, dentistry, human biology and life sciences.



One of the main tasks of the MMRS is the establishment of Ph.D. programs according to the examination regulations for the 'Ph.D. Medical Research' in order to promote the internationalization of the medical faculty. The aim of the program is to enable promising doctoral students to participate in structured research training programs focusing on current topics in medical research. Here, the focus is particularly on biomedical, experimental, clinical or translational research, especially in the fields of epidemiology or public health. As a central point of contact, the MMRS office provides advice to the faculty on all aspects of developing new Ph.D. programs and conducting doctoral studies.

The MMRS office is also the central administrative unit where all matters concerning doctoral studies are managed. A central database of all Ph.D. candidates is maintained, admissions and examinations are organized, and certificates are prepared and issued.

All doctoral candidates admitted to the CIH<sup>LMU</sup> Ph.D. Medical Research – International Health program are automatically members of the MMRS.



For further information, please visit: <https://www.en.mmrs.med.uni-muenchen.de/index.html>

## The CIH<sup>LMU</sup> Center for International Health



The CIH<sup>LMU</sup> Center for International Health was founded in 2009 as an integrative institution for international cooperation at LMU Munich within the framework of the Excellence Centres for Exchange and Development (exceed) program of the German Academic Exchange Service (DAAD) and the German Federal Ministry for Economic Cooperation and Development (BMZ). Within LMU, four faculties and twelve institutes were involved in the planning and establishment. They collaborate with more than 50 universities and ministries worldwide, with the World Health Organization and other stakeholders in the health sector.

The interdisciplinary CIH<sup>LMU</sup> Center for International Health addresses the complex issues of communicable and non-communicable diseases in low-resource settings, as well as aspects of cross-national public health policy and global health. With regard to research, the CIH<sup>LMU</sup> gives fundamental awareness to the Millennium Development Goals and the post-2015 agenda by the United Nations.

Since the shortage of medical and life science personnel is a major obstacle to progress in most countries with limited resources, CIH<sup>LMU</sup> focuses on training researchers and personnel in the health sector. To achieve this goal, CIH<sup>LMU</sup> is continuously strengthening its network of long-term partnerships with universities and institutions in Africa, South Africa, South America and Asia.



By supporting capacity building in low- and middle-income countries, CIH<sup>LMU</sup> is empowering a generation of young scientists and physicians to contribute to the solutions of local and regional development-related challenges, particularly in the fields of health and disease.

For further information, please visit: <https://lmu-klinikum.de/cih-lmu>

## Vision and aim of the Ph.D. MR - IH program

Health science in general deals with the mental, physical, psychological and social conditions of health and disease of a population. International Health goes a step further and addresses these issues not only across regional and national, but also across disciplinary boundaries. The aim of International Health is to prevent and contain disease in the global population while promoting health and longevity. A special focus hereby is on low- and middle-income countries. To accomplish this task, health scientists with broad interdisciplinary knowledge are needed to sustainably improve global health. The Ph.D. program Medical Research - International Health therefore has an interdisciplinary approach and provides students with competencies in global public health, infectious and tropical medicine, chronic and non-communicable diseases, health economics, health management, and international social and political sciences. Furthermore, the program offers students the opportunity to consider health in the context of environmental and social factors across regional and national boundaries. On this basis, the program contributes to the United Nations Development Goals (SDGs):

- Educating people by developing expertise, the ability to judge, and to argue global health issues on a scientific basis (SDG 3).
- Supporting the next generation of scientists from the field of International Health, especially from low- and middle-income countries (SDG 4).

In addition, our curriculum offers a range of soft skill courses that enable Ph.D. candidates to go about their different roles as students, project managers and team members effectively. They will improve their own project and conflict management skills, presentation techniques and intercultural communication competences and actively apply them in a professional environment. The interdisciplinary training in International Health also focuses on the addition of methodological elements and a combination of theoretical and practical components.

The introductory course (Core Course) in the 1st semester from October to December will take place in Munich. The elective courses (Advanced Modules), on the other hand, will take place in the 3rd semester from January to March. All modules are accredited by the tropEd network, which ensures the quality of content and form. During the so-called Core Course, Ph.D. students share most of the lectures with students of the CIH<sup>LMU</sup> master's program as well as with physicians completing a diploma course in tropical medicine at the Institute of Infectious Disease and Tropical Medicine of the LMU Munich University Hospital.

Networking is extremely important for our vision of being able to work globally. By bringing together international participants, as well as collaborating with renowned scientists in the field of International Health, the Ph.D. MR - IH provides an excellent networking opportunity where students can build personal bonds and establish working relationships across the globe through off-campus activities. In addition, the Ph.D. MR - IH program provides students with the skills they need to independently address, analyze and find appropriate solutions to globally interrelated health problems.

Upon completion of the program, our graduates are therefore able to, among other things,

- apply their acquired knowledge of core areas of international, medical health problems,
- understand complex, interdisciplinary issues in International Health and develop potential solutions,
- discuss specific topics of major infectious and non-communicable diseases and some clinical cases,
- identify and analyze interrelated determinants of health and the major health problems in low- and middle-income settings and on a global scale, thereby incorporating current research findings,
- critically reflect on the collection, analysis, and evaluation of qualitative and quantitative data relevant to improving health and equity of care,
- critically analyze and evaluate mixed-methods approaches and scientific publications relevant to improving health and health care in low- and middle-income societies,
- design and structure a research plan for an individual research project,
- generate knowledge through the use of research methods and enable scientifically informed decision making,
- use their knowledge of different approaches to health care financing,
- propose sustainable improvements to health systems that address inequities and take different cross-cultural settings and social, legal, and ethical responsibilities into account,
- describe the role, decision-making process, and influence of global health policy actors,
- critically assess public health systems in different countries,
- explain principles and limitations of humanitarian aid,
- actively apply their acquired skills and learned methods for giving speeches and presenting scientific results,
- apply techniques to successfully plan and manage projects and organize scientific events,
- collaborate and communicate clearly in a multidisciplinary and multicultural environment, and
- apply their acquired knowledge of intercultural communication and conflict management in multinational teams.

Our graduates are thus well prepared to work in academic (e.g. teaching and research institutions) as well as practical professional environments (e.g. public companies, healthcare or non-profit organizations, etc.). Our vision is to contribute with our graduates to a continuous improvement of public global health especially in low- and middle-income countries.

## Before your study

Before you start your studies, please inform yourself about the Ph.D. MR - IH program and its structure. Our website and the study handbook both contain important information and provide you with a good overview. Once you have decided to pursue a Ph.D. in Medical Research - International Health, you are ready to take the next steps.

### Introducing the CIH<sup>LMU</sup> Ph.D. Program MR – IH

The three-year curriculum of the Ph.D. Program Medical Research – International Health is specifically designed for health professionals who can choose from a wide range of disciplines for their research topic. At LMU, a wide range of supervisors is available from the fields of basic sciences, clinical research, epidemiology and public health, health economics, health systems research and health governance.

The Ph.D. curriculum is designed as a sandwich program covering a minimum of three years, with two periods to be spent in Munich (Module Block I and II) at the Ludwig-Maximilians-Universität (LMU), lasting three months each. In between doctoral candidates will conduct their research in their home countries. The last and final stay in Munich will be a short period of about two weeks, during which the defense and the MMRS graduation ceremony will take place.

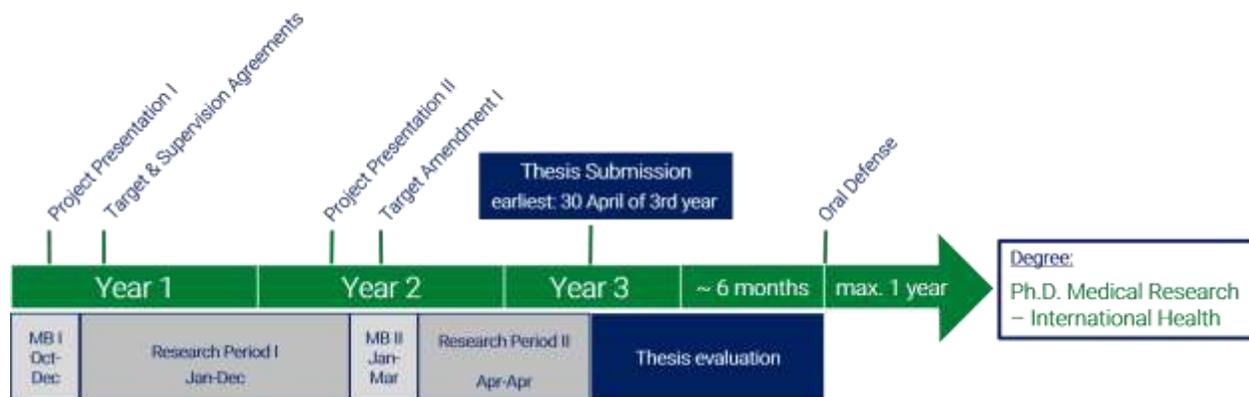


Fig. 1 General Timeline of the Ph.D. Program Medical Research – International Health

As part of the Ph.D. program, you must earn a total of 180 European Credit Transfer System (ECTS) points. The European Credit Transfer System was developed as part of the EU mobility program Erasmus with the primary aim to facilitate the transfer of academic credits between universities in two countries. For this purpose, ECTS points are assigned to each module. The number of ECTS points is based on the total amount of work required by the students to achieve the learning objectives of respective module. One ECTS point corresponds hereby to approximately 30 working hours (contact time, self-study, exam preparation, etc.).

The language of instruction for the Ph.D. MR – IH is English only. The academic title awarded upon successful graduation is: **Doctor of Philosophy (Ph.D.) in Medical Research – International Health**

## Application and Selection

The application period starts every year on 01 December. Until the end of January of the following year, applicants from all over the world can apply for the Ph.D. Medical Research – International Health program via an [online portal](#). The online application portal is accessible through the [CIH<sup>LMU</sup> website](#). In the following weeks, the CIH<sup>LMU</sup> selection board will evaluate all applications, and the final decision will be made at a meeting in late March. In early April, all applicants will be notified of the CIH<sup>LMU</sup> selection board's decision.

The minimum requirement for enrollment in the Ph.D. program Medical Research – International Health is a Master's degree or a degree recognized as equivalent, which entitles the holder to enroll in a doctoral program in Germany. Letters of recommendation from two referees must be submitted with the application. An essential requirement for admission to the program is that supervisors from Ludwig-Maximilians-Universität München are available to supervise the respective research project. Further information on the admission criteria can be found on the [CIH<sup>LMU</sup> website](#).

Since CIH<sup>LMU</sup> does not fund research and living expenses, sufficient funding is required for the research project itself and for the living expenses during all phases of the doctoral training (incl. stays in Munich). However, CIH<sup>LMU</sup> may be able to offer travel and/or subsistence scholarships to needy students. For information on the current availability of scholarships, please visit the [CIH<sup>LMU</sup> website](#).

## Acceptance

Accepted applicants will receive an email notification from the CIH<sup>LMU</sup> Ph.D. program coordination. With this email, students will receive additional information and documents that must be filled in and emailed to the CIH<sup>LMU</sup> Ph.D. program coordination prior to their arrival in Munich. In addition, all signed originals must be submitted to the CIH<sup>LMU</sup> Ph.D. Program Coordination upon arrival in Munich. Those who are late in responding to the email notification may be excluded from the Ph.D. program at any time.

The required documents are:

- Signed Letter of Acceptance
- Filled-in Pre-Departure Data Sheet
- Scanned copy of passport
- Scholarship Certificate (only for candidates who have been awarded a CIH<sup>LMU</sup> scholarship, or an EPOS scholarship)

In addition, all prospective doctoral students must remit an advance payment of € 350 to CIH<sup>LMU</sup> to confirm their participation in the program. After that, the prospective Ph.D. candidates and their respective supervisors will be introduced to each other.

All prospected Ph.D. candidates will receive a Supervision Agreement template, which has to be filled in, printed and signed by both themselves and their respective supervisors. Since a local supervisor is required to support the candidate in his/her country of residence or research, the local supervisors' signature must be obtained before departure for Munich. LMU supervisors may countersign the Supervision Agreement after the Ph.D. candidates' arrival in Munich. We recommend that Ph.D. candidates keep a copy or a second original version of the Supervision Agreement for their own records. All appointments for meetings with the supervisors, e.g. for signature collection, must be arranged by the doctoral students themselves.

The Ph.D. candidates' respective research project proposal should be revised after acceptance into the Ph.D. program if the supervisors consider a revision necessary. Revised proposals must be emailed to the CIH<sup>LMU</sup> Ph.D. program coordination; originals do not need to be submitted here.

All prospective Ph.D. candidates will receive a LMU university email account after admission to the Ph.D. program. All communication concerning the Ph.D. project should be carried out using this official email account.

## After your study

The Ph.D. Medical Research - International Health optimally prepares you for the challenges in your future professional practice. You will be prepared to function as independent researcher who can take an interdisciplinary approach to International Health issues. In addition to the basic theoretical knowledge, you will acquire a wide range of in-depth and practical skills that allow for an optimal start and/or continuation to your professional career in the field of International Health.

The contact to our Ph.D. MR - IH program alumni is particularly important for us and the realization of our vision. Therefore, we would be happy if you would join our alumni network after your studies. Sign up for our alumni mailing list and join our LinkedIn group 'CIH Alumni – because we care'. Our alumni network thrives on your commitment.



In addition, after successful graduation, you can become a member of the CIH<sup>LMU</sup> Center for International Health. Why you should become one? Because you will:

- have access to the members directory and the CIH<sup>LMU</sup> network portal,
- obtain a LMU User-ID,
- have access to the LMU virtual library and
- be able to participate and/or organize symposia, congress, workshops or summer schools in your region.

Be a promoter, an advisor and supervisor. For more information about the CIH<sup>LMU</sup> membership, please follow the [link](#).

# Module Block I in Munich

## Leaving for Munich

There are some practical things that every Ph.D. candidate has to take care of before traveling to Munich. All doctoral students must be in possession of a residence permit or a valid visa that allows them to stay in Germany for the minimum period of three months during the module blocks. All Ph.D. candidates have to apply for the visa when still being in their respective country of residence. Additionally, carrying an international Vaccination Card is strongly recommended.

The CIH<sup>LMU</sup> Ph.D. Program Coordination will provide the following documents required for the visa application:

- Letter of Acceptance to the Ph.D. program
- Invitation Letter
- Confirmation of Acceptance to Doctoral Studies in Medical Research (Ph.D.)
- LMU Letter of Admission
- DAAD Health and Liability Insurance Certificate

Health and liability insurance is mandatory for enrollment at LMU. The Ph.D. Program Coordination will assist Ph.D. candidates who wish to be insured by the DAAD with the application process. The monthly insurance rate is to be paid in cash to CIH<sup>LMU</sup>.

In addition, if you have been awarded a CIH<sup>LMU</sup> scholarship for living expenses and/or travel costs, you will receive a:

- Scholarship Certificate
- DAAD Health and Liability Insurance Certificate

Scholarship holders are required to be insured by the DAAD. The Ph.D. Program Coordination will help you apply for insurance and the monthly rate will be directly deducted from the scholarship.

- Flight ticket reservation

Moreover, please don't forget to bring the following items with you to Munich:

- personal laptop with updated office software and sufficient memory capacity (see Computers and Software)
- all required original documents (see Enrolment)
- Bed sheets (90 cm x 200 cm), pillow and blanket (a bedding set can be purchased from CIH<sup>LMU</sup>)
- appropriate clothing for Munich climate (warm jacket, trousers, etc.)
- Firm shoes
- a set of smart casual dress
- Towels

All clothing and items that you bring to Munich or purchase here after your arrival must be taken with you when you leave Munich. CIH<sup>LMU</sup> cannot provide storage space for personal items.

**Please note**, shipments of personal items will not be accepted at the CIH<sup>LMU</sup> office.

## Computers and Software

It is mandatory that all Ph.D. candidates have access to a private notebook during their doctoral studies. It must be brought to Munich for each stay (Module Block I and II, Defense Period). Minimum performance recommendations for a laptop are:

- Minimum processor speed: 1 GHz  
→All Office applications should run smoothly at an acceptable speed.
- Minimum available hard disk space: 10 GB
- USB port
- WLAN (for connectivity in public and lecture spaces)
- Power sockets are European round two pronged and 220V

Some software packages that are important for your Ph.D. studies will be made available to you during the first weeks of Module Block I.

## Arrival in Munich

Upon first arrival in Munich:

**Important:** Please make sure that you are able to carry your own luggage, as most likely you will be taking the public transport to your accommodation. Ensure to always keep CIH coordination updated regarding your whereabouts, and if any changes are happening to your travel plans.

## Accommodation in Munich

Starting from Module Block I 2025, the CIH<sup>LMU</sup> Ph.D. Program Coordination will unfortunately no longer be able to provide student dormitory rooms for the PhD students. Each individual is responsible for finding, and arranging their own accommodation for their stay in Munich. The CIH<sup>LMU</sup> can offer suggestions on how to look for housing options, as well as support to avoid possible fraud schemes.

Before you finalize any accommodation bookings, each student is **highly encouraged** to check in with the PhD program coordination first, for an additional check into the credibility of the housing.

Approximate costs for accommodation:

- Rent for a room in the city 600-700 EUR (subject to change)
- Deposit for kitchen utensils 25 EUR

The deposits will be refunded if the room and kitchen utensils are left clean and undamaged.

The due deposits will be paid at the first payment appointment.

Please note: tap water is drinkable in Munich!

## Expenses and fees

Participation in an international Ph.D. program has financial implications for each Ph.D. candidate. An estimate of the costs incurred by Ph.D. candidates accepted into the CIH<sup>LMU</sup> Ph.D. MR – IH program can be found here: [costs](#). There you will also find detailed information on living costs during the mandatory stays in Munich, such as travel costs, accommodation, insurance, public transportation, LMU student support fees, excursion costs, living expenses, LMU administration fee, etc. Please note that all costs are estimates and may vary.

Each doctoral student has to pay an administration fee of 50 EUR per month during his/her stays in Munich. These student support fees will be used for leisure activities and social events organized by the Ph.D. Program Coordination for the doctoral students. Each semester, the LMU administration fee of 85 EUR (subject to change) is due in order to remain enrolled at the university. All doctoral students are expected to pay the fees for the following semesters in advance before leaving Munich for their home country.

**Important notice:** All Ph.D. candidates must remain enrolled at the LMU München for the entire core study period (3 years, 6 semesters).

## Useful contacts

**Emergency Numbers:** In case of emergency during your stay in Munich

- Police 110
- Fire Department 112
- Emergency Medical Services 112
- Poison Emergency Medical Services 089-19240
- Patient Transport Ambulance 089-19222

### **Institute of Infectious Diseases and Tropical Medicine**

Leopoldstraße 5

80802 Muenchen, Germany

Email: [tropinst@lrz.uni-muenchen.de](mailto:tropinst@lrz.uni-muenchen.de)

### **CIH<sup>LMU</sup> Teaching & Training Unit (T&TU)**

PD Dr. med. Guenter Froeschl

Phone: +49 (0)89 4400 59820

Director of the Teaching & Training Unit

Adea Borova

Phone: +49 (0)89 4400 59830

Ph.D. MR – IH Program Coordination

Vahuka Qais Valiyakath, MPH

Phone: +49 (0)89 4400 59815

M.Sc. IH & DTMIH Program Coordination

### **CIH<sup>LMU</sup> Ph.D. Program Coordination Office**

Tuerkenstraße 89

80802 Muenchen, Germany

Email: [cih.phd@lrz.uni-muenchen.de](mailto:cih.phd@lrz.uni-muenchen.de)

T&TU Office hours: Monday to Friday, 9:00 to 17:00

## The first weeks in Munich

During the first weeks of Module Block I, all Ph.D. students will be guided through all formalities and practical matters concerning their studies and stay in Munich. They will further be familiarized with the logistics and the study process. A member of CIH<sup>LMU</sup> Ph.D. Program Coordination will explain and clarify all important administrative aspects of the program and will be available to answer any questions. This is also an important time to get to know the other new Ph.D. candidates.

### *Enrolment*

During the first week after arrival in Munich, all Ph.D. candidates will be officially enrolled at LMU Munich. For that, it is mandatory to provide the following documents:

- Passport
- Original High School Diploma
- Original Bachelor Degree(s) Certificate(s)
- Original Bachelor Transcript(s) of Records
- Original Master Degree(s) Certificates(s)
- Original Master Degree(s) Transcript(s) of Records
- Original certificates of further academic degrees
- Certificate of de-registration (“Exmatrikulationsbescheinigung”: proof of removal from the register of students if you have ever studied at a German university before)
- Original and signed Letter of Acceptance
- Original Supervision Agreement signed by Local Supervisor
- Proof of individual health and liability insurance

**IMPORTANT: Please note that all documents must be original. Copies, even if certified, will not be recognized by the CIH<sup>LMU</sup> or the student administration of LMU Munich!**

### *Introduction to International Health Facilities*

This event offers you the opportunity to get acquainted with your lecture environment, to meet administrative staff, and to visit the tropical medicine outpatient clinic and laboratories.

A small, specialized library for study-related literature is available for your use in the CIH<sup>LMU</sup> office building at Tuerkenstraße 89. Library books can be borrowed for a period of up to two weeks. To do so, you will need to fill in your name and the date on a small card located on the back of each book. Once completed, please turn the card in to the Ph.D. MR - IH Program Coordination. Please note that books marked with a red sticker can only be read in the library and cannot be borrowed.

### *MMRS Opening Ceremony*

This event is organized during Module Block I to welcome the new Ph.D. candidates at MMRS and the CIH<sup>LMU</sup>. This is an excellent opportunity for all doctoral students to meet the academic and administrative staff of both the LMU München and CIH<sup>LMU</sup>. The opening ceremony will be rounded off by a get together with drinks and buffet. The dress code is ‘smart casual’.

## LMUcard

The LMUcard is LMU's multifunctional chip card, which is functioning as student ID since the summer semester 2019. To apply for the LMUcard, you need to log into your online LMU user account. The Ph.D. Program Coordination will help you fill out the application after your successful enrollment at the LMU. The LMUcard will have a visible validity mark that can be updated by validation at the validation terminals (Fig. 2). After successful re-registration, you can re-validate your LMUcard a few weeks before the start of the new semester. The validity period will then be updated to include the current and the following semester. As you will only be in Munich during the Module Blocks, a re-validation of the LMUcard is only necessary during Module Block II.

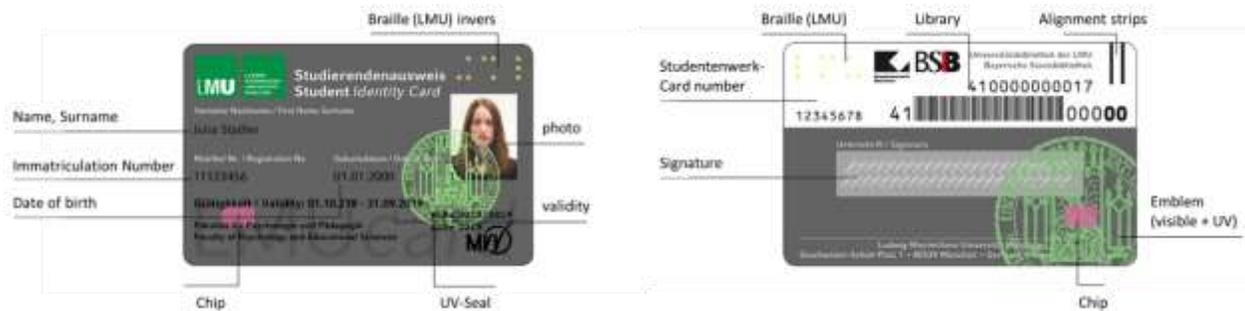


Fig. 2 Design and Characteristics of the LMUcard.

The LMUcard has the following features for students:

- Student ID  
The LMUcard identifies you as a LMU student within the specified validity period.
- Payment Features  
After charging your LMUcard at the charging stations, you will be able to pay cashless in all LMU cafeterias, cafés, lounges, espresso bars and vending machines.
- Library ID  
The LMUcard is valid as a library ID for the University Library and the Bavarian State Library.

## Public Transportation

The public transport network in Munich (Münchner VerkehrsVerbund, MVV) consists of the suburban train (S-Bahn), subway (U-Bahn), tram and bus. The S-Bahn also provides access to the greater Munich area. So if you want to take a trip to the charming countryside, using the S-Bahn is highly recommended.



The public transportation network in Munich is divided into seven tariff zones:

- Zone M (white zone, Fig. 3)  
Zone M covers the entire Munich city area and in some cases extends beyond it.
- Zone 1 to 6 (colored zones, Fig. 3)  
These zones cover the districts belonging to the MVV area. Colors are ranging from yellow (Zone 1) to dark blue (Zone 6). The Munich airport is located in Zone 5 (orange).

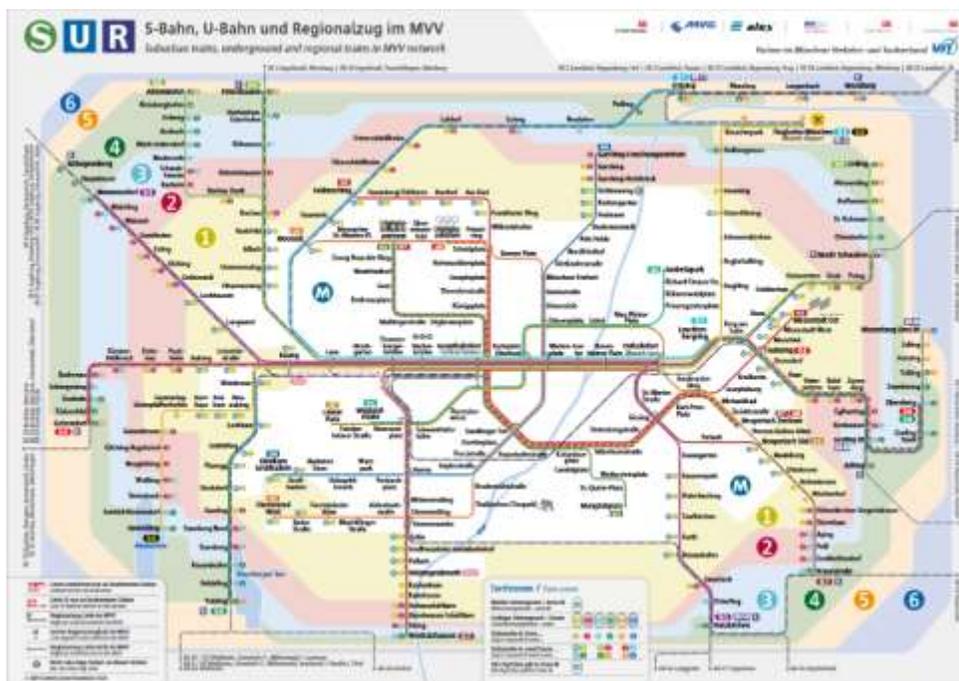


Fig. 3 MVV network map with tariff zones for S-Bahn and U-Bahn; White background = zone M; colored background = zones 1 to 6.

If visitors do not have a ticket, it is recommended to purchase single trip or day tickets from the ticket machines at the stations. A ticket purchased at the MVV ticket machines entitles you and your visitor to use the U-Bahn, S-Bahn, tram and bus. Note that some tickets must be validated before boarding, even if there is obviously no fence or control (Fig. 4). Machines that validate tickets automatically are often located at the top of the stairs leading to the platform, at the platform itself or in trams and buses.



Fig. 4 Examples for tickets that must be validated before boarding

**Furthermore, please note:** Punctuality is important in Germany. If you do not want to miss the train, a meeting or an appointment, keep this in mind. In Germany, you are always expected to be on time, especially for work and lectures, and to the minute. Trains and buses are also usually on time.

If you need more information about available MVV tickets and day passes, please follow the link: <https://www.mvg.de/abos-tickets.html> or ask the Ph.D Program Coordination for help.

**Please note** that you must always carry a valid ticket at any time when using public transportation. Otherwise, a fine of 60 EUR will be levied if you are caught without a ticket. Each Ph.D. candidate is assisted by the CIH<sup>LMU</sup> staff in purchasing a semester or monthly ticket upon arrival.

Bicycles are very common in the city, and many streets have a bike lane next to the sidewalk, often separated only by a painted line. Cyclists can be quite fast, so please watch where you step.



Pedestrians in Munich usually always wait until the red light turns green before crossing the street.

### ***Student canteen***

Each Ph.D. candidate can use his/her LMUcard to eat lunch in all cafeterias and canteens of the university at a reasonable price. We will visit the LMU canteen, located near the CIH<sup>LMU</sup> Office, together during your first week in Munich. The LMUcard must be charged in the canteens at one of the card and cash machines before the first use. Then you can choose a meal, go to the buffet, take a tray, and take the food items you want. The cost of the meal will be deducted from the LMUcard.

Please note, that cash payment is not available at the service desk. Be aware that if you lose your card, the cash loaded on it may also be lost.

Lunch is usually served daily between 11:00 am and 2:00 pm.

For more information about the weekly menu and the different locations, please visit: [www.studentenwerk-muenchen.de/en/mensa](http://www.studentenwerk-muenchen.de/en/mensa)



### ***German Language Classes***

Please note that we do not offer German classes. However, if you are interested in attending a course at your own expense, you can find further information at <https://www.dkfa.de/en/>

If interested, we would recommend you the course for beginners 'Survival German (A1)', course fee: ~150 € for 10 sessions with 3 teaching units each. For further information and registration, please follow the link: [www.dkfa.de/de/kurs-1-survival-german-a1](http://www.dkfa.de/de/kurs-1-survival-german-a1)

Please let us know in advance if you would like to register!

### ***Google calendar and LMU learning platform Moodle***

The weekly course schedule can be found on a Google calendar, to which you will receive an automatic invitation prior to the start of the Ph.D. MR - IH program.

The lecture materials (lecture slides and presentations, reading materials, etc.) will be uploaded to the learning platform *Moodle*, the virtual learning environment of Ludwig-Maximilians-Universität München. During your first study week in Munich, an introductory event will be held for this purpose.

### ***LMU University library***

As a central service facility of the LMU, the University Library offers a high-quality portfolio of scientific literature in both electronic and printed form provides a secure platform to host your electronic publications and maintains and develops an attractive learning and working environment. As such, the University Library offers general (e.g. scientific literature research, Citavi and EndNote) and subject-specific training.



For more information about the trainings, please see the following link: <https://www.ub.uni-muenchen.de/kurse/index.html>

### ***Bavarian State Library***



Students of Ludwig-Maximilians-Universität München receive their library user card in conjunction with the LMUcard. With the validation of the LMUcard, the library function is automatically activated and can then be used immediately at the Bavarian State Library.

### ***LMU Writing Center***

The LMU Writing Center supports students with their writing projects through individual tutoring, office hours, and workshops. The goal of the center is to improve and strengthen the skills in academic and professional writing and reading. There is also an interesting download area under the navigation bar 'Material'. We recommend you to visit the LMU Writing Center website, it is definitely worth browsing: <https://www.schreibzentrum.fak13.uni-muenchen.de/index.html>

### ***LMU International Student Guide***

The LMU International Student Guide provides practical tips and information about studying at the LMU München. Furthermore, you will find there a number of offers such as for example intercultural counseling, career services and sports activities.

Please find the guide under the following link: [http://www.en.uni-muenchen.de/students/int\\_student\\_guide/index.html](http://www.en.uni-muenchen.de/students/int_student_guide/index.html)



### ***LRZ e-mail account***



Each Ph.D. student will receive a LRZ e-mail account with address and temporary password. This is your official e-mail address and the only one we will use for communication throughout the entire study period.

Please notify the CIH<sup>LMU</sup> Ph.D. Program Coordination in time if you have any difficulty using the e-mail address during your research periods.

## **Leaving Munich after Module Block I and II**

Module Block I usually ends just before Christmas Eve (24 December), Module Block II towards the end of March. The exact and valid departure dates vary from year to year and will be announced in time by the CIH<sup>LMU</sup> Ph.D. Program Coordination.

You are required to comply with your landlord's requirements for checking out of your accommodation. If not, the landlord is entitled to hold your deposit. The Ph.D. candidates themselves must arrange transfer to the airport on the departure day. Borrowed items (e.g. books) must be returned to the CIH<sup>LMU</sup> office, the same goes for the kitchen utensils. Please be considerate of the next Ph.D. candidates using these items.

# Curriculum of the Ph.D. MR – IH Program

## Program design

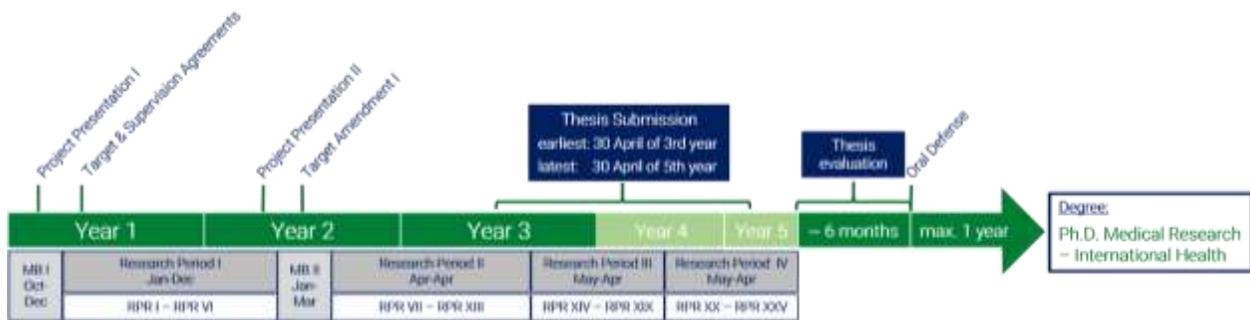


Fig. 5 Timeline of the Ph.D. MR – IH Program. MB, Module Block; RPR, Research Progress Report

The Ph.D. program is structured as a sandwich program, i.e. there are two Module Blocks spent at CIH<sup>LMU</sup> in Munich with lectures and seminars, and longer Research Periods between the Module Blocks spent in the Ph.D. candidates' respective countries of research or residence.

The Ph.D. MR – IH degree has a scope of 180 ECTS with a 6 semester standard period of study. Students can acquire

- 23 ECTS within Module Block I
- 17 ECTS within Module Block II
- 10 ECTS for attending workshops, conferences etc.
- 100 ECTS within the scope of the research project, incl. bi-monthly RPRs
- 20 ECTS for the dissertation
- 10 ECTS for the disputation

The Core Course in International Health combines the modules 'Orientation Courses', including 'International Health Fundamentals' and 'Policy and Politics', as well as 'Advanced Methods' including 'Quantitative Methods' and 'Epidemiology and Research Design' and has a scope of 20 ECTS.

The Ph.D. MR – IH program offers eight elective modules, so-called Advanced Modules (AM), of which the students must select two. They may also choose up to two additional advanced modules as voluntary modules. Our elective modules cover the following areas:

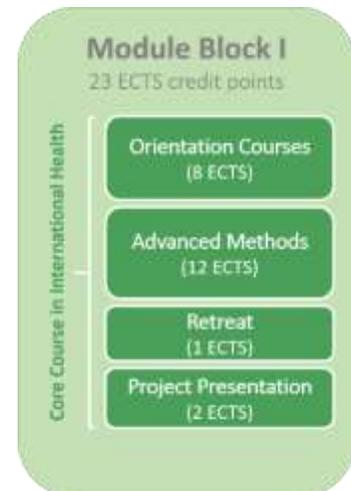
- Communication in healthcare
- Clinical Research
- Infectious diseases
- Disease vectors
- Global Health
- Epidemiology
- Global Mental Health
- Access to health

## Module Block I (MB I)

The first module block takes place between October and December of each year in Munich. In this Module Block, all Ph.D. candidates go through the same curriculum (Core Course), independent of their individual research subjects, to ensure a common knowledge base. The different subjects taught include for example general health issues, research methodology, health systems research, and subjects on personal development (transferable skills). In some modules, exams and assignments are given to the students to determine if the learning objectives of the respective module have been met. ECTS points can then only be awarded according to the principle of 'all or nothing'.

In addition to completing the Core Course, all Ph.D. candidates will work with their LMU supervisors on the design of their research project, including regular presentations of their projects to other Ph.D. candidates.

Module Block I ends towards the end of December. The different modules of the core course are divided into orientation courses and advanced methods.



### ***Orientation courses***

#### *International Health Fundamentals (IHF)*

The module comprises different courses ranging from the major infectious and non-communicable diseases to specific subjects such as occupational and environmental health, maternal health as well as sexual and reproductive health.

Typical 'International Health Fundamentals' lectures, among others:

- HIV and HIV Prevention
- Virology
- Immunology & Vaccinology
- Diabetes
- Poisoning
- Chagas & Malaria
- Tuberculosis
- Maternal Health
- Cancer in LMICs
- Demography & Aging
- Environmental Medicine
- Global Epidemiology
- Global Mental Health
- International Occupational Safety and Health
- Migration Medicine

### Policy and Politics (POL)

In this module, students learn, among other things, to critically evaluate public health systems in different countries and to understand the basics of political work. In addition, different approaches to financing health systems, as well as principles and limits of humanitarian aid are discussed.

Typical 'Policy and Politics' lectures, among others:

- Introduction to Global Public Health
- Human Rights and Development
- Global Health Security
- Humanitarian Aid
- Health Economics

### Mini-Retreat/ Management- and Communication training

One advantage of the limited number of study places we offer each year is that we provide a familiar environment for all our Ph.D. MR - IH students. To also initiate the networking between our Ph.D. students and the participants of our CIH<sup>LMU</sup> master's program as well as from the Diploma in Tropical Medicine course, which is offered annually at the Tropical Institute, we will go on a mini-retreat outside of Munich during the second week of October. Transportation and lodging will be arranged for the entire group. Since working in the field of International Health requires more than just health-related skills, specialized trainers will conduct interactive sessions on intercultural communication, conflict management, public speaking, presentation skills, and scientific event management. While most of the management and communication seminars will take place during the mini-retreat in October, some additional seminars will be offered during the Core Course (October to December).

### Research Project Presentation I

Each Ph.D. candidate is required to present his/her proposed Ph.D. research project. This initial presentation will last approx. 20 minutes, followed by questions and an active discussion. The LMU supervisors, other Ph.D. candidates and CIH<sup>LMU</sup> staff will attend the presentations and may give suggestions for project modifications to the respective Ph.D. candidate at the end. In addition, the Ph.D. candidate will receive constructive feedback on his/her presentation skills.

## ***Advanced Methods***

### *Quantitative Methods*

This course gives insight into statistical principles and methods, with an emphasis on design and analysis of epidemiological research. The course consists of various elements including lectures, exercises, an R course with a data analysis project, as well as SAS courses and tutorials.

Its content covers the basic concepts of probability theory and statistical theory, methods of data description and estimation, tests to compare observations (for quantitative, nominal and non-normal outcomes), the issue of multiple testing, concept of sample size calculation, modelling associations using Linear Regression and Generalized Linear Models. A special focus is given to the practical application of these statistical methods for the participants' own statistical data analyses and to the presentation and interpretation of the results.

Typical 'Quantitative Methods' lectures, among others:

- Describing data: types of data, summarizing and visualizing data
- Theory of probabilities
- Theory of distribution and sampling
- Principles of estimation
- Hypothesis testing
- Comparing groups
- Modelling

### *Quantitative Methods Exercises*

Within this course, Ph.D. candidates deepen their acquired theoretical knowledge in 'Quantitative Methods' and are able to apply their knowledge independently. They acquire practical experience in handling data in statistical software packages (SAS) and the skills required for planning, analyzing and interpreting data.

Typical 'Quantitative Methods' exercises, among others:

- Average and SD, median, modal, Boxplot
- Normal distribution table, distribution of mean, types of distribution
- Confidence intervals
- Testing continuous (T-tests, F-test) and discrete data (Chi<sup>2</sup>-test, z-test)
- Sample size
- Linear regression and model selection
- using 'R'

### Epidemiology and Research Design

This course is designed to provide students with essential concepts and skills in epidemiology. Students will have the chance to familiarize themselves with different study designs (e.g. cohort study, case-control study), gain insights into statistical methods employed in epidemiological settings, enhance their abilities to connect health data with underlying phenomena, and develop grounded conclusions. On the completion of this course, the students will be prepared for their real-world projects (e.g. Ph.D project).

Typical 'Epidemiology and Research Design' lectures, among others:

- Incidence and prevalence – basic measures
- Cohort Studies – basics, standardization, risk and stratification
- Case-control studies
- Mantel-Haenszel-Procedure
- Bias, Confounding, causal thinking
- Metaanalysis

### Epidemiology and Research Design Exercises

This course will cover basic principles of data description and analysis of an epidemiological data set. Practical experience in handling data in statistical software packages like SAS and R will be provided.

Typical 'Epidemiology' exercises, among others:

- Tabulating data
- Sample size calculations
- Planning and conducting clinical and epidemiological studies
- Data processing and analysis

## Research Period I (RP I)

Upon completion of Module Block I, doctoral students return to their countries of research or residence. This is the beginning of Research Period I. Close contact should be maintained between the Ph.D. candidates, the local supervisor and the LMU supervisors.

### ***Research Progress Reports (RPRs)***

Every two months, each Ph.D. candidate must submit a Research Progress Report via email based on the Research Progress Report Template (see [CIH<sup>LMU</sup> website](#)). RPRs should be submitted at the end of every even-numbered month (February, April, June, August, October and December). Before the report is submitted to the Ph.D. Program Coordination, it should be sent to the doctoral candidate's supervisors for approval. All supervisors are kindly asked to read and comment on the reports. 8 ECTS will be awarded for timely submission of an adequate Research Project Report, resulting in a total of 48 ECTS for all reports in Research Period I.

### ***Workshop Participation***

Each Ph.D. candidate is expected to participate in a workshop of his/her personal choice on a topic related to his/her particular research project. The duration of the workshop should be at least four full days. Alternatively, several shorter workshops with a total duration of four full days or more may be attended. The workshop costs need to be covered by the candidate him/herself.



## Module Block II (MB II)

During the months January to March, following Research Period I, candidates will come to Munich to attend Module Block II (second year of study). MB II covers advanced subjects on research methodology, personal development and health systems research. Typically, seven to eight in-depth topics are offered as Advanced Modules, of which each doctoral student must choose at least two.

Furthermore, all Ph.D. candidates must again present their research project to the other doctoral students, colleagues, supervisors and CIH<sup>LMU</sup> staff.

At the end of the Module Block II in March, all Ph.D. candidates, together with master students who have chosen the Advanced Module 'Project Management' from their curriculum, will organize a research symposium where they also present their projects in the form of a poster and a presentation.



## ***Research Skills***

'Research skills' comprises key competencies required for research and the dissemination of the publication of research results.

Typical 'Research Skills' lectures, among others:

- Good clinical practice
- Good scientific practice
- Online resources
- Learning Science
- Qualitative methods

## ***Soft Skills***

'Soft skills' include key competencies such as communication, collaboration, conflict management, time management, etc., which are essential for working in International Health, a highly interdisciplinary and intercultural field of study.

Typical 'Soft Skills' lectures, among others:

- Communication & Conflict Management
- Moderation- Leading the crowd

## ***Advanced Modules***

During Research Period I, all Ph.D. students must choose two Advanced Modules, totaling 6 ECTS credits. Students can choose these modules according to their own interests. Additional Advanced Modules may be chosen optionally, in which case no additional ECTS credits are awarded. Currently, T&TU offers eight advanced modules with a scope of 3 ECTS each.

Students are encouraged to consult the current list of available modules on the [CIH<sup>LMU</sup> website](#). A detailed description of the typically offered advanced modules can be found in the back of this study handbook (see Advanced modules).

## ***Research Project Presentation II***

As previously described each Ph.D. candidate will have again the opportunity to present his/her research work, including a description of the methods used, preliminary results and modifications to the initial targets and original objectives. The student's supervisors, other Ph.D. candidates and CIH<sup>LMU</sup> staff will attend the presentations and provide constructive feedback on the student's research project and presentation skills.



## Research Period II (RP II)

The second research period will begin in April after all Ph.D. candidates returned to their research locations or countries of residence subsequent to Module Block II. Contact between the candidate and all supervisors will again be upheld through the mandatory bimonthly submission of research progress reports.

Research period II will last for 13 months (from April to April) and midway, candidates will enter the final stage of research. During this time, students will still stay in their home countries or at the location of research, but with an intensified communication to all supervisors, marking the finalization of research activity and the writing of the Ph.D. thesis. At the end of this period and once all curricular requirements have been completed, candidates will submit their Ph.D. thesis to the Ph.D. Program Coordination. The Ph.D. program coordination will subsequently check all documents and if completed, will submit the thesis to the MMRS.

**Please note** that the acceptance of a manuscript in a peer-review journal is a precondition for the submission of the Ph.D. thesis.



### ***Conference Participation***

Each doctoral candidate is expected to attend at least one conference of his/her personal choice throughout the Ph.D. studies. Doctoral students may attend the conference during research period I or II. Active participation in the form of an oral or poster presentation of the student's Ph.D. work is mandatory in order to receive ECTS credits. The conference should be at least of national importance. Participation in a conference is at the candidate's own expense.

## Graduation

To graduate from the Ph.D. program, the doctoral student must successfully fulfill all curricular activities and submit a Ph.D. thesis followed by an oral defense (disputation). Detailed information on the finalization of the Ph.D. studies can be found in a separate chapter in this handbook (see Finalization) or in the 'Finalization handbook' available online on the [CIH<sup>LMU</sup> website](#).

### ***Ph.D. thesis (dissertation)***

The core element of the Ph.D. study is the doctoral thesis. The topic of the dissertation is agreed with the Ph.D. candidate's local and LMU supervisors and is written as an independent research work that serves to demonstrate the new scientific knowledge gained in the course of the doctoral study. At the end, Ph.D. candidates must submit their final draft of the thesis, no earlier than the end of April within the doctoral student's third year of study. Depending on the type of dissertation, monographic or cumulative, the Ph.D. candidate must also submit at least one (monographic) or at least two (cumulative) scientific manuscript(s) to a scientific journal. Prior to writing the thesis, the style and layout of the dissertation should be discussed with all supervisors.

The doctoral degree serves to demonstrate the Ph.D. student's ability to conduct in-depth academic and scientific work and is based on a written, independently prepared dissertation and an oral examination. At the end of the Ph.D. MR - IH, students must demonstrate that they are able to select a relevant research project and to embed it in current, international scientific research in the field of International Health, to work on it and to discuss it critically.

### ***Review Period***

The final period will be spent in the home or research countries of the Ph.D. candidates and serves to revise the thesis (if the reviewers ask you to do so) and prepare the defense presentation, with the support of the supervisors and their respective institutions. The duration of this final period may vary (at least five months), depending on the revisions required and the decisions of the respective examination board. If the dissertation is accepted, the Ph.D. candidate is admitted to the disputation, in which he/she must demonstrate in-depth knowledge in his/her and related research areas.

### ***Ph.D. thesis disputation***

The Ph.D. student will receive a written invitation to the oral defense from the chair of the Doctoral Committee at least two weeks before the scheduled defense date. The defense consists of a 45-minutes presentation of the respective research project and its results, followed by a 30- to 60-minutes discussion.

For the disputation and the delivery of the statutory copies of the dissertation to the LMU University Library, the doctoral candidate must come to LMU Munich for a short period of at least 10 to 14 days. The stay in Munich has to be organized by the Ph.D. candidate him/herself and is at his/her own expenses.

The Ph.D. curriculum will end with the successful disputation and the awarding of the Ph.D. Certificate in Medical Research – International Health.

## Study and examination performance

### *Overall grade*

Each individual module is completed by either written or oral examinations, seminar papers or presentations. Detailed information can be found in the official examination regulations of the Ph.D. MR - IH program as well as in the detailed module descriptions further down in this study handbook. The program is completed with a dissertation and the disputation.

In accordance to the official study and examination regulations of the Ph.D. MR – IH, your overall grade will be the result of the following performances:

- Ph.D. thesis (factor 1.5)
- Ph.D. thesis disputation (factor 1.0)

### *Examination procedure*

#### Exam at the end of the Core Course

The two modules ‘International Health Fundamentals’ and ‘Policy and Politics’ will be completed with two multiple-choice exams at the end of the Core Course. The two ‘Advanced Methods’ exams (‘Quantitative Methods’ and ‘Epidemiology and Research Design’) consist of a combination of multiple-choice and open-ended questions, as well as mathematical problems.

The grading of each module is done according to the official study and examination regulations of the Ph.D. MR – IH (pass/fail).

#### Exams in the Advanced Modules

Each Advanced Module has its own examination performance that must be completed. These can range from multiple-choice exams to the writing of an essay to the presentation of an individual project. The examination performance for the respective elective module can be found in the module descriptions further down in this study handbook (see Advanced modules).

### *Repetition of examinations*

Exams and modules will only be graded on a passed/failed basis. Failed module examinations, with the exception of the Ph.D. thesis and disputation as well as the Advanced Modules, can be repeated up to three times at an individually agreed date. The Advanced Modules as well as the final Ph.D. thesis can be repeated only once at the next possible date.

### *Attendance policy*

Ph.D. MR – IH students should not miss more than 20% of the sessions in any module or submodule (e.g. ‘International Health Fundamentals’, ‘Policy and Politics’). If a student arrives later than 15 minutes after the start of a session, or is absent without excuse, the session will be counted as missed. If a Ph.D. candidate misses more than 20% of the sessions, he/she may need to submit additional coursework to be admitted to the module exam, or the module may have to be repeated the following year. In this case, an additional stay in Munich is required, which must be organized and covered by the Ph.D. candidate himself/herself.

## Extension: Research Period III and IV (RP III and IV)

Candidates who fail to complete their research project or to submit a manuscript to a peer-reviewed journal within the regular three-year study period will be granted an additional year to finalize their projects (Research Period III). For a Ph.D. project that extends beyond the 4th year of Ph.D. study, candidates will be given one final year to complete their projects (Research Period IV). During Research Period III and IV, doctoral students must continue to submit Research Progress Reports on a bimonthly basis, although these reports are not awarded any ECTS credits. Once the Ph.D. candidate has submitted all documents necessary to be admitted for (re-)defense, the Munich Medical Research School (MMRS) may take up to 12 months from the date of submission to schedule a defense. Again, the stay in Munich for the defense has to be organized by the individual Ph.D. student himself/herself and at his/her own expenses.

### **IMPORTANT NOTE**

Ph.D. candidates that are unable to successfully finalize all required curricular elements, i.e.

- the Ph.D. project,
- acceptance of a manuscript to a peer-reviewed journal,
- submission of the Ph.D. thesis, and
- its successful defense in front of the LMU Examination Committee

within 60 months after initiation of the respective Ph.D. studies (start of Module Block I), will be dismissed from the Ph.D. MR – IH program with the result “**failed**”.

## The Ph.D. candidates' responsibilities

Your responsibilities as a Ph.D. candidate are to

- carry out your research effectively within the given study period,
- attend the compulsory curricular courses organized by the CIH<sup>LMU</sup>,
- comply to the activities specified in the target agreement,
- maintain regular contact with your supervisors, especially your LMU supervisors as they are not on-site,
- submit your Research Progress Reports to your supervisors by the agreed deadlines to allow sufficient time for comments and discussion, before submitting them to the Ph.D. Program Coordination,
- present your work and findings at seminars and/or conferences,
- comply to ethical standards in your research project,
- participate in the course evaluation of your doctoral training program,
- responsibly keep track of all documentation of the courses, seminars and activities you complete as part of your training,
- consult the administrative Ph.D. Program Coordinator in confidence if you feel that a change of supervisor is desirable for any reason,
- inform the external party of any matters that may have a significant impact on the collaboration and the progress of the research project/Ph.D. studies (if applicable, candidates funded by an external party).

# Finalization

## Terminology

Based on the degree program and examination regulations of the LMU Munich for the doctoral program 'Medical Research', dated 29 July 2011, amended on 22 December 2017, the essential examination bodies and committees are:

### ***Doctoral Committee***

- a) Responsible for the implementation of the doctoral procedure
- b) Appointed by the Medical Faculty of LMU Munich for a period of two years
- c) Consists of
  - Chairperson
  - Deputy chairperson
  - 5 further committee members from the group of university professors of the LMU Munich Medical Faculty

### ***Supervisory Committee***

- a) Responsible for the supervision and academic support of the Ph.D. candidate
- b) Appointed by the Doctoral Committee for the entire Ph.D. period
- c) Consists of
  - Habilitated LMU supervisor (1st supervisor)
  - Direct LMU supervisor (2nd supervisor)
  - Local supervisor
  - 3rd LMU supervisor (only if accepted as such by the Ph.D. Program Coordination based on a written supervision agreement)

### ***Examination Committee***

- a) Responsible for the evaluation of the dissertation and the oral defense (disputation)
- b) Appointed by the Doctoral Committee
- c) Consists of
  - 1st and 2nd reviewer (in most cases your 1st and 2nd LMU supervisor)
  - 3rd and 4th member as appointed by the Doctoral Committee

## Thesis preparation

You will usually begin preparing and writing your Ph.D. thesis at the beginning of your second or third year of study. There are two ways to write your thesis, either monographic or cumulative. Any Ph.D. thesis, whether written as a monographic or cumulative thesis comprising several peer-reviewed papers, is being examined based on its scientific merits. There is no difference in scientific quality per se between these two formats.

Ideally, you will write your dissertation in close consultation with your Supervisory Committee. The length of the writing process will depend on the needs and agreements between you and your respective supervisors. The Ph.D. Program Coordination does not influence the length of your writing process and will not affect this period.

When writing your thesis, kindly be aware of the guidelines for the use of AI (see Appendices).

### ***Monographic thesis***

This is the traditional form of a doctoral thesis. It can be considered as a research report with a comprehensive record of the research conducted during your Ph.D. studies and its results. A doctoral thesis written as a monograph is structured into several chapters with an introduction and conclusion, and you as the Ph.D. candidate are the sole author. The first chapters usually contain an extensive literature review, which serves as the basis for the problem you were working on and that is analyzed in subsequent chapters. A concluding chapter at the end summarizes your Ph.D. work and explores its broader significance.

We have prepared a style template for monographic dissertations that can be found on our [website](#). Although the template is only a suggestion by the Ph.D. Program Coordination and can be modified by its users, the title page (incl. the second page) is the officially accepted CIH<sup>LMU</sup> template and should not be changed. The Ph.D. Program Coordination will not accept other title pages. Please fill in the *Title Page* by adding the title of your dissertation, the department of your habilitated LMU supervisor, and your personal details (name, place of birth and the date the thesis was submitted (mm-yyyy)). On page 2, please fill in the title and names of your supervisors (LMU and local). The names of your reviewers and the date of your oral defense should be left blank and will be filled in after your disputation. We recommend that you read through the style template at least once, as it also contains a number of useful recommendations and contents for the respective chapters.

Your thesis file, submitted to the Ph.D. Program Coordination, must contain the following documents:

- a signed **affidavit**,
- a signed **confirmation of congruency**,
- your **tabular curriculum vitae (CV)**,
- a **complete list of all your publications**, and
- a **statement of contribution**.

A word count of approx. 25,000 to 37,500 should not be exceeded (excluding references, appendices, figures and tables). Your thesis must be compiled in a single document and submitted as a single PDF file to the Ph.D. Program Coordination.

Please note that CIH<sup>LMU</sup> requires you to work on accompanying scientific articles during your doctoral studies. Therefore, Ph.D. candidates are required to have at least **one article** based on their Ph.D. project **accepted** by a peer-reviewed journal before submitting their dissertation to the Program Coordination and being admitted to the defense. For this article, it is sufficient to be recognized at least as co-author. However, the article should be related to the Ph.D. research project, an affiliation to the CIH<sup>LMU</sup> or the LMU University Hospital should be recognizable and the LMU supervisors should be named as co-authors. Only original work (no reviews or case studies) published or accepted for publication in a peer-reviewed journal will be accepted. A scan or copy of the electronic acceptance confirmation is sufficient as proof of acceptance of the article. Ph.D. candidates are required to forward this confirmation from the journal or its editor to the Ph.D. Program Coordination along with the manuscript itself as submitted to the journal (both as separate PDF files).

Please note that there is a high risk of self-plagiarism if parts of your Ph.D. thesis have already been published in a journal. To avoid self-plagiarism, please follow these rules:

- Already published results can be included in the results section of your thesis if they are marked accordingly. However, the doctoral student should write the results section independently. Copy and paste from the publication will not be accepted.
- Results from co-authors may be shown in your dissertation, but must be clearly identifiable as the contributions of others. Only your own performance will be evaluated for the dissertation.
- Translations must be free and not literal.
- Introduction and discussion must be rewritten independently.
- The methods section must be detailed and clearly go beyond your already published manuscript.
- In the case of text similarities of more than 30%, the supervisor must justify in a written statement why he/she does not suspect self-plagiarism.
- When using unchanged or only slightly changed figures and tables from publications, the permission of the copyright holder (usually the original publisher) must be obtained, both for use in the printed and in the electronic/online version of the dissertation. Please include a copy of the permission when submitting your thesis.

A detailed explanation on how to handle your own, already published data can be found in the [citation guide](#) of the Faculty of Medicine.

## ***Cumulative thesis***

Cumulative theses are a collection of articles published or accepted for publication in recognized scientific peer-reviewed journals. They can be submitted as an alternative to a monographic thesis. All papers must be related to the overarching topic of your Ph.D.. Careful selection of manuscripts and convincing, concise introductory and concluding chapters are required to show readers how the articles relate to each other and contribute to the central topic of your thesis. In the introductory chapter, you should identify and discuss the common theme or problem of your Ph.D. thesis. In the concluding chapter, which should discuss the theme or problem in light of the information contained in the manuscripts, you will have the chance to explore the broader implications of your own work.

The following regulations were set up by the MMRS as guidelines for all doctoral cumulative dissertations in Medical Research. You do not need to apply for submitting a cumulative dissertation. However, you have to fulfill a number of criteria:

- 1) Only **original work** published in the **top 80% of the subject-related journals** will be accepted for cumulative dissertations (see Determining the rank of a journal in the Journal Citation Reports).
- 2) A minimum of **two articles** must be accepted or published in peer-reviewed, international journals. At least one of these articles must be published as first author.

A **shared first-author** is possible and will be accepted as a regular first-author publication. The Ph.D. candidate's contribution must be shown in great detail. Further, you must submit an explanation as to how a shared first-authorship came to be in that case.

Both articles need to be related to the Ph.D. research project, an affiliation to the CIH<sup>LMU</sup> or the LMU University Hospital should be recognizable and the LMU supervisors should be named as co-authors.

- 3) The following publication forms are not allowed or can only be used in certain cases for a cumulative dissertation (please check beforehand with the MMRS):
  - a) **Short Report:** if it corresponds to a publication on original work in form and content, then it can be used. Subject to decision on a case-by-case basis by the Doctoral Committee.
  - b) **Letter:** if it is published in a journal with a double-digit impact factor and the data presented is equivalent to that of original work, then it can be used. Subject to decision on a case-by-case basis by the Doctoral Committee.
  - c) **Methodological Publications:** Subject to decision on a case-by-case basis by the Doctoral Committee.
  - d) **Meta-Analysis:** you can submit a maximum of one meta-analysis for your cumulative dissertation, but the second publication must be based on original work.
  - e) The following publication forms may not be used: **review-articles, case studies.**
- 4) Unpublished manuscripts, review-articles and case studies as well as short reports, letters and methodological publications, which have been declared insufficient after case-by-case evaluation by the Doctoral Committee, can be added in a cumulative dissertation but have to be clearly labeled as additional contributions. Such additional contributions cannot replace the two main articles required under any circumstances. Additional contributions can only help to provide better scientific context and a more complete picture about the candidate's scientific work.

The cumulative dissertation is preceded by an **introductory summary** explaining the significance of the work for the respective field of study and, in the case of articles with several authors, outlining the doctoral student's contribution to the content and scope. The minimum length of the introductory summary should be 5 pages, and the maximum length of 10 pages (excluding title page, affidavit, table of content, references, listed publications) should not be exceeded.

Please be aware that the foundation on which a cumulative dissertation is graded are not the papers themselves, but your contribution to these publications! Therefore, **it is crucial that you explain your contribution to the papers in detail**. This is best done in a separate chapter, for each paper separately if there was more than one author. Furthermore, this means that the statement of your contribution is also required for papers where you are the first author.

We have prepared a style template for cumulative dissertations that can be found on our [website](#). Although the template is only a suggestion by the Ph.D. Program Coordination and can be modified by its users, the title page (incl. the second page) is the officially accepted CIH<sup>LMU</sup> template and should not be changed. The Ph.D. Program Coordination will not accept other title pages. Please fill in the *Title Page* by adding the title of your dissertation, the department of your habilitated LMU supervisor, and your personal details (name, place of birth and the date the thesis was submitted (mm-yyyy)). On page 2, please fill in the title and names of your supervisors (LMU and local). The names of your reviewers and the date of your oral defense should be left blank and will be filled in after your disputation. We recommend that you read through the style template at least once, as it also contains a number of useful recommendations and contents for the respective chapters.

Your thesis file, submitted to the Ph.D. Program Coordination, must contain the following documents:

- a signed **affidavit**,
- a signed **confirmation of congruency**,
- your **tabular curriculum vitae (CV)**,
- a **complete list of all your publications**, and
- a **statement of contribution**.

Combine the title page, introductory summary, your articles and all other required documents (CV, statement of contribution, affidavit etc.) into one PDF file and submit it to the Ph.D. Program Coordination.

## Thesis submission

The thesis submission deadlines are set twice a year:

- **30 April** for scheduled defense in autumn
- **30 September** for scheduled defense in spring of the subsequent year

Please be aware that you can submit your Ph.D. thesis throughout the year. However, the above deadlines serve as a guarantee that you will be able to defend your dissertation within the defense weeks (November, June) and attend the MMRS graduation ceremony. Although the Ph.D. Program Coordination and the MMRS will try to meet these defense deadlines, please note that the date for the disputation may be set up to 12 months after you submit your thesis.

Your thesis and all required documents should be submitted to the Ph.D. Program Coordination by emailing to [cih.phd@lrz.uni-muenchen.de](mailto:cih.phd@lrz.uni-muenchen.de). After compiling all documents and checking the formal thesis requirements, the Ph.D. Program Coordination will forward your thesis to the MMRS Doctoral Office. From this point on, the MMRS handles the entire evaluation process. The Doctoral Committee appoints the Examination Committee, on which your habilitated and your direct supervisor (or 1st and 2nd supervisor) will often be the 1st and 2nd reviewers. The 3rd and 4th members of the Examination Committee are appointed according to their respective areas of expertise.

### ***Application for admission***

The Ph.D. candidate must compile all documents listed in this section, including all required signatures. The documents have to be submitted to the Ph.D. Program Coordination along with the dissertation. By this time, all supervisors must have agreed with the Ph.D. student on the final version of the thesis and its submission. In addition, all ECTS credit points related to the Ph.D. MR - IH curriculum (Module Block I and II, and Research Period I and II) must have been earned by this time. The Ph.D. Program Coordination will then forward all required documents to the MMRS Doctoral Office. Please name all digital documents according to the following example: *[your name]\_authorship form* and submit them in PDF file format only (no MS Word or image files). You may consider digital signatures (e.g. Adobe Digital Signature) for all documents requiring signatures; alternatively, you may print, sign and scan the respective documents. Please note that only PDF files of good quality can be accepted; this applies in particular to the quality of scanned documents.

### ***Plagiarism check***

To ensure good scientific practice at the LMU Munich Medical Faculty, the Faculty Board decided in 2016 to give all supervisors of doctoral theses the opportunity to verify the originality of the Ph.D. theses before they are officially submitted to the MMRS Office.

The Faculty of Medicine obliges all supervisors to check the dissertations of their doctoral students with the plagiarism recognition software 'iThenticate' before submission. In practice, this means that the respective supervisors receive access to the online software 'iThenticate' after applying for it at the MMRS office. For a short description of the procedure, please follow the link: <https://www.en.mmrs.med.uni-muenchen.de/plagiarism-check/index.html>.

The iThenticate report will mark text passages that can be found in other publications. You will need to carefully read the test result and your thesis to judge whether the marked passages contain plagiarized text fragments. As this plagiarism check takes place **before** the thesis is submitted to the CIH<sup>LMU</sup> Ph.D. Program Coordination and MMRS, and thus before the review process is initiated, Ph.D. candidates are given a one-time chance to revise suspicious text passages. Please discuss with your supervisor if and which text passages need to be revised. After the revision, your Ph.D. thesis needs to be uploaded again to the iThenticate software for a final plagiarism check. Thereafter, no more changes to your Ph.D. thesis are allowed.

For the final thesis submission to the Ph.D. Program Coordination, you must also submit the supervisor's statement on the originality of your dissertation. This statement should be emailed to [cih.phd@lrz.uni-muenchen.de](mailto:cih.phd@lrz.uni-muenchen.de) directly by your LMU supervisor. Ph.D. candidates are advised to allow sufficient time for the plagiarism check by their LMU supervisor prior to final submission, as the submission deadlines set by the Ph.D. Program Coordination and the MMRS remain unaffected.

For further information about the plagiarism check and a guide with detailed instructions on how to use iThenticate, please follow the link: [www.en.mmrs.med.uni-muenchen.de/plagiarism-check/index.html](http://www.en.mmrs.med.uni-muenchen.de/plagiarism-check/index.html).

### ***Documents that you need to submit***

You can find all forms and templates with the respective links on LMU Moodle in the respective administrative section or on our CIH<sup>LMU</sup> Ph.D. MR – IH program [website](#).

### ***Ethical Clearance***

All biomedical and clinical studies require a positive ethical vote by the LMU Ethics Commission **before** they can be conducted. Please note that you are not officially allowed to perform any sensitive work until you have received final clearance by the LMU Ethics Commission. In addition, be aware that the LMU Ethical Committee **does not issue positive votes retrospectively** and the medical faculty may not accept your dissertation (monographic or cumulative), if you do not have the required paperwork.

It is therefore extremely important, that you apply for ethical clearance right at the beginning of your doctoral studies. You can apply for the ethical clearance through the [online ethics platform](#). Please find more information and a guide with detailed instructions on how to apply for ethical clearance on LMU Moodle. If you have further questions, please contact your LMU supervisors or the Ph.D. Program Coordination.

### ***Application for Admission to the Ph.D. Examination***

Please fill in and sign the form 'Application for Admission to the Ph.D. Examination'. The 'Supervisor Declaration for Admission to the Oral Defense', which is part of the 'Application for Admission to the Ph.D. Examination' form should be filled in and signed by the habilitated LMU supervisor. Please submit the form to the Ph.D. Program Coordination along with your dissertation by email.

### ***Supervisor Consent Form***

After you have agreed with all your official supervisors (LMU and local) that you are ready to submit and defend your thesis, the supervisors will be asked for their written consent. The 'Supervisor Consent' Form must be filled in by the Ph.D. student (name, title of research project) and sent to all supervisors (LMU and

local). Your supervisors must sign the consent form and forward it to the Ph.D. Program Coordination via email. It is your responsibility to facilitate communication between your local and LMU supervisors and to ensure that signed consent forms are sent. The Ph.D. Program Coordination should receive a total of three or four filled in and signed 'Supervisor Consent' Forms.

#### iThenticate Statement Form

As of October 2016, all theses must be checked for potential plagiarism before being submitted to the MMRS (please see [Plagiarism check](#)). Your thesis can be checked twice, however, the version last reviewed must match the submitted thesis version. If the iThenticate verification report gives no reason to expect plagiarism, the supervisor needs to submit the filled and signed iThenticate Statement Form directly to the Ph.D. program coordination.

For more information on the plagiarism software and the procedure, please follow the link: <https://www.en.mmrs.med.uni-muenchen.de/plagiarism-check/index.html>. Furthermore, to assist in the preparation of a dissertation and to prevent plagiarism, the Faculty of Medicine provides a [citation guide](#).

#### Form for the „Münchener Universitätsgesellschaft“

The Münchener Universitätsgesellschaft e.V. ([www.unigesellschaft.de](http://www.unigesellschaft.de)) would like to win further friends and sponsors for the Ludwig-Maximilians-Universität München. To support this, the Doctoral Committee intends to forward your address to the Münchener Universitätsgesellschaft after successful completion of your Ph.D.. With this form, you indicate whether you agree with the forwarding of your contact details to the Münchener Universitätsgesellschaft e.V..

#### Affidavit

With the affidavit, you confirm that the Ph.D. thesis you have submitted to the MMRS Doctoral Office is the result of your own work. You declare that you have indicated all sources, cited correctly and that you have not made unauthorized use of any third-party services. The affidavit must be part of the bound version of your thesis and signed by you.

#### Confirmation of congruency

A signed 'Confirmation of congruency' must be submitted to the MMRS Doctoral Office to declare that the digital and printed copies of the dissertation are identical in content. As the Ph.D. Program Coordination will submit your Ph.D. thesis to the MMRS on your behalf, you must fill in and submit the 'Confirmation of congruency' when you email your dissertation to the Ph.D. Program Coordination. The confirmation of congruency must be part of the bound version of your thesis and signed by you.

#### List of all your scientific publications

A list of all your scientific publications should be included in the appendix of your Ph.D. thesis.

#### Proof of article acceptance

##### **Monographic thesis**

Upon acceptance of your articles, you will receive a notification from the journal or its editor. This notification serves as proof of article acceptance. Please forward this confirmation from the journal or its editor to the Ph.D. Program Coordination along with the manuscript itself as submitted to the journal (both as separate PDF files).

## Cumulative thesis

If your articles are accepted, you will receive a notification from the journal or its editor. This notification serves as proof of article acceptance. If your two manuscripts have not yet been published, please combine the proofs into a single PDF file and submit it as a separate PDF file together with your thesis.

### Confirmation of all co-authors

This form is only required if you are submitting a cumulative Ph.D. thesis. Please fill in one confirmation form per article. Please note that it is important to describe the contributions of the co-authors in detail in order to evaluate your own contribution to the manuscript. Forward the document to all co-authors and ask them to sign, scan and return the document to you. Then merge the documents into one single PDF file and send it to the Ph.D. Program Coordination when you submit your thesis.

## Documents added by the Ph.D. Program Coordination

The Ph.D. Program Coordination will add the following documents when submitting your thesis to the MMRS Doctoral Office:

- Supervision Agreement
- Target Agreement
- Target Amendment I (and II, if applicable)
- Proof of Enrolment
- Transcript of Records

## Printing

After submitting your thesis to the Ph.D. Program Coordination, the Ph.D. Program Coordination will print two bound paper copies of your thesis and submit them together with the digital PDF file to the Doctoral Office on your behalf. The Ph.D. Program Coordination will initially cover the printing and binding costs. However, please note that full reimbursement of the printing costs to CIH<sup>LMU</sup> is mandatory prior to the defense of your dissertation. If you prefer to print your thesis yourself and submit it to the Doctoral Office along with all required documents, you may do so, but all exceptions must be discussed in advance with the Ph.D. Program Coordination.

### **Please note that no changes can be made once your thesis has been submitted to the Doctoral Office!**

The address of the Doctoral Office at the Medical Faculty is:

Dekanat der Medizinischen Fakultät – Promotionsbüro/ Munich Medical Research School  
Bavariaring 19, 80336 München  
Room 003, ground floor (see <https://goo.gl/maps/7ZFPK>)  
Office hours: Tuesday 9-12 am, Wednesday 1-4 pm.

Please adhere to the office hours for the submission of your thesis! Please note that office hours are subject to change, and check the [website](#) of the Doctoral Office beforehand.

## Thesis evaluation and revision

Once the application for admission to the doctoral examination has been submitted with all required documents, the MMRS forwards the dissertation to the first two reviewers. Upon submission of their expert opinions, the dissertation and reviews are then forwarded to the other two members of the Examination Committee, who also evaluate and comment on the dissertation. The whole evaluation process can usually take up to 6 months. Please see here a summary of the evaluation process:



The reviewers may request adjustments or changes to your submitted thesis. If you have been asked by your reviewers to make **minor revisions**, you are required to incorporate the suggestions in order for your dissertation to be accepted. During this process, we recommend that you confer the revision closely with your Supervisory Committee. Please note that you are allowed to revise your thesis only once! After editing, you must submit a revised copy of your thesis (standard print with adhesive binding) to the Doctoral Office with your signature in the affidavit and the signatures of those reviewers who recommended revisions next to their names on page 2. With their signatures, both supervisors certify that they have approved the revisions made, that the revised thesis submitted is the final version and that you fulfilled all their requirements for the defense. If you, your supervisors, or both are absent, you may include digital signatures. In that case, please forward any correspondence between your respective supervisor and you as proof.

Please note that even for revised dissertations, the submission date is always the date of the initial submission of your thesis to the Doctoral Office! You have to arrange for the printing of the final copy yourself and deliver it directly to the Doctoral Office (see address above). The Doctoral Office must receive your revised thesis within the deadline set by the MMRS, but no later than the day before your oral defense. In addition, you must submit a PDF file of your dissertation and an additional current confirmation of congruency. If the Doctoral Office does not receive your revised thesis, you will not be admitted to your scheduled doctoral defense.

In case of **major revisions**, the thesis is returned to you. You are required to follow the given recommendations and **resubmit the thesis within 12 months** after being officially notified. Upon resubmission, the Examination Committee will evaluate the revised thesis, and the thesis evaluation process (see above) will be repeated. If the revised thesis is rejected again, there will be no further opportunity for revision and you will have irrevocably failed your Ph.D..

The thesis is passed if the evaluations and opinions of the Examination Committee and Doctoral Committee members recommend the grade “sufficient” (4.0) or better. Detailed information on grading can be found in the [Examination and Study Regulations](#) for the Doctoral Program in Medical Research. The document is available for download on the website of the MMRS. However, please note that only the official version of the Examination and Study Regulations published in German is legally binding. The translation into English is only a service offered for better understanding, but it is not legally binding.

Subsequently, the Ph.D. Program Coordination together with your Examination Committee and the Doctoral Committee will schedule the date for your oral defense. You will be notified at least two weeks before the date. By regulation, the allowable timeframe for the Doctoral Committee to schedule your disputation is up to 12 months after your thesis submission. If submitted on time, the Ph.D. Program Coordination will provide the best possible support to the MMRS so that you can defend your dissertation within the deadlines mentioned above.

Ph.D. candidates who have not been asked for revisions do not have to hand in another copy to the Doctoral Office.

## Oral defense (disputation)

The next stage after successfully submitting and passing of your thesis is the oral defense.

All disputations take place in Munich. You will have to arrange and cover the costs for the visit yourself. Please plan at least **ten days** for your stay in Munich and contact the Ph.D. Program Coordination before making travel arrangements and bookings. Unfortunately, our student dorm rooms at Stiftsbogen are generally not available for Ph.D. candidates coming to Munich for their oral defense, unless stated otherwise. Although the Ph.D. Program Coordination does not provide other accommodations, we may be able to help you find a hotel for your short-time stay.

The disputation consists of your **presentation** and the subsequent **oral examination**. Both take place in front of the Examination Committee and are open to the public. The purpose of your defense is to demonstrate that you are able to present and defend your research to a potentially critical audience. Be prepared to present your Ph.D. project and your findings. Generally, your oral defense will not exceed two hours. You will have 45 minutes to present your Ph.D. thesis. Please stick to the given timeframe: speak no longer than 45 minutes and not shorter than 40 minutes. The subsequent oral examination will last for 30-60 minutes.

Most likely, you will defend your Ph.D. thesis only once. So consider this your one-time opportunity to convince the Examination Committee that you are able to summarize your work in a limited amount of time, focusing on the important points. In your presentation, you might address the following points:

- What were the topics/aims/hypotheses/questions addressed in your thesis?
- What is the importance of your research?
- What is the current state of scientific knowledge?
- Which methods did you use?
- What are your results?
- What are the policy-relevant effects?

After your presentation and the subsequent discussion, the Examination Committee will retire and deliberate on the grading of your oral defense. In case of failure, the oral defense can be repeated once within 12 months.

After a successful disputation, you will receive a copy of the final version of your thesis with handwritten entries regarding the title and names of your reviewers as well as the date of your defense. These entries must be transferred to the second page of the statutory copies of your Ph.D. thesis, which you must submit to the LMU University Library.

## Delivery of the statutory copies to the LMU library

Ph.D. candidates who have successfully defended their dissertation will receive a preliminary certificate from the CIH<sup>LMU</sup>, either during the official graduation ceremony or individually. This document does not entitle you to use the title 'Ph.D.'. Within 12 months after your disputation, you have to deliver **two bound statutory copies and one digital copy** of your thesis, together with the required documents, to the LMU University Library's Dissertationsstelle (Publication Services Theses). If these statutory copies are not delivered on time (within this one year), all rights acquired with the successful completion of the examination procedure will expire. Only after submitting the statutory copies of your dissertation to the LMU University Library will you receive the final Ph.D. certificates and transcripts with which you may officially use the title 'Ph.D.'.

Please note that all important information about the publication of your electronic theses and bound copies of your dissertation, as well as about all necessary documents that need to be submitted, can be found here: <https://edoc.ub.uni-muenchen.de/help/index.html>

### **Registration**

Please register to be able to upload your dissertation to the theses server.

1. To do so, please use the function '**Create Account**' in the main menu.



2. After you have filled in your email address and have chosen a password and a username, an activation code will be sent to your email address, which will be valid for one week. Please make sure that you access the link provided in the email within this time.
3. After your successful registration, you can log in with your username and password. Please use the function '**Login**' in the main menu. Before you can upload your thesis, you will be asked to provide some more personal information.



### ***Submitting your thesis to the LMU University Library***

Upload your electronic dissertation to the theses server of the LMU University Library. Currently, you can only upload your thesis as a single PDF document. If the publication of your thesis is to be deferred until a patent application has been completed, you are asked to deliver your dissertation as PDF file on a compact disc, instead of uploading it. After uploading and/or submitting your thesis to the LMU University Library, you will not be able to make any further changes to your dissertation.

Subsequently, you must submit two printed and bound copies of your thesis to the Publication Services Theses either personally or by mail (please find the contact details below). Your printed copies must have a durable and permanent binding. Ring or spiral bindings are not allowed, an adhesive binding is recommended. Please inform the printing shop that the copies are intended for submission to the LMU University Library to ensure the use of the required long-lasting materials (printing on wood- and acid-free long-lasting paper). Please find a detailed explanation on how to prepare the statutory copies of your dissertation for the submission to the LMU University library in the annex of this handbook. Please adhere to these specifications.

The two paper copies must carry your **original signature** on the affidavit and the confirmation of congruency. Please note that digital signatures will not be accepted by the LMU University library! The affidavit in the electronic version of your thesis (PDF document) does not need to be signed. **The statutory copies and the electronic version of your dissertation do not need to contain your CV**, as they will be publicly available. Furthermore, your supervisors do not need to sign the statutory copies.

Please note that you have to **organize and cover the costs for printing and delivery of your statutory copies** yourself!

### ***Submission form for electronic theses***

To publish your Ph.D. thesis on the repository a legally binding permission is necessary. You are therefore required to confirm that you permit the LMU University Library to publish, store and, if necessary, convert your thesis. Therefore you have to hand in the official "Submission form for electronic theses" signed and in duplicate together with the printed statutory copies of your thesis. This does not affect your rights under copyright law.

The 'Submission form for electronic theses' can be downloaded here: <https://edoc.ub.uni-muenchen.de/help/> (paragraph 5, 'Submission form for electronic theses')

### ***Blocking note due to a patent application***

If your thesis is associated with a patent application, you can request the LMU University Library to defer the publication of your electronic and printed copies. In this case, upload the electronic version of your dissertation to the theses server and submit your printed copies together with the 'Submission form for electronic theses' (in duplicate) as well as a 'Blocking Note due to a patent application' (in duplicate) to the Publication Services Thesis. You may block publication of your thesis for up to two years. Issuing a blocking note might prolong the duration until you receive your final Ph.D. certificate. Please note that both of your LMU supervisors need to confirm the issuance of a blocking note by signing the respective form. Occasionally, you may be asked to provide additional documents.

The blocking note can be downloaded here: <https://edoc.ub.uni-muenchen.de/help/> (paragraph 9, 'Blocking note due a patent application')

### ***Blocking note due to publishing in a journal***

If you want to publish your thesis in a journal and the journal requires an embargo period, you can request the LMU University Library to defer the publication of the electronic and printed statutory copies. The doctorate regulations of your faculty must allow the delayed publication of your thesis in case of a publication in a journal.

In this case, upload the electronic version of your thesis to the theses server and submit your printed copies together with the 'Submission form for electronic theses' (in duplicate) as well as a 'Blocking note due to publishing in a journal' (in duplicate) to the Publication Services Thesis.

The blocking note can be downloaded here: <https://edoc.ub.uni-muenchen.de/help/> (paragraph 10, 'Blocking note due to publishing in a journal')

### ***Contacting the Department of Dissertations***

Postal address:

Universitätsbibliothek der LMU München  
Publikationsdienste Dissertationen  
Leopoldstraße 13  
80802 München

Address for personal delivery of the statutory copies of your thesis:

Universitätsbibliothek der LMU München  
Publikationsdienste Dissertationen  
Room 1108 (House 1 / 1<sup>st</sup> Floor)  
Leopoldstrasse 13  
80802 München

If you have questions about the submission of your thesis, please contact:

Tel: +49-(0)89-2180-3589 (Anja Soujon) or -9486 (Claudia Höhn)  
Email: [dissertationen@ub.uni-muenchen.de](mailto:dissertationen@ub.uni-muenchen.de)

Opening hours of Publication Services Theses: Monday - Friday: 9-12 am

## Issuing of the Ph.D. certificate

The MMRS Doctoral Office issues all documents. The **doctoral degree** is issued upon successful disputation and submission of the statutory copies to the LMU University library and bears the date of your oral defense. Together with it, you will receive the **doctoral certificate**, which contains the

- date of the doctoral degree,
- the topic of the dissertation,
- the grade of the academically supervised doctoral thesis and
- the final grade achieved.

The final grade is the arithmetically weighted mean of the grade of your dissertation (factor 1.5) and your disputation (factor 1.0). You will also be issued a final Transcript of Records.

**Please note** that you are not allowed to use the title 'Ph.D.' until you have received your doctoral degree and your doctoral certificate. Only after receiving these documents, you may officially use the doctoral title.

The doctoral degree and all related documents can be delivered no earlier than four weeks after the delivery of the statutory copies to the LMU university library. All documents will be sent to you by secure messenger service organized by the Ph.D. Program Coordination. Please be sure to provide the Ph.D. Program Coordination with your current mailing address (no P.O. Box!) and telephone number!

Before you receive your final Ph.D. certificate, you will be asked to complete a final evaluation questionnaire issued by the CIH<sup>LMU</sup> Center for International Health, which will be given to you after your oral defense. At the same time, open claims, such as pending documents, payments and returns to the CIH<sup>LMU</sup> library must be settled.

## Procedure in case of prolonged studies

Supervisors are required to evaluate the possibility of a successful finalization of your Ph.D. project at the end of Research Period II. Candidates who do not complete their research project within the regular three-year study period or did not submit a manuscript to a peer-reviewed journal will be given an additional year to finalize their projects. However, a new Target Amendment (Target Amendment II) corresponding to the 4th year of Ph.D. study must be submitted to the Ph.D. Program Coordination **by the end of the last month of Research Period II (30 April)**. The new Target Amendment should adequately outline the project plan until the finalization of the Ph.D. project and must again be signed by the student and his/her supervisors. Please use the template provided, which can be found on our [website](#). Please note that you must also continue to submit bi-monthly research progress reports during the extension.

If, after evaluating the progress of the Ph.D. project, the supervisors propose to extend the study period for another year, the Ph.D. candidate must submit another Target Amendment (Target Amendment III) to the Ph.D. Program Coordination. The deadline for submitting the Target Amendment III is the **end of the last month of Research Period III (30 April)**. Please use the respective template found on our [website](#). Please note that you must continue to submit bi-monthly research progress reports during the extension.

The maximum duration of your Ph.D. studies within the Ph.D. MR – IH program is five years. **Thus, the last possibility to submit your thesis is 30 April in your fifth regular year of study!**

# Leave of Absence

Students who are prevented from participating in their regular course of study due to important reasons will generally be granted a leave of absence for up to two semesters.

Leave-of-absence semesters do not count toward the overall number of subject-specific semesters. Therefore, students are not allowed to complete any coursework or take any examinations during their leave of absence. No research progress reports have to be submitted during this time. However, all supervisors of the Ph.D. candidate (LMU and local) have to be informed.

If you would like to apply for the leave of absence, you have two options:

- 1) Applying for a leave of absence at the LMU or to
- 2) apply for a leave of absence at the CIH<sup>LMU</sup> Ph.D. Program Coordination.

## Applying for leave of absence at LMU

Ph.D. candidates that are still registered at the LMU with LMU student service fees already paid for the following semester need to apply for a leave of absence at the LMU. The student service fees for the LMU Studentenwerk (Munich Student Union) must already have been paid in full and credited to your fee account for the **respective** semester. The continuation of registration for that particular semester, done for you by the Ph.D. Program Coordination, must already be completed and approved in its required form and by the specified deadline. You may use the [LMU online self-service](#) functions to verify your **current account balance**.

Please note: Failed examinations, or those considered as failed, must be retaken by the specified deadline – regardless of the leave of absence or the reason for it. A leave of absence does not nullify the deadline. Cases in doubt must be resolved in cooperation with the Ph.D. Program Coordination.

Please note: A request for a leave of absence (e.g. extended parental leave) must be filed for **each semester separately!**

### *Application deadlines*

In general, you must submit your request for a leave of absence by the **specified deadlines**:

- for the winter semester – by **30 October** at the latest
- for the summer semester – by **30 April** at the latest.

Only in instances in which the significant reason for the leave of absence does not become apparent until **later**, and which could not have been anticipated any earlier, may the request be submitted

- for the winter semester – by **5 December** at the latest
- for the summer semester – by **5 Jun** at the latest.

### *Fees and continuation of registration*

Generally, a leave of absence will not be granted for the first semester. Furthermore, a retroactive leave of absence cannot be granted for any previous semesters, even due to a proven illness.

## Reasons for granting a leave of absence

It is possible to apply for a leave of absence due to

- illness
- a study abroad program
- a program abroad as a foreign language assistant
- an internship
- maternity and parental leave
- the exceptional burden of care giving for close relatives
- obligations toward the family
- other reasons

Please find all relevant information about the different reasons for leave of absence and the necessary documents that need to be submitted here: <https://www.lmu.de/en/workspace-for-students/abc-study-guide/leave-of-absence-semester/index.html>

## Applying for a leave of absence to the CIH<sup>LMU</sup> Ph.D. Program Coordination

Ph.D. candidates that are still enrolled at the LMU but for whom the LMU student service fees for the following semester have not yet been paid, as well as Ph.D. students who have already been exmatriculated from LMU (after completing the required 6 semesters), must apply for a leave of absence to the CIH<sup>LMU</sup> Ph.D. Program Coordination. In consultation with the Munich Medical Research School (MMRS), the CIH<sup>LMU</sup> Ph.D. Program Coordination will decide whether a leave of absence will be granted. Please contact the Ph.D. Program Coordination in a timely manner for more information on the required documents that need to be submitted to apply for a leave of absence. A retroactive leave of absence cannot be granted for any previous semesters, even due to a proven illness.

## Detailed module descriptions

### Core Course modules

#### *Orientation Courses*

<b>Module:</b>	<b>Orientation Courses</b>	
<b>Degree:</b> Ph.D.	<b>Module offered:</b> annually each Winter Semester	<b>Module Type:</b> Compulsory
<b>Credit points:</b> 8 ECTS	<b>Student Workload- Total nr of hours:</b> 240 hrs	<b>Contact hours:</b> 120 hrs
		<b>Self study hours:</b> 120 hrs
<b>Semester of Study:</b> 1st Semester	<b>Participation requirements:</b> none	<b>Language:</b> English
<b>Learning outcomes of the module:</b>	<p>Upon successful completion of this module, students will be able to:</p> <ul style="list-style-type: none"> <li>• recognize and describe infectious and non-communicable diseases in an international context,</li> <li>• critically analyze the epidemiology and treatment, control and prevention strategies related to diseases of international health relevance,</li> <li>• describe different immunological concepts that may underlie pathogen-specific immunity and the effect of vaccines,</li> <li>• describe the global burden of non-communicable diseases, especially in low- and middle-income countries,</li> <li>• recognize the global burden of occupational and environmental health and discuss recent advancements on these health problems in different settings,</li> <li>• describe the principles of health systems, trends in national health reforms and the key elements in international health policies,</li> <li>• define the main functions of a health system,</li> <li>• discuss health economics; types of economic evaluation and economics of health systems,</li> <li>• explain different approaches to financing a health care system,</li> <li>• critically evaluate the advantages and disadvantages of a country's health system,</li> <li>• describe the basics of health promotion,</li> <li>• distinguish between intervention, prevention and health promotion,</li> <li>• critically analyze the normative underpinnings of political work, the health policy, in the dynamics of development cooperation,</li> <li>• define the following concepts and processes: equity, equality, universalism, targeting, human rights instruments,</li> <li>• interpret the history and politics of development cooperation,</li> <li>• discuss the principles, objectives, ambitions and limitations of humanitarian work.</li> </ul>	
<b>Module content and objectives:</b>	The module provides students with basic knowledge of the core topics of international, medical health care. The module is divided into the sub-	

	<p>modules: 'International Health Fundamentals' and 'Policy and Politics'. Here, there is a strong focus on the clinical consideration of infectious diseases, their prevention, treatment and control, as well as child and adolescent health. The module further highlights global health burdens and sensitizes students to global inequality and injustice, as well as how to critically address them. Furthermore, through various courses on health policy, students learn to understand the principles of policy work, critically assess public health systems in different countries, and discuss the principles and limits of humanitarian aid, among other topics. In addition, students gain knowledge of the various approaches to financing health systems.</p>
<b>Forms of Teaching and Courses:</b>	Lecture, seminar-based group work, problem-based learning with discussion, processing of case studies, self-study
<b>Prerequisites for the award of ECTS credit points</b>	<p><b>Examination form:</b> Written exam  <b>Examination duration:</b> 180 minutes  <b>Grading:</b> passed/failed  <b>Repeatability:</b> Three times</p>
<b>Literature:</b>	<p>Topic-dependent literature selection, for 'International Health Fundamentals' e.g.:</p> <ul style="list-style-type: none"> <li>• Abbas, A.K.; Lichtman, A.H.; Pillai, S. (2014) Cellular and Molecular Immunology. 8th ed. Saunders</li> <li>• Kaufmann, S.H.E.; Rubin, E.J.; Zumla, A. (2015) Tuberculosis. Laboratory Press.</li> <li>• Knobloch, J. (1996) Tropen- und Reisemedizin. Urban &amp; Fischer Verlag.</li> <li>• Maternal Health- an executive summary for <i>The Lancet's</i> Series. (2016) Lancet.</li> <li>• Murphy, K. (2007) Janeway's Immunobiology. 7th ed. Garland Science, 887 pp.</li> <li>• Birn, A.-E.; Pillay, Y.; Holtz, T.H.; Basch, P.F. (2009) Textbook of International Health: Global Health in a Dynamic World. 3rd ed. Oxford University Press.</li> <li>• Gladwell, M. (2000) The tipping point: How little things can make a big difference. Little Brown.</li> <li>• Landrigan, P.J.; Fuller, R.; Fisher, S.; Suk, W.A.; Sly, P.; Chiles, T.C.; Bose-O'Reilly, S. (2019) Pollution and children's health. <i>Sci. Total Environ.</i> 650(2):2389-2394.</li> <li>• Wilkinson, R.; Marmot, M. (2006) Social determinants of health. 2nd ed. Oxford University Press.</li> </ul> <p>Topic-dependent literature selection, for 'Policy and Politics' e.g.:</p> <ul style="list-style-type: none"> <li>• Bouslaugh, S.E. Health Care Systems around the world. A comparative guide. SAGE Publishing.</li> <li>• Buse, K.; Hein, W.; Drager, N. (2009) Making Sense of Global Health Governance. Palgrave Macmillan.</li> <li>• Cimadamore, A.D.; Deacon, D.; Grønmo, S.; Koehler, G.; Lie, G.T.; O'Brien, K.; Ortiz, I.; Pogge, T. Asuncion St. Clair (2013). Poverty &amp; the Millennium Development Goals (MDGs) - a critical assessment and a look forward. CROP Poverty Brief.</li> <li>• United Nations 2015. Transforming our World: the 2030 agenda for sustainable development. Resolution adopted by the General Assembly on 25 September 2015.</li> </ul>



## Advanced Methods

<b>Module:</b>	<b>Advanced Methods</b>	
<b>Degree:</b> Ph.D.	<b>Module offered:</b> annually each Winter Semester	<b>Module Type:</b> Compulsory
<b>Credit points:</b> 12 ECTS	<b>Student Workload- Total nr of hours:</b> 360 hrs	<b>Contact hours:</b> 135 hrs
		<b>Self-study hours:</b> 225 hrs
<b>Semester of Study:</b> 1st Semester	<b>Participation requirements:</b> Good knowledge of calculus and algebra	<b>Language:</b> English
<b>Learning outcomes of the module:</b>	<p>Upon successful completion of this module, students will be able to:</p> <ul style="list-style-type: none"> <li>• define epidemiology and epidemiologic terms,</li> <li>• apply the key concepts of epidemiology,</li> <li>• describe the different types of epidemiological studies and assess their advantages and disadvantages,</li> <li>• analyze qualitative, quantitative and mixed-methods research approaches,</li> <li>• tabulate data and calculate epidemiological measures,</li> <li>• plan and conduct clinical and epidemiological studies,</li> <li>• define and identify possible error sources (e.g. random error, bias),</li> <li>• define, calculate and interpret performance characteristics of diagnostic tests,</li> <li>• discuss the relevance and significance of statistical test results,</li> <li>• communicate clinical study outcomes and results of statistical analyses,</li> <li>• apply the basic concepts of applied statistics,</li> <li>• interpret statistical parameters,</li> <li>• use graphical methods to describe data,</li> <li>• understand the philosophy of estimating data parameters,</li> <li>• apply appropriate statistical methods for the data analysis,</li> <li>• critically analyze scientific publications,</li> <li>• interpret and evaluate study results and assess the evidence and quality of research literature on a health-related topic,</li> <li>• recognize the value of qualitative research,</li> <li>• critically analyze qualitative data and studies.</li> </ul>	
<b>Module content and objectives:</b>	<p>The module provides students with basic knowledge of epidemiology and quantitative methods. 'Epidemiology and Research Design' provides knowledge to describe, organize and evaluate epidemiological studies. The practical application is tested in exercise. Students will acquire skills for planning, funding, implementation, analysis and dissemination of results in epidemiological research projects. 'Quantitative Methods' gives insights into statistical principles and methods, with an emphasis on design and analysis of epidemiological research.</p>	
<b>Forms of Teaching and Courses:</b>	Lecture, exercise, tutorial, R course, SAS+ course	

<b>Prerequisites for the award of ECTS credit points:</b>	<b>Examination form:</b> Written exam <b>Examination duration:</b> 120 minutes <b>Grading:</b> passed/failed <b>Repeatability:</b> Three times
<b>Literature:</b>	<ul style="list-style-type: none"> <li>• Acock, A.C. (2016) A gentle introduction to stata. 5th ed. Stata Press.</li> <li>• Alexander, L.K.; Lopes, B.; Ricchetti-Masterson, K.; Yeatts, K.B. (2015). ERIC notebook. Chapel Hill, Epidemiologic Research and Information Center (ERIC), UNC Gillings School of Global Public Health.</li> <li>• Altman D.G., Bland J.M. (1995) Statistics notes: Absence of evidence is not evidence of absence. BMJ. 311:485.</li> <li>• Bland, J.M.; Bland, D.G. (1994) Statistics Notes: One and two sided tests of significance BMJ. 309:248.</li> <li>• Bland, M. (1995) An Introduction to Medical Statistics. 2nd ed. Oxford University Press, Oxford.</li> <li>• Bonita, R.; Beaglehole, R.; Kjellström, T. (2006). Basic epidemiology. 2nd ed., Geneva: World Health Organization.</li> <li>• Bowling, A. (2009) Research Methods in Health- investigating health and health services. 3rd ed.</li> <li>• Creswell, J.W. (2014) Research design: Qualitative, Quantitative, and Mixed Methods Approaches. 2nd ed. Thousand Oaks: Sage Publications</li> <li>• Centers for Disease Control and Prevention. (2012). Principles of Epidemiology in Public Health Practice - An Introduction to Applied Epidemiology and Biostatistics. 3rd ed. Atlanta, U.S. Department of Health and Human Services: xii, 499</li> <li>• Freedman, D.; Pisani, R.; Purves, R. (2007) Statistics. 4th ed. WW Norton &amp; Co</li> <li>• Petrie, A.; Sabin, C. (2009) Medical Statistics at a Glance. 3rd ed. Oxford: Wiley Blackwell.</li> <li>• Porta, M.S.; Greenland, S.; Last, J.M. International Epidemiological Association. (2008). A dictionary of epidemiology. 5th ed., Oxford; New York: Oxford University Press.</li> <li>• Rothman, K.J.; Greenland, S.; Lash, T.L. (2008) Modern Epidemiology. 3rd ed. Lippincott Williams and Wilkins.</li> <li>• Rothman, K.J. (2012) Epidemiology- An introduction. 2nd ed. Oxford University Press Inc.</li> <li>• Szklo, M.; Nieto, E.J.; Reilly, T.; Parker, K. (2014) Epidemiology- Beyond the Basics. 3rd ed. Jones &amp; Barlett Publishers</li> <li>• Victor, A.; Elsässer, A.; Hommel, G.; Blettner, M. (2010) Judging a plethora of p-values: how to contend with the problem of multiple testing--part 10 of a series on evaluation of scientific publications. Dtsch Arztebl Int. 107(4):50-56.</li> </ul>

## Advanced modules (AM)

Ph.D. students must select two of the following 10 elective modules. Furthermore, the students can select up to two additional elective modules, which they will attend on a voluntary basis.

The elective modules are also part of the CIH<sup>LMU</sup> master's program and are accredited in the tropEd network. Furthermore, these modules are open to students from other LMU faculties or other universities, although course fees may apply. In this way, the interdisciplinary and cross-sectoral vision of the Ph.D. MR - IH program is taken into account and doctoral students benefit from the networking opportunity with other international students.

- Academic Teacher Training for Health Professionals
- Applied Clinical Research
- Burden of NCDs
- Climate Change and Health
- Introduction to Health Geographic Information Systems
- Global Mental Health
- Pandemic Preparedness
- Public Health in Nepal
- Vaccine Research and Immuno-monitoring
- Vector Biology and Control in Ghana

For information on each Advanced Module, please follow the link: <https://lmu-klinikum.de/cih-lmu/education/short-term-courses/advanced-modules-in-international-health/74ae073471cd9d9a>

# Appendices

## European Credit Transfer System (ECTS): Ph.D. MR – IH crediting

Program Period	Module	Module Elements	ECTS/Module	ECTS, Total
<b>Module Block I in Munich</b>	P1.1 Orientation courses	International Health Fundamentals	5	8
		Policy and Politics	3	
	P1.2 Retreat I	Quantitative Methods, Lectures	3	3
	P1.3 Key skills, basic	Retreat Week	1	1
	P2.1 Ph.D. project 1 Part I	Project Presentation I	2	2
	P3.1 Advanced methods of medical research	Epidemiology	3	3
	P3.2 Retreat II	Epidemiology, Clinical	3	3
	P4.1 Methods for advanced students	Quantitative Methods, Exercises	3	3
<b>Module Block I ECTS Total</b>				<b>23</b>
<b>Research Period I</b>	P2.1 Ph.D. project 1 Part II	RPR I (Jan/Feb)	8	16
		RPR II (March/April)	8	
	P2.2 Ph.D. project 2	RPR III (May/June)	8	24
		RPR IV (July/Aug)	8	
		RPR V (Sep/Oct)	8	
	P5.1 Ph.D. project 3 Part I	RPR VI (Nov/Dec)	8	12
		Workshop	4	
<b>Research Period I ECTS Total</b>				<b>52</b>
<b>Module Block II in Munich</b>	P4.2 Retreat III	Symposium Prep	2	2
	P4.3 Key skills, individual deepening	Symposium Report	1	1
	P5.1 Ph.D. project 3 Part II	Project Presentation II	2	8
		Soft Skills	2	
		Research Skills	4	
	P6.1 Special methods courses	Advanced Module I	3	3
	P6.2 Key skills, special competencies	Advanced Module II	3	3
<b>Module Block II ECTS Total</b>				<b>17</b>
<b>Research Period II</b>	P5.1 Ph.D. project 3 Part III	RPR VII (April) (Part I)	4	4
	P5.2 Ph.D. project 4	RPR VIII (May/June)	8	24
		RPR IX (July/Aug)	8	
		RPR X (Sep/Oct)	8	
	P7.1 Ph.D. project 5	RPR XI (Nov/Dec)	8	30
		RPR XII (Jan/Feb)	8	
		RPR XIII (March/April)	8	
		Conference	4	
	RPR VII (Part II)	2		
<b>Research Period II ECTS Total</b>				<b>58</b>
<b>Graduation</b>	P7.2 Ph.D. project 6	Dissertation	20	20
	P7.3 Disputation	Disputation	10	10
<b>Total</b>	<b>3-Year ECTS Total</b>			<b>180</b>

## German Grading System for Universities

	Grades	Descriptor	Conversion (approx. to U.S.A. system)	Conversion (approx. to U.K. system)
100-90%	1.0	'sehr gut' <b>very good:</b> an outstanding achievement	A+	A+
	1.3		A	A
90-80%	1.7	'gut' <b>good:</b> an achievement substantially above average requirements	A-	A
	2.0			A/B
	2.3			
80-65%	2.7	'befriedigend' <b>satisfactory:</b> an achievement which corresponds to average requirements	B+	B+
	3.0		B	B/C
	3.3		B-	C
65-50%	3.7	'ausreichend' <b>sufficient:</b> an achievement which barely meets the requirements	C+	
	4.0		C	D
50-0%	5.0	'mangelhaft'/'ungenügend'/'nicht bestanden' <b>not sufficient/failed:</b> an achievement which does not meet the requirements	D+	E
			D	
			D	F
			F	G

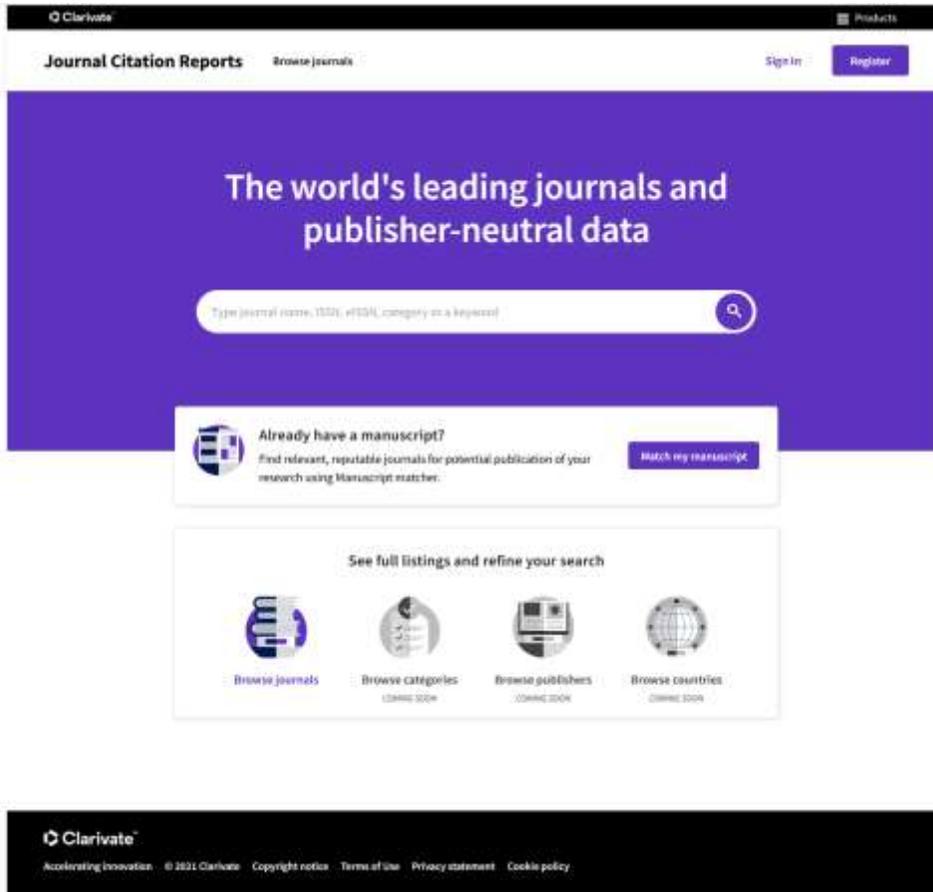
## Module Overview

	Module and courses	Teaching Format	Contact/ Self-study (hours)	ECTS	Examination	Evaluation
Module Block I	<b>Orientation Courses</b>			8		
	International Health Fundamentals (IHF)	Lecture	40/20	2	Written Exam (180 min)	Passed/Failed
	Policy and Politics (POL)	Lecture	30/60	3		
	<b>Advanced Methods</b>			12		
	Quantitative Methods	Seminar	79/101	6	Written Exam (120 min)	Passed/Failed
	Epidemiology and Research Design	Seminar	56/124	6		
	<b>Retreat Week</b>			1		
<b>Project Presentation I</b>			2			
Research Period I	<b>Research Progress Reports</b>			48		
	<b>Workshop Participation</b>			4		
					Essay (1.000-2.000 words)	Passed/Failed
Module Block II	<b>Project Management- Symposium</b>			3		
	Symposium Preparation & Execution	Seminar	16/14	1	Essay (1.000-2.000 words)	Passed/Failed
	Symposium Report	Seminar	20/40	2		
	<b>Research Skills</b>			4		
	<b>Soft Skills</b>			2		
	<b>Project Presentation II</b>			2		
	<b>Advanced Modules</b>			6		
	Advanced Module I	Seminar		3	depending on module	Passed/Failed
	Advanced Module II	Seminar		3	depending on module	Passed/Failed
Research Period I	<b>Research Progress Reports</b>			52		
	<b>Conference Participation</b>			4		
					Essay (1.000-2.000 words)	Passed/Failed
	<b>Project Presentation III</b>			2		
Graduation	<b>Dissertation</b>			20		Graded
	<b>Disputation</b>			10		Graded

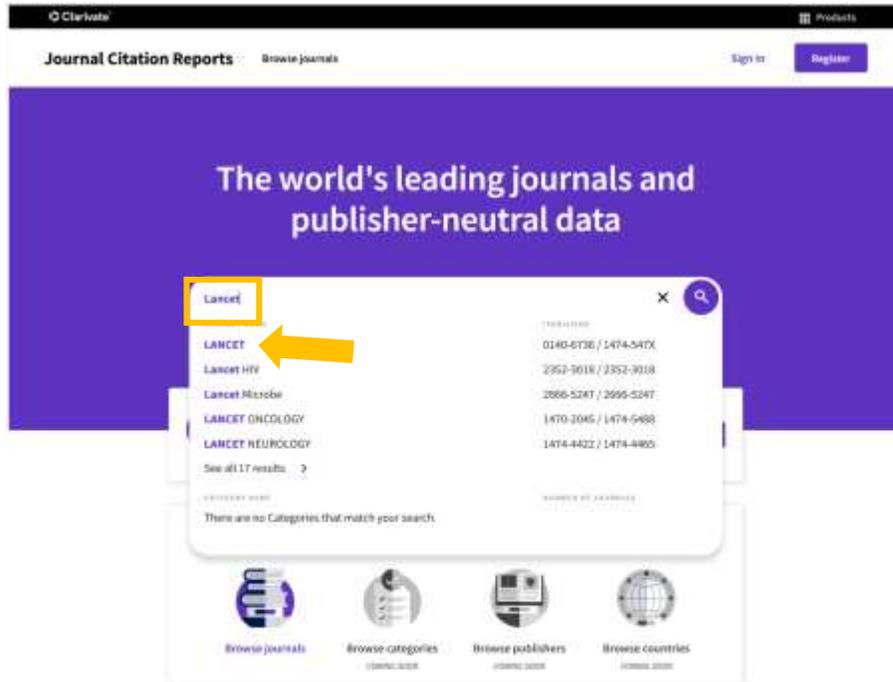
## Determining the rank of a journal in the Journal Citation Reports

In order for a paper to be used for a cumulative dissertation, it must be published in a journal that is among the top 80% in its field. Here we explain how to determine the ranking of a journal.

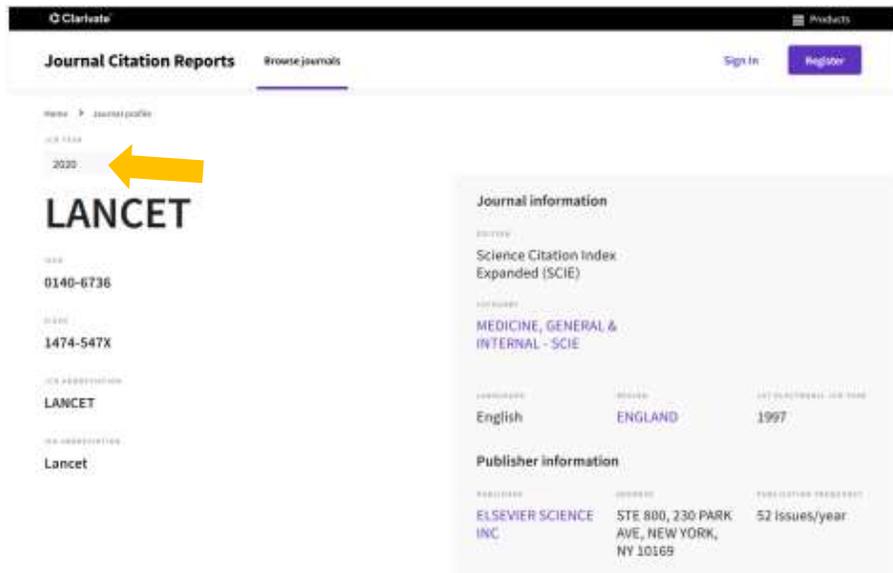
1. Log into [Journal Citation Reports](#) via the university library. Use your campus ID. The site that opens should look like this:



2. Enter the name of your journal into the search field. Select the journal you are searching for (→).  
*Example: We are searching for the journal "Lancet".*

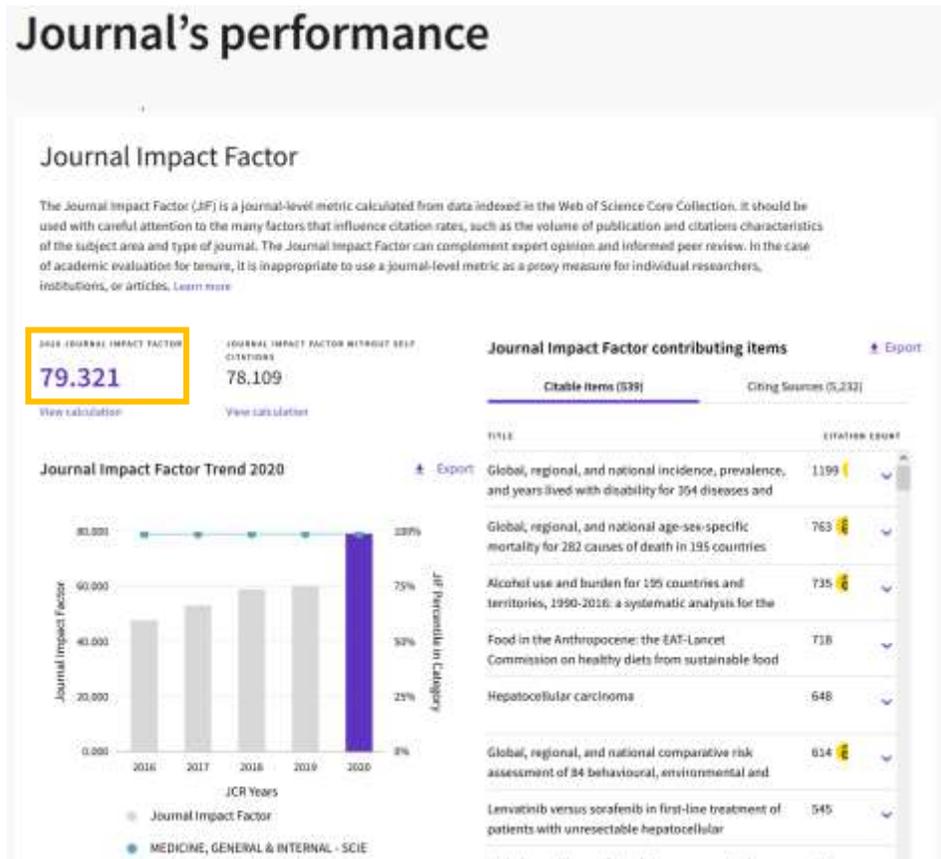


3. Select the most recent year available (→).  
*Example: The most recent year for which the impact factor is available is 2020.*



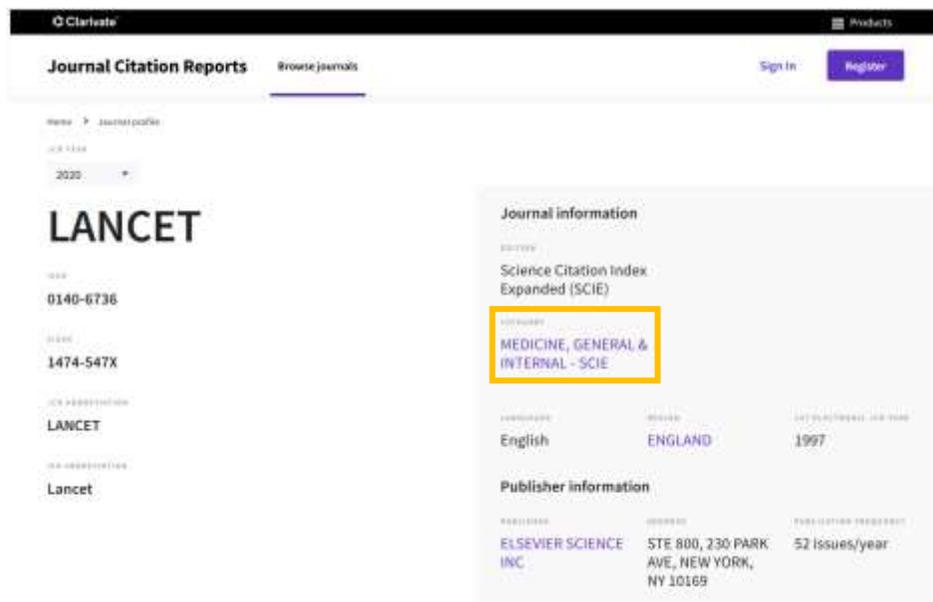
4. Scroll down to search for the impact factor of the journal.

*Example: The journal "Lancet" had an impact factor of 79.321 in 2020.*

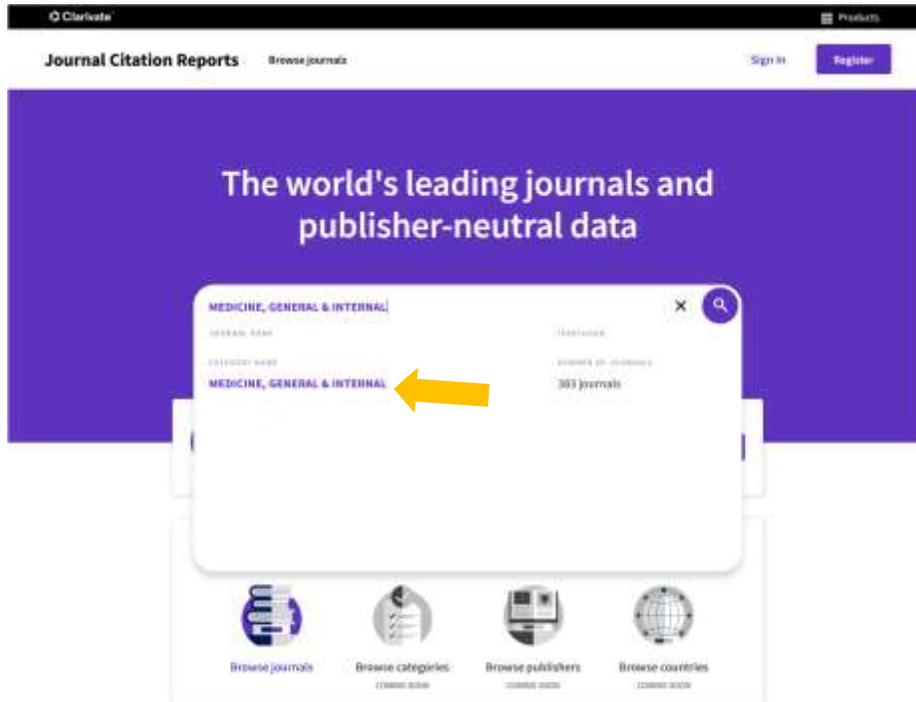


5. Look for the "category" of the journal.

*Example: The journal "Lancet" belongs to the category "Medicine, General & Internal – Scie".*



6. Go back to the initial [Journal Citation Reports](#) website.
7. Enter the category into the search field to determine how many journals are part of the same category as the one you are interested in. Click on the category (→).  
*Example: The journal “Lancet” belongs to the category “Medicine, General & Internal – Scie”, so please enter “Medicine, General & Internal” into the search field. By clicking on the category, you will be forwarded to the website with all journals of the same category. The category “Medicine, General & Internal” has 318 journals.*



The screenshot shows the search results page for the category 'Medicine, General & Internal - Scie'. The search bar contains '318 journals'. Below the search bar is a table of journals with the following columns: Journal name, ISSN, eISSN, Category, Total Citations, 2018 JIF+, JIF Quartile, 2018 JCI, and % of C.

Journal name	ISSN	eISSN	Category	Total Citations	2018 JIF+	JIF Quartile	2018 JCI	% of C
NEW ENGLAND JOURNAL OF MEDICINE	0029-4729	1553-4406	MEDICINE, GENERAL & INTERNAL - SCIE	464,351	81,249	Q1	26.14	1
LANCET	0140-6736	1474-547X	MEDICINE, GENERAL & INTERNAL - SCIE	369,661	79,323	Q1	20.05	2
JAMA - JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION	0098-7484	1538-3596	MEDICINE, GENERAL & INTERNAL - SCIE	224,147	56,272	Q1	11.48	1
Robtaw Reviews Disease Progress	2050-6754	2056-676X	MEDICINE, GENERAL & INTERNAL - SCIE	14,221	52,329	Q1	16.63	4
BMJ - British Medical Journal	1750-1833	1756-1833	MEDICINE, GENERAL & INTERNAL - SCIE	158,747	38,090	Q1	6.27	1
ANNALS OF INTERNAL MEDICINE	0093-4889	1539-3704	MEDICINE, GENERAL & INTERNAL - SCIE	72,968	25,381	Q1	4.26	1
Lancet Digital Health	N/A	2508-7500	MEDICINE, GENERAL & INTERNAL - SCIE	1,260	24,529	Q1	1.41	10

- Multiply the total number of journals in your category by 0.8 ( $\cong 80\%$ ) to determine the rank of the journal at the bottom of the top 80%.

**Example:** 318 journals multiplied by 0.8 = 254.4 -> All journals including the one on rank 254 are within the top 80% of the category "Medicine, General & Internal – Scie".

- Sort all journals in the category by their impact factor from big to small ( $\rightarrow$ ). Determine if the journal you are interested in is among the top 80% in its field.

**Example:** The journal of your interest is among the top 80% if it is among the first 254 journals listed. The journal "Lancet" is on rank 2, meaning that if you publish a paper in Lancet it fulfills the requirements for a cumulative thesis.

The screenshot shows a table of journals with columns for Journal name, ISSN, eISSN, Category, Total Citations, 2020 JIF, 2020 QI, and %iG. A yellow arrow points to the 2020 JIF column.

Journal name	ISSN	eISSN	Category	Total Citations	2020 JIF	2020 QI	%iG
NEW ENGLAND JOURNAL OF MEDICINE	0028-4793	1533-4406	MEDICINE, GENERAL & INTERNAL - SCIE	464,351	91.245	Q1	36.14 C
LANCET	0140-6736	1474-5478	MEDICINE, GENERAL & INTERNAL - SCIE	369,801	79.321	Q1	30.05 2:
JAMA JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION	0098-7484	1538-3598	MEDICINE, GENERAL & INTERNAL - SCIE	224,147	56.272	Q1	11.48 C
Nature Reviews Disease Primers	2058-6768	2056-6768	MEDICINE, GENERAL & INTERNAL - SCIE	14,321	52.339	Q1	16.63 4
BMJ-British Medical Journal	1756-1833	1756-1833	MEDICINE, GENERAL & INTERNAL - SCIE	156,747	39.680	Q1	6.37 B:
ANNALS OF INTERNAL MEDICINE	0003-4823	1538-3794	MEDICINE, GENERAL & INTERNAL - SCIE	72,568	25.391	Q1	6.38 C
Lancet Digital Health	N/A	2589-7500	MEDICINE, GENERAL & INTERNAL - SCIE	1,260	24.519	Q1	3.41 D:
JAMA Internal Medicine	2168-6106	2168-6104	MEDICINE, GENERAL & INTERNAL - SCIE	25,003	21.875	Q1	5.21 B

- Tip:** If you do not want to count the rank of all journals to see on which rank the journal of your interest is, scroll down to the bottom of the page and use the "items per page" function.

**Example:** Select "200 items per page" and search for the journal of interest by using the STRG + F function. If you find your journal of interest on page 1, it means it is still among the top 80%.

## Finalization Checklists

### **Before Ph.D. thesis submission**

- Complete student documentation (Supervision and Target Agreement, Target Amendments)
- Transcript of Records with 150 ECTS
- Ethical Clearance
- Plagiarism check

### **With Ph.D. thesis submission**

- PDF file of the Ph.D. thesis including the signed affidavit, confirmation of congruency and your tabular CV
- Two bound paper copies of the Ph.D. thesis including the signed affidavit, confirmation of congruency, your tabular CV and a list of all scientific publications (to be printed by yourself or by the CIH<sup>LMU</sup> on your behalf)
- iThenticate report  
(will be forwarded by your supervisor directly to the Ph.D. program coordination)
- Supervisor Consent Forms
- Application for admission to the Ph.D. Examination Form
- Declaration for the “Münchner Universitätsgesellschaft”
- Proof of article acceptance (if your paper has not been published yet)
- Confirmation of all co-authors (if applicable)

### **With submission of revised Ph.D. thesis (after major revisions)**

- PDF file of the revised Ph.D. thesis including the signed affidavit, confirmation of congruency and your tabular CV (without signatures)
- One bound paper copy of the revised Ph.D. thesis, including the signed affidavit, confirmation of congruency, your tabular CV and original signatures of your supervisors

### **With submission of the statutory Ph.D. thesis copies at the LMU university library**

- Electronic Ph.D. thesis (Upload of PDF file to the theses server of the LMU university library)
- Two bound paper copies of your Ph.D. thesis including the signed affidavit and confirmation of congruency (original signatures!)
- Submission form for electronic theses (in duplicate)
- Blocking Note (if applicable, in duplicate)

# TTU Guidance on AI

## *Introduction*

With the introduction of ChatGPT 3.5 in November 2022, the use of Artificial Intelligence (AI) has become more accessible and usable than ever before. In the context of academia and international health, it is being used in health care procedures, in education, and in research. Academic accomplishments such as compilation of evidence, manoeuvring of research methods and generation of text on an academic level are considered criteria of scientific excellence. The fact that these aspects can potentially be taken over by AI now, make regulations on the use of AI a necessity. The team of the TTU is continuously developing guidance on scientific integrity for its students, and is in continuous exchange on the issues with representatives from other academic institutions all over the world. This guidance document is intended to facilitate the use of AI for our TTU students.

## *Examples of Tools*

There is a continuously increasing portfolio of available AI tools, which can be used in clinical care, literature review, compilation of lectures, etc.

This guidance will focus on the use of generative large-language model chatbots, such as ChatGPT 3.5, Deepseek and others.

## *An Analysis on the Use of AI in the Context of TTU*

The use of generative language model chatbots comes with advantages and disadvantages, and faces future opportunities and threats. The following SWOT analysis is not exhaustive, but tries to address key points.

- Strengths

Universally accessible (as of now)

Fast

Potential to balance language issues in students from non-English environments

- Weaknesses

Algorithms not transparent

Exclusion of ideas that are out-of-the box

Difficulty to identify fraudulent use in academia

- Opportunities

AI has come to stay, users benefit to remain up-to-date with developments

AI is continuously developing, the output will likely increase in quality

Generative language bots have the potential to create equity with regard to command of English language

- Threats

Users of AI may lose competencies of reasoning and critical thinking

Dependence on providers of AI

Risk of manipulation of users through intentional or unintentional biases in algorithms

Effective utilization of AI depends significantly on the formulation of appropriate and context-aware prompts. TTU promotes the development of prompt engineering skills among students to enable large language models to accurately comprehend and respond to their requirements.

### ***Guidance and Rules on Use of AI at TTU***

TTU encourages all its students to familiarize with AI in general, and with generative language model chatbots in particular. This not only can help in conducting tasks and assignments as a student, but will prepare for a competent use in professional and private life.

IMPORTANT NOTE: Any use of AI has to be agreed upon with your entire supervision committee. We strongly recommend to state this in written in your target agreements, and/or in your Research Progress Reports, or in a supplementary document. However, the agreement with supervisors should not breach this TTU guidance, but supervisors may decide to be stricter on the use of AI as compared to this guidance. If you see any conflicting guidance, please contact the TTU team.

This guidance will take the conduct of qualification research and the compilation of a thesis as an example.

Research should be driven by rationale, which is based mostly on gaps and challenges, in our case in health care systems in low- and middle-income settings. The identification of gaps and challenges can be conducted in an empirical manner, but also by personal experiences of the beholder. The latter is at risk if AI is employed. In addition, the use of AI as first-entry-tool bears the risk of biasing the user right away, hampering development of out-of-the-box thinking.

TTU suggests therefore, to develop rationales always via personal reflections as a first step. In a second step, AI may be used to complement, and to avoid omission.

The proper use of methodology in research requires a particular attitude in the researcher, and even more so in a student aspiring for an academic qualification. It is expected, that a student understands the algorithms of research methods, in order to be able to appreciate weaknesses and risks in the use of methods. It is hence indispensable that students are able to select and defend their methodology, independently of AI.

AI can help to compile a review of existing evidence, both for introduction and discussion of qualification works. However, due to observed shortcomings in the functionality of AI to neutrally assess suitability of existing evidence, it is recommended to use AI and a critical traditional literature review in parallel. Always ensure that you verify any data obtained from AI-assisted searches.

A common procedure, which we at TTU would like to propose, is as follows:

- *Introduction and Rationale*

The starting point, both for rationale and hypothesis generation, should always be a personal reflection on the topic, in order to allow out-of-the-box ideas, which may be linked to personal experiences. In a second step, we encourage the use of AI, in order to complement, to compare, and to avoid omission.

Compilation of existing evidence should be conducted in parallel by critical traditional literature review (e.g. search terms on pubmed) and by use of AI.

- *Methods*

The applied methodology has to be fully understood by the researcher; this requires a complex training, which is offered to all program students at TTU. Only secondarily can AI then be used, e.g. for the compilation of codes when using statistical software.

- Results

In the presentation of results, the mode of presentation and formatting should always follow universal scientific conventions, also in order to facilitate understanding in the readers of scientific works. Here, AI can be used to find common fashions to present results.

- Discussion and Conclusion

Since the merging of AI generated pre-existing evidence and additional personal complementation of evidence will be difficult to be fed back into a generative language chatbot, we propose to draft discussions and conclusions always manually. Only in a second step, certain paragraphs can be structured, but not written, upon suggestions by AI.

- English Language Command

Once the scientific work has been compiled entirely, we suggest to use AI to correct and compensate difficulties in English language command. This can be done by the chatbot command “rewrite in scientific English language on PhD (or masters) level the following text”. We recommend to execute this paragraph by paragraph, and to critically review the result. We would like to draw attention on nuances in meanings. For example, the degree of probability can be misunderstood and produced in a misleading way (e.g. differences between “is”, “can”, “may”, “is probable”, “is likely”, “cannot be excluded”, etc.).

### ***Declarations***

If AI has been used in any of the steps of research of compilation of a qualification work at TTU, you are obliged to declare this. It has to be declared in the “contributions” section. It has to be transparent at which steps which AI tools have been used. As an example: “After personal decision on methodological tools to be used, ChatGPT was used to generate codes in the use of the software Stata version 17. After a personal compilation of existing evidence in the discussion, ChatGPT 3.5 has been used to complement the compiled evidence. It has also been used for English language correction after the full manual writing of the thesis.”

### ***Support***

In case of doubts, we recommend to contact the coordination team at TTU, and to discuss with your supervisors.

### ***Disclaimer***

This guidance document is a legally not binding document. It may be overruled by German law and university regulations, which may be implemented at any time. This document does not convey any rights to the use of AI to TTU students.

TTU Team, 09 July 2025