

MASTER THESIS

(Course leaders: Lut Lynen & Jean-Claude Dujardin)

The thesis writing process gives the students the opportunity to integrate knowledge, methods and skills acquired during the MTM programme. It allows them to collect, analyse and use primary and/or secondary, quantitative and/or qualitative data, as well as to carry out systematic reviews of literature and meta-analysis. The students will also gain the ability to critically appraise their personal experiences and contextual issues and use this in arriving at logical conclusions. The students will select thesis topics in line with their study orientation, personal interests and experience.

The research proposal, thesis seminar, thesis manuscript and the oral defence will allow the examination board to assess the level of the student's attainment of the learning outcomes.

NUMBER CREDITS

15 ECTS divided over a joint seminar session and the manuscript

- 3 ECTS: thesis seminar
- 12 ECTS: thesis manuscript

MODE OF STUDY

This course (component) is organized :

- Face-to-face (Antwerp)
- Blended courses (online + face-to-face)

LEARNING OBJECTIVES

After the thesis writing and defence the participants should be able to:

- Formulate an original clinical or biomedical research question relevant at global, national, regional or local level within the thematic and methodological scope of the chosen (biomedical or clinical science) orientation;
- Demonstrate insight in methodological and domain-specific issues related to the topic, contextualised within the broad spectrum of tropical medicine and international health;
- Critically select and review relevant literature and other sources of information to understand and analyse the research problem;
- Select and use appropriate concepts and theories related to the master thesis topic;
- Select and use appropriate methodological and/or laboratory techniques for the collection and analysis of data;
- Present in a scientific way the consecutive research steps undertaken during the research, and specifically:
 - Write a clear scientific text, showing proficiency in the use of scientific vocabulary and technical terms, within a scientific text format.
 - Formulate and demonstrate the flow of arguments in a coherent way.
 - Cite bibliographic references appropriately and correctly.

- Convincingly present the thesis work and discuss the results with a scientific audience.

CONTENT

The master thesis process will consist of two major building blocks. The first part will be the master thesis group seminar (3 ECTS). During the seminar students will have to present – publicly – their master thesis research proposal and contextualise their master thesis proposal into the larger field of tropical medicine and international health. Students can only present their research proposal after approval by the promotor. Comments, remarks and suggestions made by the panel during the seminar are used for the further development of the master thesis during the rest of the learning trajectory. It is explicitly the purpose of the thesis seminar to discuss and interact with students with other disciplinary backgrounds on the thesis proposal. For that purpose each student will have a promotor and co-promotor from two different departments. The thesis seminar will be quoted, though the result of the seminar is not determinant for the rest of the trajectory.

The second part of the master thesis, is the thesis itself, where students will, based on their original clinical or biomedical research question in the field of tropical medicine, demonstrate their methodology applied and their results obtained. Fieldwork can be an integral part of the master thesis. The thesis will be written according to the guidelines of and within the format of a scientific manuscript. This implies that the manuscript should be a "potentially publishable" article in a peer-reviewed journal.

The manuscript is part of the assessment, together with the oral defense.

TEACHING AND LEARNING METHODS

The process of thesis writing

Thesis writing is an iterative process that requires exercise, coaching and feedback. Several steps are important during the process. Below a timeline is provided, as a guiding principle for students willing to study in one year:

- When applying for the MTM, students need to submit a proposal for thesis topic, preferably related to the expertise of ITM. The student has to motivate his/her choice for the topic.
- September-December: students will be guided towards a first research proposal.
- January - March (including 2 weeks dedicated to seminar presentation): development of the research proposal and preparation of poster presentation during the seminar.
- March - June: data-analysis, drafting the results section, develop a plan for the discussion.
- June – Mid-August: finalise the manuscript and submit to course coordination.
- Mid-September: thesis submission and defence.

Support for thesis writing and defence

- Students will have info sessions regularly organised by the course coordination team (face-to-face when students are present at ITM or remotely).
- Peer support: peer review sessions with inputs from staff are organised at the initial stage to define the problem & the methods at the thesis seminars in March and to rehearse the thesis defence in September.

- During the writing process, discussions with peers are strongly encouraged, but not formally organized.
- Supervisor: each participant is assigned a thesis supervisor. We strongly recommend students and supervisors to clarify their expectations on the thesis coaching process during the first meeting. A memorandum of understanding will be drawn up between the student and the supervisor to clarify each other's expectations and decide on a timeline and specific training plan to obtain the knowledge and skills required.
- Students are expected to take the initiative to personally contact her/his supervisor on a regular basis. Students are advised to make appointments, to send the latest draft before the appointments and to prepare the points to be discussed. The frequency of meetings with the supervisor will depend on the needs of the participant.
- Additional guidance: in case of need, additional guidance can be arranged, e.g. for data analysis, on specific methodological or technical issues, on issues related to literature search and reference writing, for IT support. These arrangements for additional guidance have to be discussed first with the thesis supervisor and the course coordinator.
- Role course coordinators: Course coordinators are not directly involved in the coaching of students. They have a quality assurance and mediator function. The supervisor will inform the course coordinators on the progress of the participant. In case of doubt or problems with regards to the coaching (availability, disagreements, ...) the supervisor and/or the participant are requested to contact the course coordinator.

ASSESSMENT

The assessment of the master thesis will consist of three parts:

- The thesis seminar where the quality of the proposal, together with the presentation and the discussion with the audience will be quoted.
- The quality of the manuscript.
- The presentation of the master thesis: each participant has 15 minutes to present her/his thesis to the 4 members of the jury. After the presentation, the jury has 35 minutes to ask questions. These questions are not limited to the thesis but can also be focused on related topics covered in the master programme. The 2 members of the jury who have read the thesis in detail will start with the questions.

The examination board for each student is composed of four members: two represent the teaching staff of the master in tropical medicine and two represent the academic or professional international expert in clinical or biomedical science. The composition of the examination board is largely orientation specific and adapted to the domain of the thesis. The examination board assesses the achievements of the participants in relation to the above-mentioned learning objectives taking into account the orientation specificity in the application of concepts, theories and methods:

- Two members (one ITM, one external) mark the thesis seminar and the thesis text. Their consensus determines the participant's mark.
- Four members mark the thesis presentation/final oral exam. Here also their consensus determines the participant's mark.
- The participant who failed for the thesis document can participate in a second session on the condition that the participant's marks for the other elements comply with the deliberation

rules. S/he will have to redo both the thesis document and the final oral exam, as these cannot be separated.

STAFF INVOLVED

Course leaders for the Master thesis are Prof. dr. Jean-Claude Dujardin and Prof. dr. Lut Lynen.

Each student will be coached by a professor or post-doctoral researcher for his/her thesis in one of the units in the department.

REMARKS

Permission data use

If students plan to use data that are part of third-parties databases, it is up to the participant to request the permission to use these data from the organisation/institution involved (e.g. MoH, research institution, NGO etc.). The coordination team will endorse such requests with a formal support letter. The participant should contact the coordination by mail to request such a support letter, and provide full name and address of the organisation/institution involved.

Ethical review

From the ITM Institutional Review Board (IRB) procedures, please note the following information: Research proposals which prospectively collect research participant data and/or human bio-specimens should always be submitted to the IRB, and if needed, the Ethical Commission (EC) from University Hospital Antwerp (UZA). If the research takes place abroad, submission to the local Ethics Committee and/or Health Authorities should be done and approval obtained as required by local legislation. This remains the responsibility of the local Investigator. In case study data has already been collected abroad for the research proposal, it is the thesis supervisor's responsibility to ensure that the study data have been obtained according to appropriate scientific and ethical standards and that ethical clearance was granted prior to the start of the data collection, or that further approval is needed for use of secondary data in research.