



# MASTER OF SCIENCE IN TROPICAL MEDICINE

INSTITUTE OF TROPICAL MEDICINE

INITIAL ACCREDITATION • PANEL REPORT

*NOVEMBER 18, 2019*





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# 1 Executive summary

The proposed Master of Science in Tropical Medicine is a 60 ECTS tropical medicine specialization, offered to students who have already obtained a Master of Science (MSc) degree in medicine or medicine-related MSc (Master after Master). It focuses on tropical diseases and research and treatment of disease in low-resource circumstances. The programme, which will be offered both full-time and part-time, aims to enhance students in their pursuit of a career as a professional or a scientist. The programme ties in with certain developments within the professional field, such as the need to increase the number of specialized professionals, the availability of research technologies in low-resource environments and the occurrence of tropical diseases in regions not defined as tropical. The programme has not clearly defined the field of Tropical Medicine. Although there is a shared idea of the field of Tropical Medicine among those involved in the programme, the panel thought this could be made more clear. The focus of the programme could therefore be strengthened by explicitly (re)defining the field of Tropical Medicine, also in relation to Global Health.

The programme directors defined general learning outcomes for the programme as a whole. On top of that, specific learning outcomes have been developed for the two specialisations, of which students will choose one: biomedical sciences or clinical sciences. The learning outcomes were developed in consultation with the professional field and clearly reflect an academic master's level. The panel finds the combination of the two strands of science in one programme a unique and a strong asset by which students deepen their knowledge and broaden their perspective.

The programme builds on the traditionally strong capacities in research and education of the Institute of Tropical Medicine in Antwerp. There are ample well qualified and experienced members of staff in the two hosting Departments (Clinical Sciences and Biomedical Sciences), that are dedicated to deliver the program that is characterised by a tailor-made approach. This allows students to develop in a direction which is personally and professionally of interest to them. Given the expected student population and aims of the programme, the panel applauds this approach.

The programme admits students from various backgrounds and has an adequate procedure in place to select them. The courses offered fully support the achievement of learning outcomes by the students. The courses cover both the relevant issues related to the biomedical and clinical professional field and develop the student's scientific knowledge and skills. The methods of teaching and learning and the structure of the programme fit the expected student population. The support and guidance of students is excellent and the programme has foreseen feedback mechanisms that allow students to participate in safeguarding the quality of the programme. Regarding the structure of the content, the panel recommends the programme directors to ensure that the level of complexity for students in the clinical orientation does not drop after the first period. In addition, it recommends the programme to evaluate an integrative approach of the diseases and topics discussed in the first and second period of the programme.

The assessment methods are varied and match with the instruction methods. The panel establishes that students will be informed in a transparent manner about the expectations concerning assessment. The system of assessment and the rules concerning validity of previously obtained results allow students a good degree of flexibility and at the same time motivates students to finish their studies within due time. The programme ensures a fair and consistent assessment of students.

The Hague, 18 November 2019

On behalf of the expert panel convened to assess the programme

Eduard E. Zijlstra  
(panel chair)

Jetse Siebenga  
(secretary)

## 2 Description of the programme

### 2.1 Overview

Country	Flanders (Belgium)
Institution	Institute of Tropical Medicine
Programme	Master of Science in Tropical Medicine
Language of instruction	English
Level and orientation	Academic Master
Number of credits	60
Location	Antwerp
Study mode	Fulltime, part-time
Domain of study	Medicine

### 2.2 Profile of the institution

The Institute of Tropical Medicine (ITM) was established in 1906 as a postgraduate training centre for medical doctors and paramedics that were sent out to Central Africa. ITM is recognized by decree as an independent institution for research, education and service delivery in tropical medicine and public health. Its core mission is to conduct and promote scientific research, professional and academic education as well as scientific and community services in the field of tropical diseases and global healthcare, with special attention to low and middle-income countries. The institute consists of three departments, Clinical Sciences, Biomedical Sciences and Public Health. It currently offers two master programmes, focused at Tropical medicine and International Health. The programme in public health offers a specialization in Tropical Medicine. In addition, the institute offers postgraduate education in tropical medicine and international health.

ITM thus far has mainly attracted students from low-income tropical countries and is strongly aimed at capacity building in those countries. ITM adapted its teaching and learning methods to the needs and expectations of these students: flexible and blended learning, international mobility and tailored student support are at the heart of ITM's educational vision. With this approach, ITM together with its worldwide alumni, aims at playing a prominent role in tropical medicine and public health science and practice.

### 2.3 Profile of the programme

The programme in Tropical Medicine is a further development of the institution's existing education in this field. It is offered to students with a master's degree in a broad range of subjects related to health care (Master-after-Master). The programme aims to educate future scientists and professionals that will work in research institutes, NGO's and clinical organizations. One of the unique features of the programme is the integration between science and profession, reflected by a firm scientific approach contextualized in the practical circumstances that characterize medical practice in tropical low-income countries. The programme will be offered both full-time and part-time and facilitates and attracts professionals from low-income countries.

## 3 Assessment per generic quality guarantee

### 3.1 Intended exit level (generic quality guarantee 1)

*With respect to level, orientation and content, the intended exit level reflects the current requirements that have been set for the programme by the professional field and/or discipline from an international perspective.*

#### *Outline of findings*

ITM found the need for the programme both in the perspective of current students graduating from other ITM programmes, and in the perspective of the professional field. Graduates from the specialization in Tropical Medicine and International Health master-programme at ITM, expressed the wish to be able to follow more course components in the field of Tropical Medicine. To be able to answer this need, ITM decided that further adaptation of the public health programme was not an option.

There is an increasing need for professionals and scientists who understand both clinical and biomedical aspects of tropical medicine and are aware of the possibilities and conditions in low-income tropical countries. Several tendencies within the professional field amplified this need in recent years, such as the increasing transfer of innovative research technologies, increasing interest in research by NGO's and increasing specialization of NGO's clinical staff. The professional field represented during the site visit argued that there is a demand for staff members with a stronger affinity and more knowledge of clinical and biomedical research. From the self-evaluation and the site visit, it became clear that this need lies within the traditional work field connected to ITM (research institutes dedicated to tropical medicine, NGO's and clinical organisations). The programme additionally indicated that pharmaceutical companies have shown interest in sending their employees to the programme.

The programme aims to deliver two types of graduates within the field of tropical medicine:

- Clinical or biomedical *professionals* who are trained to work in reference labs, research institutions, and in the sector of field actors involved in health care (NGO's) in the Global South. This means that the graduated students are equipped to translate their acquired knowledge to other settings, and to work together in those settings with other professionals;
- Clinical or biomedical *scientists* who want to conduct fundamental, applied or operational research in research, academic or reference institutions.

The programme defined general learning outcomes for all students and specific outcomes for the clinical and biomedical orientation. The learning outcomes state that all graduates of the programme should be able to discuss health problems with other experts in a multidisciplinary setting. Graduates have an evidence-based approach and propose research ideas aimed at solving problems related to tropical medicine. As such, they are able to pursue a career in research centres, NGO's and in clinical practice.

Graduates from the biomedical orientation of the programme have acquired the ability to independently use the appropriate research techniques within biomedical sciences, the ability to make an informed choice regarding adapted lab settings in resource-constrained settings, the capacity to select appropriate research methods and apply these within the relevant context and the ability to write a research proposal according to the guidelines of a grant application.

Graduates of the clinical orientation are able to make a sound diagnosis and plan adequate clinical management in specific settings, formulate evidence-based guidelines to ameliorate clinical care or laboratory practices in resource-constrained settings, improve clinical decisions based on new scientific elements and formulate and justify research questions in the domain of diagnosis and management.

The programme emphasizes a holistic approach towards the treatment of tropical diseases and as such fosters the integration between the disciplines. This combination is unique for Flanders. Thus, the programme clearly found a niche in this respect. The professional field supported the importance of this niche for tropical medicine in practice. Representatives of the professional field indicate that the combination of a rigid theoretical approach with an understanding of the realities of the tropical medicine practice is a strong asset of the programme and is reflected in the proposed curriculum.

The learning outcomes were derived from the domain-specific learning outcomes and with the Flemish qualification framework level 7. The programme undertook several initiatives to ensure that the learning outcomes match with expectations of the professional field relevant to the institute. It did so by sending out a survey to organisations in the professional field and research institutes. In addition, this survey was sent to alumni of the institute and to other contacts in the professional field, including contacts at important NGO's and institutional partners. Furthermore, the institute organized two focus group sessions with alumni of the institute, one of which took place in Cambodia.

The panel discussed the field of Tropical Medicine and the perspective of the programme on this field, since the panel could not find a clear definition of the field. During the site visit, the institute gave its perspective and defined the field of Tropical Medicine as focused on tropical diseases and diagnosis and treatment of diseases in low-resource environments. The panel discussed several issues concerning this definition, such as the increasing importance of non-communicable diseases (NCD's) that have become increasingly important and may present as a co-morbidity or main diagnosis in all areas where tropical diseases occur. Clearly, the management of NCD's has its own challenges in a tropical context. In addition, there was no discussion on how Tropical Medicine relates to Global Health.

#### *Considerations*

The panel discussed the profile of the programme and concluded that the programme offers a niche which is of relevance to the professional field that ITM has served traditionally and might also be of interest to the pharmaceutical industry. The panel compliments the programme directors for addressing this niche and concludes that the combination of the biomedical and clinical approach certainly leads to a positive reinforcement of the practice of tropical medicine and research within this field. The combination of a focus on the practice of tropical medicine with a rigid scientific approach is an asset of the programme. The panel expresses one concern with regard to the profile of the programme. The panel was surprised that an elaborate definition of the field of Tropical Medicine was not made explicit in the self-evaluation document. Although the panel noticed that an implicit understanding of the field is a clear fundament to the programme, it recommends the programme directors further elaboration thereof. The field of classical tropical medicine has extended over the years to include, among other, HIV medicine, Neglected Tropical Diseases, Emerging Infections, and also Non-Communicable Diseases. It is recommended to clearly define the field of (clinical) tropical medicine, the geographical orientation thereof and its relation to the field of Global Health.

In addition, the panel advises the programme to further investigate the interest from the pharmaceutical industry both in terms of its numbers and in terms of its content. The programme should thus further elaborate on the inferred match between the proposed programme and the interest from the pharmaceutical industry.



### Conclusion

The panel assesses the generic quality guarantee 1 *Intended exit level* as satisfactory.

## 3.2 Teaching-learning environment (generic quality guarantee 2)

*The teaching-learning environment enables the students to achieve the intended learning outcomes.*

### Outline of findings

#### Selection of students

The student-centred approach of the programme is not only part of the programme itself but starts already with the admission of students. Applications of prospective students have to indicate a research problem which they would like to address during the programme. The programme directors evaluate the extent to which students can be facilitated in working on this research problem. In addition, the programme directors evaluate the mix of candidates before deciding on individual applications. It aims to arrive at an optimal learning environment by forming a group that offers on one hand sufficient variety in backgrounds to foster student's curiosity and on the other hand offers sufficient homogeneity in terms of prior knowledge and interest to sustain an efficient learning process for all students. The programme directors aim to start the programme with about 20 students.

Admission criteria are (i) to have obtained a master's degree in a relevant field. The self-evaluation document lists 11 degrees in the field of medicine which give access to the programme, varying from Global Health to Biomedical Technology. A second criterion is the requirement (ii) to be proficient in English (TOEFL 88 or IELTS 6.5). Generally, students interested in following a master's programme offered by the institute, have participated in short courses or postgraduate education provided by the institute. The previous performance of students in a short course is taken into account in the selection of students. It is not an admission criterion but forms an indication to the programme when selecting students. From the discussion during the site visit, the panel concludes that the programme aims to select students with the profile of honour's students.

The admission process as foreseen for this programme, is similar to the process ITM runs for other programmes. After the deadline for application has passed, the programme screens the application files. Students who match the admission criteria are invited for an interview in person or by Skype. In the experience of the programme directors, the interview is very informative regarding the prospective student's academic quality and assists in verification of the candidates' proficiency in English. The programme has the expectation that it will attract mostly candidates from southern countries who apply for a scholarship, but the programme wishes to increase the intake of students from northern countries.

#### The curriculum

The match between the various elements of the curriculum and the programme's learning outcomes are visible in a table in the self-evaluation report. From this table it becomes clear how the courses relate to the learning outcomes. In addition, the course descriptions contain the learning goals of each course. The proposed curriculum is based upon existing courses. It is divided in four clusters and runs over the course of a year for full-time students. Part-time students may take up to maximal 5 years to finish all the programme elements. Students may opt for 3 possible scenarios: a biomedical research- oriented focus, a clinical laboratory research-oriented focus or a clinical professional-oriented track.

The clusters are: 1. Introduction to International Health (20 ECTS); 2. Tropical Biomedical Sciences or Tropical Medicine and Clinical Decision Making (10 ECTS); 3. Specific topics on Tropical Biomedical Sciences and Tropical Disease (15 ECTS); 4. Master thesis (12+3 ECTS).

Cluster 1, (introductory course in International Health) runs for 16 weeks and is uniform for all students in the first 10 weeks. It includes an Introduction block followed by 4 thematic blocks (vector-borne diseases, bacteria and antimicrobial resistance, HIV/AIDS and integrated tuberculosis care). It is followed by a three-week period in which students either chose public health electives (including child health, and reproductive and maternal health), or field lab preparedness. The final 3 weeks are common to all and include, among other, the exams. The course aims at creating a common understanding for students with various backgrounds. The course is focused on a multidisciplinary perspective of diseases in the south and provides students with a common understanding of the (global) context in which tropical medicine exists.

In the second period (cluster 2), students choose a specialisation. Students who opt for biomedical science follow a 10 ECTS course that consists of two parts: Biomedical Methodology in which they acquire skills to write a research proposal, and Biomedical Methods that focuses on deepening their knowledge of their research topic and methodology.

The students who opt for clinical science take a 10 ECTS course that discusses descriptive pathology, clinical laboratory skills and clinical decision-making. In addition to either of these courses, students take a 3ECTS thesis seminar, during which they develop, present and discuss their research proposal. They work on data collection (primary or secondary) and work on evidence-based solutions. During the thesis seminar students practice how to write a research proposal in a commonly used format. The programme directors selected this specific format because it challenges students to market their ideas and use clear language in presenting their research proposal. The programme subsequently offers students the possibility to engage in either fieldwork, lab work or an internship. Students who wish to uninterruptedly continue as full-time students can commence with a course in Clinical Research and Evidence Based Medicine in their programme.

The panel reviewed the course syllabi of the courses to be offered. It observed that the level of complexity of the clinical study material is sometimes less in the second cluster than in the first cluster. The discussions during the site visit further illustrated the setup of the programme which is to engage students with a broad perspective and narrow it down towards their specialism and application thereof as the programme goes along. The course in Tropical Medicine and Clinical Decision Making has a strong focus on the decision-making and diagnosing and researching patients' symptoms. This involves knowledge of the tests and validity of tests available. Students also practice in a model ward room (with elements typical for tropical circumstances) and operate in role-plays performed by staff members. Courses in the biomedical science specialisation aim to familiarize students with the methods and methodology they plan to use for their research proposal presented before the start of the programme. To this end, students will engage in an existing research project of the Department of Biomedical Sciences – under close supervision. The panel has observed that the programme offers a strong tailor-made approach in these courses, to ensure that there is a match between the student's interests, prior knowledge and the structure and content offered by the programme.

Cluster 3 offers students the possibility to take elective courses. These courses are also on offer to students enrolled in other ITM programmes. The programme provides students with four standard options, but students can decide to combine several elements of these options. The options on offer are:

1. a course on biomedical research methodology (10 ECTS) with a course on molecular data for infectious disease (5 ECTS);
2. a course on qualitative and mixed methods in international health research (6 ECTS) with distance learning courses on One Health (4 ECTS) and Advanced One Health (4 ECTS)

3. a selection of ITM courses from other programmes or relevant accredited courses on offer by other institutions;
4. a short course on Clinical Research and Evidence-Based Medicine (10 ECTS) and a 5 ECTS thematic course, being either Hospital-based Interventions to Contain Antibiotic Resistance in Low-resource Settings or Clinical Decision-making for Drug Resistant Tuberculosis.

Not all of these options are available to all students. Some courses require prior knowledge and a research proposal that is in coherence with the course. The 20 ECTS introductory course, the thesis seminar and some of the elective courses integrate students with a biomedical and a clinical orientation.

Cluster 4 involves the Master thesis. There are 2 building blocks: the first is the group seminar in which the students publicly present and discuss their study proposal. The second building block is the work for the thesis itself that may include field work. The final thesis is written according to guidelines for a scientific manuscript and will be subject to a public defence.

#### Teaching and learning methods

The application file contains an overview of teaching and learning methods in each course. Applied methods are: lectures, interactive lectures, (coached) group work and assignments, laboratory work, individual study, tutorials, fieldwork, simulations and online learning. The panel discussed how blended learning operates within the programme. The vision of the programme is twofold: it offers online study material to prospective students who wish to extend their knowledge. In addition, it supports enrolled students whilst being abroad and on campus. In ITM's structure, some of the courses are offered blended: partly online and partly face-to-face and, depending on the curriculum of the student, the courses may have a combination of fully online courses, face-to-face-courses and blended courses. The programme in Tropical Medicine does not offer courses completely online, besides the two electives in 'One Health' during the third period. Students expressed their appreciation for the support that ITM offers online and emphasize the importance of a face-to-face approach in combination with an online approach. ITM involves alumni in coaching students involved in online elements of the programme – which strengthens the opportunities for (regional) networking. The professional field encouraged the programme to facilitate more fully online courses since there is a demand for it from professionals without the means (time-and money-wise) to travel. In addition, some representatives plead for more education in French because of the large francophone community in Tropical countries.

The flexible and student-centred approach of the programme was vividly illustrated during the site visit. The panel received a number of examples in which staff members describe how they individually guide students in working on a research project, either their own or research projects that were developed at ITM. Students present during the site visit, praised ITM for encouraging students to work on problems that are relevant to their home countries. Since the structure of the programme allows students to do fieldwork, students work on solutions to real problems. Students were also positive about the available opportunities for establishing and extending their professional network.

#### Staff

The programme is the responsibility of two departments that reflect the two orientations offered by the programme: the Department of Biomedical Sciences and the Department of Clinical Sciences.

The expertise of the Department of Biomedical Sciences lies in microbiology and parasitology, molecular biology and epidemiology, immunology and ecology of tropical infectious diseases. Its research field comprises fundamental and translational research in the diagnostic laboratory on one hand, as well as the ecological, biological and molecular aspects of transmission and population dynamics of the pathogens, their intermediate hosts and the reservoirs in the field on the other hand.

The Department of Clinical Sciences strives for optimal prevention, diagnosis and treatment of tropical and globalized infectious diseases, with the aim of improving the health of individual patients. The department's objectives are: (i) to conduct excellent clinical and laboratory research in the field of HIV, TB, STI and tropical infectious diseases; (ii) to contribute to improved patient management by strengthening capacities for research, training and reference service delivery in low and middle income countries; (iii) to provide scientific and medical service delivery for the benefit of the Belgian population, and national and international health organizations.

During the site visit, the panel met with a representative selection of staff members, all of whom expressed great enthusiasm for this new program. For both specializations, a course director is academically responsible for the programme. A steering group consisting of the course leaders assists these course directors and course coordinators. The steering group will meet on a regular basis: to discuss the application of prospective students, to prepare for the coming semester and to evaluate the semester. The course coordinators are appointed to ensure the information flow between students and teaching staff. The course leaders are responsible for the content and delivery of the course. All the course leaders have a PhD. The institute does not require staff members to have a didactical qualification- however, some staff members possess a didactical qualification that they have obtained in their affiliation with a university. For some courses, the course leader alternates between the two research departments, which ensures the inclusion of both approaches in the delivery of the course.

#### Facilities and student support

The facilities of the programme include research labs, a library, a simulated ward room and classrooms that are equipped with the latest technology. The programme uses Moodle as an online learning platform. During the site visit, the panel was given a presentation on the use of Moodle. Within each department, an expert in online education is available to assist staff members in the use of Moodle and give updates on the progress made by students.

The programme supports students with arranging their visa, accommodation, health insurance and residence permits. Students explicitly mentioned to be very positive about the provisions and support of the institute in these practical matters. In addition, the panel found the students to be involved in the quality assurance processes of the programme. Students are represented in official bodies in which they discuss the quality of the courses and the programmes. Furthermore, the programme receives feedback on the quality of the courses by the questionnaire's students are asked to fill in.

#### *Considerations*

The panel has studied the programme's curriculum, its structure, the teaching and learning methods, staff and facilities. It is impressed by the student-centred approach of the programme and the extent to which the programme is able to guide students on an individual basis. The programme is built on the long and extensive experience of ITM in providing education in Tropical Medicine to students from tropical countries and this experience is visible in the design of the programme. Its degree of flexibility offers the envisioned student population an adequate and feasible structure. The curriculum allows students from different backgrounds and disciplines to broaden and deepen their perspective and to do this in an environment in which research and education are closely intertwined. This enhances the extent to which the programme offers students an in-depth training.

As such, it facilitates students in obtaining the learning outcomes. The panel nevertheless has several recommendations that could further improve the programme.

Regarding the envisioned student population, the panel notes that the profile of the students from northern countries, whom the institute increasingly wishes to attract, could be made more explicit. The panel for example considers the programme's attractiveness low for students from northern countries who pursue a career as a biomedical researcher. These students often completed a two-year master's programme and continue with a PhD.

Regarding the structure and content of the curriculum, the panel felt that the lack of an elaborated definition on the field of Tropical Medicine resulted in a somewhat unclear coherence of several programme components. This particularly applies to the several elements discussed in the course Introduction to International Health (cluster 1), as these seem rather fragmented. It would be helpful if the reason for inclusion of 'reproductive and maternity health' in this MSc in Tropical Medicine could be made more clear as this is commonly part of the specialty of gynaecology/obstetrics, particularly the public health aspects thereof. The panel suggests that a more clear and integrated approach and discussion of the diseases across the spectrum of tropical medicine would possibly support the goals of the programme stronger. In addition, the panel advises the programme directors to review the balance in the complexity of literature discussed in period 1 and period 2, especially for students in the clinical orientation.

The panel concludes that the programme's content, the teaching and learning methods used, the staff members involved and the student facilities and services available, allow the selected students to realize the learning outcomes. The combination of the programme's student-centred approach with proven experience and a fantastic network in the field of Tropical Medicine as well as the envisioned scale of the programme will allow ITM to provide a strong learning curve with applicable outcomes in the field of tropical medicine, for all its students.

#### *Conclusion*

The panel assesses the generic quality guarantee 2 *Teaching-learning environment* as satisfactory.

### 3.3 Exit level to be achieved (generic quality guarantee 3)

*The programme has an adequate assessment, testing and examination system in place to ascertain whether the intended learning outcomes are being achieved.*

#### *Outline of findings*

The self-evaluation document contains an overview of the tests and assessment methods per course. In addition, the course syllabi mention the assessment methods. These are amongst others: open book tests, multiple choice questions, lab practical exams, group assignments, individual assignments, participation in discussions and (poster) presentations. Based on the course descriptions that were added as an annex to the self-evaluation document, the panel concluded that it was not clear what the weight is of each assessment in the courses. However, during the site visit, this issue was clarified: it became clear to panel that all assessments have their individual weight, the student handbook (available for each course), in which the individual weight of assessments is mentioned. The panel had the opportunity of reading a few handbooks during the site visit. It concluded that the handbooks clearly indicate the form and weight of assessment.

The programme has several instruments in place to sustain the reliability and validity of the assessment. With regard to the programme as a whole, the assessment for each course involves multiple assessors, occasions and contexts.

This strengthens the validity of the assessment. The validity of the assessed content per course is assured by the organization of peer review of exam questions and assignments, and the accompanying assessment criteria. The course leader, involved teaching staff and course coordinators check whether questions/tasks are well formulated, cover the essential course content and assess most learning objectives. In addition, test results across students are analysed, for instance to differentiate between difficult questions to be maintained (only answered well by strong students) or poor questions to be dropped (only answered well by a very small but random group of students). The reliability of assessment is ensured by an agreed generic marking system, specific assessment criteria for each assignment, blinding for MCQs, double marking and discussion on divergent marks.

The assessment of the thesis consists of three parts. First, the thesis seminar during which students will be marked on the quality of the thesis proposal, together with the presentation and the discussion with the audience. Second, students write a manuscript and third, they are also tested on their ability to orally defend their thesis. They do so in front of a jury of a minimum of four members of whom at least two are from ITM and two others are external.

If students fail a course, they have the right to one resit. If the student fails the resit as well, he or she has to enrol a second time. Students that fail their master thesis are further supported by ITM, which uses the twelfth month of the scholarship to do so. If a failed student does not agree with its results, he or she can contact the ombudsperson, who functions autonomously and is not part of one of the departments, but functions at the level of the institute. The ombudsperson currently treats one or two cases per year, often not related to marking.

#### *Considerations*

The panel investigated the system of examination and assessment. It found that the assessment policies result in a practice that strengthens the reliability and validity of testing and that encourage a variety of assessment. The panel concludes that this variety adds to the quality of the programme and that assessment methods relate to the methods of instruction and the learning goals of the courses. Practices with regard to the four-eye principle and use of model answers are appropriate. Regarding the thesis, the panel is positive about the setup the programme has selected. The panel is positive about the fact that students practice how to write a research proposal and finds the defence in front of a jury consisting of both external and internal members a strong asset of the thesis process.

#### *Conclusion*

The panel assesses the generic quality guarantee 3 *Exit level to be achieved* as satisfactory.

## 4 Overview of the assessments

The panel presents their assessments per generic quality guarantee, as outlined in chapter 3, in the following table.

Generic quality guarantee	Assessment
1 Intended exit level	Satisfactory
2 Teaching-learning environment	Satisfactory
3 Exit level to be achieved	Satisfactory
Programme as a whole	Satisfactory

## Annex 1: General information institution and programme

Name, address, e-mail address, website institution	Institute of Tropical Medicine Nationalestraat 155, B-2000 ANTWERPEN itmedu@itg.be <a href="https://www.itg.be">https://www.itg.be</a>
Status institution	Ambtshalve geregistreerd
Name association	-
Name, function, telephone, e-mail address of contact person	Bruno Broucker PhD, education officer
Name programme (degree, qualifications of the degree, specification of the degree)	Master of Science in Tropical Medicine
Level and orientation	Academic master
Title that holders of the degree earned from this programme can place with their name	MSc.
(Part of a) Field of study, fields of study in which the programme is classified	<ul style="list-style-type: none"> <li>• Health and Health Care in Low- and Middle-Income Countries</li> <li>• Tropical and infectious diseases, including HIV/AIDS</li> <li>• Tropical veterinary science and veterinary health care in Low- and Middle-Income Countries</li> </ul>
The ISCED name of the field of study in which the programme is classified	Not applicable
Corresponding programme(s) (Flanders if any, or neighbouring countries)	<ul style="list-style-type: none"> <li>• Master of Tropical Medicine and International Health (<i>London School of Hygiene &amp; Tropical Medicine</i>)</li> <li>• Master of International Health and Tropical Medicine (<i>University of Oxford</i>)</li> <li>• Master of Global Health and Infectious diseases (<i>University of Edinburgh</i>)</li> </ul>
Languages used to teach	English
Location in which the programme is offered	Antwerp
Length of the programme expressed in credits	60 ECTS
New programme in Flanders	Yes



The post-graduate study opportunities and the possible post-graduate courses (bachelor)/ The required previous qualifications and admission requirements (master)

Students with one of the following master's degrees, or in an equivalent domain, are eligible to the programme:

- Master of Science in Biomedical Sciences
- Master of Science in Biomedical Engineering
- Master of Science in engineering: Biomedical Technology
- Master of Science in Molecular Biology
- Master of Science in Biology
- Master of Science in Bio-informatics
- Master of Science in Medicine
- Master of Science in Bioscience Engineering: Human Health Engineering
- Master of Science in Global Health
- Master of Science in Pharmacy
- Master of Science in Drug Development
- Master of Science in Epidemiology

*English proficiency: TOEFL 88 / 6.5 IELTS*

## Annex 2: Programme-specific learning outcomes

*After completion, the graduated Master of Science in Tropical Medicine will be able to:*

1. Demonstrate at an advanced level specific knowledge and insight in the field of tropical medicine;
2. Critically analyse the epidemiological, biomedical and clinical features of tropical diseases;
3. Identify and critically discuss the determinants of health related to tropical diseases;
4. Contextualize clinical and biomedical expertise in tropical medicine, taking into account the socio-economic and cultural characteristics of low resource settings;
5. Analyse and interpret the accuracy and pitfalls of laboratory tests for tropical diseases;
6. Use appropriate research tools and skills for clinical and/or biomedical research on tropical diseases;
7. Develop and implement properly the consecutive steps of a scientific research project;
8. Contribute responsibly in a professional and multidisciplinary international team;
9. Communicate in a written and oral way research results and their relationship to the Sustainable Development Goals to scientific and professional communities.

*On top of these learning outcomes, students will – depending on their choice of orientation – acquire a number of more specific learning outcomes. Students choosing the orientation ‘clinical sciences’ will also, after completion, be able to:*

10. Make a sound differential diagnosis and plan adequate clinical management in specific settings;
11. Formulate evidence-based guidelines to ameliorate clinical care or laboratory practices in resource constrained settings;
12. Improve clinical decisions based on new scientific elements (literature and own experience) in the field of tropical medicine, taking into account resource constrained settings;
13. Formulate and justify a research question in the domain of diagnosis and management of tropical diseases, and apply the appropriate research methods.

*Students choosing the orientation ‘biomedical sciences’ will also, after completion, be able to:*

10. Use independently the appropriate research techniques within biomedical sciences;
11. Make an informed choice regarding adapted lab techniques in resource constrained settings;
12. Select appropriate research methods and apply them within the relevant context;
13. Write a research proposal according to the guidelines of a grant application.

*Datum validatie: 2 december 2019*

## Annex 3: Composition of the panel

The composition of the panel that assessed the quality of the programme was as follows:

**Prof. dr. Eduard Zijlstra** (*chair*) is a specialist in Internal Medicine, specialist in Infectious Diseases and Epidemiologist. He has broad experience as programme coordinator and (senior) consultant for Médecine sans Frontières (MSF) and as an academic. He held positions at universities in the Netherlands, Sudan and Malawi. He was head of the Department of Medicine at the College of Medicine, University of Malawi, from 1999 until 2009. During 2009-2011, he was University Medical Specialist at the Erasmus Medical Centre, Rotterdam. Since 2011 he is director of the Rotterdam Centre for Tropical Medicine (RoCTM).

**Prof. Dr. Stanley Brul** (*member*) has the chair Molecular Biology and Microbial Food Safety at the Swammerdam Institute for Life Sciences (SILS), at the Faculty of Science at the University of Amsterdam. After his post-doc in Microbiology at the University of Nijmegen he became food preservation project manager at Unilever. In 2002 he combined a position as senior scientist at Unilever with a position as professor of Molecular Biology and Microbial food safety at SILS. Since 2007 he is full-time employed by the university and as program director responsible for the bachelor Biomedical Science and the master track Medical Biochemistry and Biotechnology. He has broad experience as a member and chair of educational evaluation committees as well as scientific review committees.

**Prof. dr. Egbert Sondorp** (*member*) has been prominent in 'International health' as a doctor for thirty years, manager and academic. He started his career as a doctor in a field hospital in Botswana. After the additional training in Public Health (MPH, Johns Hopkins), he became Medical Director at MSF (Holland) and was subsequently co-founder and Executive Director of the NGO "HealthNet International". In 2011 he went to work as a senior Health Advisor Royal Institute of Tropical Medicine (KIT), in Amsterdam. As an expert in Public Health, he is team leader of the "Health System Strengthening" program of the KIT. He has special expertise in the evaluation of health policy and planning, disease control and health care research. He realized the South Sudan Health Action and Research Program (2013-2016) SHARP project to promote maternal health in South Sudan and has extensive work experience in investigating the health status of people in unstable and conflict-prone areas. He is currently conducting the third-party monitoring and evaluation of the SEHAT (System Enhancement for Health Action in Transition) program in Afghanistan.

**Giles Hamerlinck** (*student*) is a master's student in Physical Education and Movement Sciences at Ghent University. He was also chairman of the Faculty Student Council for Medicine and Health Sciences (2018-19) and currently represents the students as a faculty council member.

On behalf of the NVAO, Roxanne Figueroa Arriagada was responsible for the process-coordination. Jetse Siebenga, secretary, drafted the experts' report.

## Annex 4: Schedule of the site visit

The site visit by the panel to the programme was conducted on October 1<sup>st</sup>, 2019 as part of the external assessment procedure regarding the programme.

08:30-09:00	Welcome + closed meeting of the panel
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09:00-09:30	Meeting with the Board of the Institution
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- **Marc-Alain Widdowson**, director ITM
- **Lut Lynen**, Head of Department Clinical Sciences
- **Jean-Claude Dujardin**, Head of Department Biomedical Sciences
- **Marianne van der Sande**, Head of Department Public Health
- **Lore Verstraete**, Head of HR

09:45-11:15	Meeting with programme coordination group
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- **Lut Lynen**, Head of Department Clinical Sciences
- **Jean-Claude Dujardin**, Head of Department Biomedical Sciences
- **Maria Zolfo**, Departmental Education coordinator Clinical Sciences
- **Mieke Stevens**, Departmental Education Coordinator Biomedical Sciences
- **Bruno Broucker**, Education Office
- **Govert Van Heusden**, Academic coordinator - Education Office

11:30-12:30	Meeting with the 'Intended' Teachers
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- **Kevin Ariën**, course leader Tropical Biomedical Sciences
- **Johan Van Griensven**, course leader Clinical Research and Evidence-Based Medicine
- **Bouke De Jong**, course leader Clinical Decision Making for DRTB
- **Gert Van der Auwera**, course leader MID
- **Tom Decroo**, course coordinator DRTB
- **Emmanuel Bottieau**, course leader Tropical Medicine and Clinical Decision Making
- **Bruno Marchal**, course leader Introduction to International Health
- **Jan Jacobs**, course leader Hospital-based Interventions to Contain Antibiotic Resistance in Low-resource Settings
- **Anna Rosanas**, course leader Biomedical Methods II
- **Maria Zolfo & Mieke Stevens**, coordinators master thesis

12:30-13:30	Lunch – closed meeting of the panel
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13:30-14:15	Meeting with students and ITM's alumni
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- **Yomiyu Mitiku Wakjira**, student Msc Tropical Animal Health
- **Joshua Katusime**, student Msc Tropical Animal Health
- **Ni Ni Tun**, student Master Public Health – Tropical Medicine and International Health
- **Ibiloye Olujuwon**, student Master Public Health – and alumnus short course SCREM
- **N'Dira Sanoussi**, alumnus MID, and PhD-student
- **Bassirou Diarra**, alumnus and PhD-student

14:15-15:00	Meeting with representatives of the professional field
	<ul style="list-style-type: none"> <li>• <b>Liz Ponet</b>, Universidade Sao Francisco, Brasil (via skype)</li> <li>• <b>Jorgen Stassijns</b>, doctors without borders</li> <li>• <b>Anita Mesic</b>, doctors without borders</li> <li>• <b>Charlotte Morantin</b>, Internationalisation Officer ITM in charge of alumni policy</li> </ul>
15:00-15:30	Presentation facilities
15:30-17:30	Closed meeting of the panel

## Annex 5: Documents reviewed

The programme management presented the following documents in an annex to the application file:

- Annex 1. Decision Macro-Efficiency by the Higher Education Committee
- Annex 2. Domain Specific Learning Outcomes
- Annex 3. Programme-specific learning outcomes
- Annex 4. Schematic Overview of the Curriculum
- Annex 5. Outline Description of Contents
- Annex 6. Staff Description
- Annex 7. Contacts with professional field
- Annex 8. Investment Plan

## Annex 6: List of abbreviations

IETLS	International English Language Testing System
ITM	Institute of Tropical Medicine
NVAO	Dutch-Flemish Accreditation Organization (Nederlands-Vlaamse Accreditatieorganisatie)
TOEFL	Test of English as a Foreign Language

