Programme Handbook



MSc/Dip/Cert
in Tropical
and
Infectious
Diseases
2019/20

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Key Programme Contacts

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Introduction

This handbook provides you with specific information about the MSc in Tropical and Infectious Diseases. You will also be provided with a general handbook which covers issues common to all Masters students studying at the School. It is most important that you are aware of the information provided in these handbooks.

The MSc in Tropical and Infectious Diseases places emphasis on the scientific evidence for diagnosis, management and control of the most prevalent diseases in developing countries and provides new insights into working in a very challenging but rewarding area of medicine. Alumni from this course have become well-established clinicians, pursued international careers (e.g. WHO and MSF) or have become leading researchers in their field.

The programme has particular reference to high burden diseases such as tuberculosis, HIV, malaria, respiratory infections and diarrhoea. Emphasis is also given to the development of research skills applicable to a wide range of problems in clinical and epidemiological settings and addresses both the curative and preventive strategies available to deal with these problems.

The MTID is an integrated programme of recommended and optional modules designed to address knowledge and comprehension of these common disorders from both a clinical and community perspective. A primary aim is to provide doctors with previous experience in high burden diseases the necessary training in research methods required to address these problems. The programme will enable doctors to practice with improved knowledge and skills at both a clinical and community level. It is therefore highly relevant for medical officers working within an international organisation. In addition, the programme will enable students to comprehend and conduct health-related research through a supervised project which can include a three month period of applied research in an overseas location.

The Liverpool School of Tropical Medicine has an international reputation in training in tropical and infectious diseases. The Masters Programme in Tropical and Infectious Diseases, has been taught since 1983.

Programme Aims and Learning Outcomes

Outline

This programme develops research skills that are applicable to a wide range of problems in clinical and epidemiological settings. Emphasis is also given to the scientific and empiric evidence for diagnosis, management and control of the most prevalent diseases in developing countries, with particular reference to high burden diseases such as tuberculosis, HIV and malaria, from a public health and clinical perspective. However, the programme does not include a clinical attachment and teaching at the bedside. Following a taught component, participants complete a dissertation including a period of applied research either overseas or in Liverpool. The programme is offered within a dynamic research-led environment and its content is informed by the cutting-edge research activities of the academic staff. It is designed to enable the professional development of the student, to be relevant to students from both the UK and overseas and to promote critical and participatory approaches to learning. These skills will be essential to take on leadership roles in the future.

Aims

The curriculum has been informed by current national and international priorities and policies in the field of tropical and infectious diseases. The programme aims to:

- Provide doctors with previous experience in high burden diseases with research skills relevant to tropical and infectious diseases in low income countries
- Develop students' knowledge and comprehension of the preventive and curative management strategies that promote health and well-being in tropical countries
- Enable students to comprehend and conduct health-related research
- Produce graduates who are experienced, committed, informed, proactive and effective professionals, capable of taking substantial and leading professional roles
- Facilitate high quality learning that is informed by critical analysis of current research
- Develop independent and reflective approaches to study that will enable graduates to continue to learn in the future

Subject-based Learning Outcomes

This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if s/he takes full advantage of the learning opportunities that are offered.

A. Knowledge and Understanding

Upon successful completion of the programme a student should have developed and be able to demonstrate:

- A1. A systematic understanding and critical awareness of current issues and priorities in the field of tropical and infectious diseases
- A2. Knowledge of a range of relevant research methods and understanding of how the methods can be applied to address particular research questions
- A3. Ability to apply statistical knowledge and understanding to design a research study and to analyse and critically interpret data.

A4. Appropriate skills related to the diagnosis, management and control of tropical parasitic, bacterial, viral and fungal infections of children and adults in a variety of regional and resource settings

B. Cognitive skills

Upon successful completion of the programme a student should be able to:

- B1. Analyse, synthesise and evaluate information from a variety of sources in a critical manner
- B2. Apply subject knowledge and understanding in a variety of contexts to analyse and reach evidence-based conclusions on complex situations, problems and opportunities
- B3. Apply the principles and values of ethical practice with regard to the design and practice of research studies, consent and confidentiality in the collection and presentation of data, and publication
- B4. Demonstrate creativity, innovation and originality in the application of knowledge

C. Practical/professional Skills

Upon successful completion of the programme a student should be able to:

- C1. Formulate a research question, devise an appropriate research strategy and take a systematic approach to project planning and management
- C2. Undertake research investigations in a responsible, safe and ethical manner and accurately record the data collected
- C3. Effectively manage, analyse and report data collected in the laboratory or field

Programme Structure

The programme is offered within a dynamic research-led environment and its content is informed by the cutting-edge research activities of the academic staff. It is designed to develop self-directed learning, to enable the professional development of the student and to be relevant to students from both the UK and overseas.

The programme comprises an introductory induction week, followed by taught modules totalling 120 credits and a 60-credit dissertation (Table 1). A 10 credit module (5 ECTS credits) represents 100 hours of student learning activity including assessment and self-directed study.

Required modules are necessary to achieve the programme learning outcomes and must be taken by all students following the programme. The recommended optional modules listed have been identified as most suitable for contributing to the attainment of the programme learning outcomes. However, depending on their background or interests, students may opt to replace these optional modules with modules offered as part of other LSTM MSc programmes, subject to the agreement of the Director of Studies for the programme (see Table 2). Before choosing any module, students should get familiar with its aims and learning outcomes.

Table 1: Modular Structure of the MTID programme (Required modules are shown in bold)

| w/b | Week | | | Mon | Tues | Wed | Thurs | Fri (am) Fri (pm) | | | | |
|---|-----------|------------------------|--------------------------|--|--|---------------------------|-------------------|-------------------------------------|--|--|--|--|
| 09/09 | Induction | | | Induction + | | | | j : (.) (.) | | | | |
| 16/09 | 1 | - | | | | deticit to recy civilio | | | | | | |
| 23/09 | 2 | | | | | | | | | | | |
| 30/09 | 3 | | | | | | | | | | | |
| 07/10 | 4 | | | TROP | TROP 934: TROP 938: Current | | | | | | | |
| 14/10 | 5 | its | | Research Methods Clinical Challenges | | | | | | | | |
| 21/10 | 6 | eq | | in Intern | | | ppical | Research | | | | |
| 28/10 | 7 | S | | Hea | | | icine | Methods | | | | |
| 04/11 | 8 | 09 | | (30 cr | | | edits) | | | | | |
| 11/11 | 9 | .1 | | , | • | , | • | | | | | |
| 18/11 | 10 | ter | | | | | | | | | | |
| 25/11 | 11 | es | | | | | | | | | | |
| 02/12 | 12 | Semester 1(60 credits) | | | | | | | | | | |
| 09/12 | 13 | S | | Revision + Assessments | | | | | | | | |
| 16/12 | | | | | | Christmas | Christmas Holiday | | | | | |
| 23/12 | | | | | | Cilistilas | rioliday | | | | | |
| 01/01* | 14 | | | | | evision + As | | | | | | |
| 06/01 | 15 | | | | | | | Child Health (10 | | | | |
| 13/01 | 16 | | | credits) or TROP708 Organisation & Management (10 credits) or | | | | | | | | |
| | | | Block 1 | TROP92 | TROP923 Key Concepts in Sexual & Reproductive health (10 | | | | | | | |
| | | | 00 | credits) | | | | | | | | |
| 20/01 | 17 | | 丽 | TROP974 H | HIV in Resc | ource Limit | ed Settinas | s (10 credits) | | | | |
| 27/01 | 18 | | | | | | | | | | | |
| 03/02 | 19 | | | Revision + Assessments | | | | | | | | |
| 10/02 | 20 | <u></u> | 2 | TROP973 Using Systematic Reviews in Policy (10 credits) TROP976 Health Promotion (10 credits) or Tropical Piggs 200 | | | | | | | | |
| 17/02 24/02 | 21 | ij | X | | | | | | | | | |
| | 23 | G | Block | | | • | , | Tropical Diseases | | | | |
| 02/03 | 23 | <u>၂</u> | ш | | 06 Develop | | | (20 credits) | | | | |
| 09/03 | 24 | (60 credits) | | Control Programme (10 credits) | | | | | | | | |
| | | 7 | | Revision + Assessments | | | | | | | | |
| 16/03 | 25 | ester 2 | | TROP 971: Statistical Methods for Epidemiological & Clinical Research (10 credits) OR | | | | | | | | |
| 23/03 | 26 | Jes | | TDC | | | | | | | | |
| | | Sem | 3 | | | | teriology (1 | credits) OR | | | | |
| | | S | Block 3 | | TROP 973 N | vi c uicai bac | teriology (it | o credits) | | | | |
| 30/03 | 27 | | ā | TROP 0 | 71: Statistic | al Methods | for Fnidemi | ological & Clinical | | | | |
| 06/04* | 28 | | | 11(0) 3 | | | credits) OR | • | | | | |
| 33/37 | | | | | | • | trition (10 c | | | | | |
| 13/04* | 29 | | | | | Assessr | • | | | | | |
| 20/04 | 30 | | | | | Reading | week | | | | | |
| 27/04 | 31 | | | Preparation for Research Presentations + 1st semester re-sits | | | | | | | | |
| 04/05** | 32 | | | | | esearch Pre | | | | | | |
| Weeks 33-48 | | | | | | | | | | | | |
| (11/5/20**- 23/8/20) Dissertation hand-in 27/08/20 | | Posagreh Broject | | | | | | | | | | |
| 23/8/20) | | di≟i | Research Project TROP942 | | | | | | | | | |
| Dissertation 59 9 | |) ē | INOF 342 | | | | | | | | | |
| hand-in 27/08/20 ທິຕິບັ | | | | | | | | | | | | |
| | | | | | /s 06/4/20 and 1 | Deferred | Holiday | | | | | |

^{*} School closed for New Year BH (1/1/20) & Easter Bank Holidays 06/4/20 and 13/4/20 ** School closed for May Bank Holidays 8/5/20 & 25/5/20

<u>Table 2</u>: Optional modules offered in Semester 2 for LSTM MSc programmes. Modules recommended for students on MTID are shaded. Other modules can be taken by MTID students subject to the approval of the Director of Studies

| Wks | | | | | | | | | | | |
|-------|-----------------|---|--|--|--|--|--|-------------------------------|--|--|--|
| 15-16 | 13/01 06/01 | Organisation & Management TROP708 | Complex Humanitarian | Key Concepts in Sexual & Reproductive Health TROP923 | Quality Improvement in Global Child Health TROP910 | Parasite Epidemiology | Key Aspects in Molecular & Cellular Biology of Tropical Diseases and Vectors TROP775 | | | | |
| 17-18 | 20/01 | HR Planning & Management | Emergencies TROP807 | Maternal & Newborn Health | | Epidemiology and Control TROP719 | | HIV in Resource Limited | | | |
| | 27/01 | TROP915 | | TROP924 | | | | Settings TROP974 | | | |
| 19 | 03/02 | | | Readin | g week/Assessme | nts | | | | | |
| 20-21 | 10/02 | | Using Systematic Reviews in | | Global Climate Change & | Vector Population Biology & | Immunology of Tropical Diseases | | | | |
| 20- | 17/02 | | Policy TROP973 | | Health TROP927 | | | | | | |
| -23 | 22-23 | Health Promotion | Development of a Disease Control | Reproductive Sexual & Adolescent | | Control TROP741 | TROP739 | | | | |
| 22 | | TROP976 | Programme TROP706 | Programme Health | | | | | | | |
| 24 | 09/03- 13/03 | | Reading week/Assessments | | | | | | | | |
| 25-26 | 16/03 | Management of Refugee and Displaced | Key Topics in Snakebite | Quality Improvement in Maternal & Newborn | Statistical Methods for Epidemiological & Clinical | Medical Bacteriology | | | | | |
| | 23/03 | Populations TROP941 | TROP969 | Health TROP972 | Research TROP971* | Trop 975 | | | | | |
| 27-28 | 30/03 | Health in Humanitarian | Applied | Media, Policy & Advocacy in Humanitarian Action TROP809 | Statistical Methods for Epidemiological & Clinical Research TROP971* | Humanitarian Operations TROP901 | Child Nutrition TROP776 | | | | |
| | 06/04 | Emergencies TROP900 | Bioinformatics TROP970 | | | | | | | | |
| | 13/04 | Assessments | | | | | | | | | |
| 29-32 | 20/04 | Reading Week | | | | | | | | | |
| 72 | 27/04 | Preparation for Research Presentations + 1st semester re-sits | | | | | | | | | |
| | 04/05 | Research Presentations | | | | | | | | | |

^{*}TROP971 - module runs twice - students should only choose once

Assessment Schedule

| Module | Timing | Assessment Strategy | % of module mark | | | |
|--------------|---------------|--|------------------|--|--|--|
| | | Semester 1 | | | | |
| TROP 934 (R) | In module | 1.5 hour exam (multiple choice) | | | | |
| | End of module | 1500 word critical reflection of group qualitative research study 2500 word research proposal (minimum mandatory mark 40%) | | | | |
| TROP 938 (R) | In module | 2.5 hour exam (short answer) | | | | |
| | End of module | 2.5 hour exam (short answer) 30 minute oral examination | | | | |
| | | Semester 2 Block 1 | | | | |
| TROP 910 (O) | End of module | 2500 word written assignment | 100 | | | |
| TROP 708 (O) | End of module | 3000 word critical analysis of a case study | 100 | | | |
| TROP 923 (O) | End of module | 15 minute oral presentation 60 question MCQ exam | 40 60 | | | |
| TROP 974 (R) | End of module | 2 hour exam (short answer and essay) | 100 | | | |
| | | Semester 2 Block 2 | | | | |
| TROP 973 (O) | End of module | Written assignment (completion of pre-prepared form 1.5 hour exam (extended matching set questions) | 60 40 | | | |
| TROP 739 (O) | End of module | 2 hour exam (essay) 3000 word laboratory report | 50 50 | | | |
| TROP 976 (O) | End of module | 2000 word written report | 100 | | | |
| TROP 706 (O) | End of module | 2500 word written assignment | 100 | | | |
| | | Semester 2 Block 3 | | | | |
| TROP 975 (O) | End of module | 1500 word written assignment 1 hour exam (multiple choice) | 60 40 | | | |
| TROP969 (O) | End of module | 3000 word assignment | 100 | | | |
| TROP776 (O) | End of module | Poster Presentation 1 hour written exam (short answer questions) | 50 50 | | | |
| TROP 971 (O) | End of module | 2000 word report on analysis of data set | 100 | | | |
| | | Semester 3 | | | | |
| TDOD 040 (D) | In module | 10 minute oral presentation of research proposal. | 10 | | | |
| TROP 942 (R) | End of module | 16,000 word dissertation | 90 | | | |
| | | | | | | |

Important Dates

MSc Project choices deadline - 18 October 2019

Deadline for Semester 2 module choices – 31 October 2019

Allocating/defining dissertation topics: September-November 2019

Developing proposal for Dissertation Project: September 2019-January 2020

Submission to Masters Ethics Committee (if required): February 2020

Fieldwork: April/May – June/July 2020 Dissertation writing: June – August 2020

Dissertation Submission deadline: 27 August 2020

Board of Examiners meeting: October 2020

Release of results: Following Board of Examiners meeting

Graduation Ceremonies: December 2020

Research Project

Many students carry out a fieldwork-based dissertation project overseas. Others opt to conduct fieldwork in the UK or to carry out another type of study (using literature or data already collected) that does not involve travelling abroad. Whilst overseas, students are supervised by a designated person in the host country, as well as by a member of LSTM staff. All projects have the key aims of developing students' skills in formulating a research question, designing and implementing a research project and critically interpreting and presenting the findings. Further information regarding the dissertation will be provided elsewhere.

Where appropriate, research proposals must be approved by the MSc Ethics Review Panel of the Liverpool School of Tropical Medicine and by in-country Ethics boards or committees. Further information and guidance on preparing a submission to the Ethics Committee will be provided during TROP934/936.

Prizes

Glen Williams Prize

The Glen Williams Prize is awarded to the candidate with the highest overall mark in the examinations.

David Smith Memorial Prize

The David Smith Memorial Prize is awarded to a student from a developing country who has contributed most to the collective and team work of students on his/her programme. It is open to students on any programme.

David Smith was a member of staff of the School for many years and was head of the Tropical Medicine Division in the School at the time of his tragically early death. A former Director of the UK Medical Research Council's unit in Kisumu, Kenya, he was also at one time head of the vector-borne disease division of the Kenyan Ministry of Health. He worked extensively in Africa on the control of tropical diseases, including malaria, sleeping sickness and haemorrhagic viral infections. In addition he had extensive knowledge of South America and Asia and worked for a year on secondment to the British Government's overseas development ministry, assisting them in developing more effective policies in health and disease control. He played a key role in the establishment of the Malaria Consortium as a joint operation of the Liverpool and London Schools.

Selected LSTM Teaching Staff

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Education

Dr Martyn Stewart Senior Lecturer in Research <u>martyn.stewart@lstmed.ac.uk</u>

Methods

Recommended Texts

Beeching, N & Gill G. 2014. Lecture Notes in Tropical Medicine. 7th Edition. Wiley Blackwell Publishing (also available as eBook)

Davidson R, Brent A, Seale A. 2014. Oxford Handbook of Tropical Medicine. 4th Edition. Oxford University Press