

Master of Clinical Tropical Medicine Programme

Philosophy of Programme

The Master of Clinical Tropical Medicine (International Programme) was established to train medical graduates to become extensively proficient and skillful in clinical tropical medicine and research on tropical diseases, cultivate attitudes and skills in both fundamental and clinical researches being conducted with responsibilities in themselves and consideration on rights of research participants in line with widely recognized ethical standards for research. Learning is to be provided via experience sharing from lecturers and group discussion, which contribute to knowledge exchange based on reasonable arguments of different opinions. In addition, treatment of and solution to problems in relation to tropical diseases are to be in accordance with body of medical knowledge in the digital age, including that medical ethics significantly adheres to respect for patients' rights. Therefore, medical graduates of this programme will be able to apply clinical tropical medicine and related researches to solve public health problems and improve quality of life of people in the tropical region.

Significance of Programme

Currently, knowledge and technology have rapidly progressed and developed, whereby modern communication technology are playing a significant role. Taking a role in providing health-related knowledge, medical treatment, and advices on disease prevention to patients, it is extremely necessary for physicians to develop their knowledge in response with the world of innovation, as well as contemplate in accepting and analyzing information.

Programme Specification
Academic Year 2016-2018

| | |
|-------------------------------|--|
| 1. Awarding Institution | Mahidol University |
| 2. Faculty | Faculty of Tropical Medicine |
| 3. Name of Programme | Master of Clinical Tropical Medicine (International Programme) |
| 4. Degree name (full) | Master of Clinical Tropical Medicine |
| 5. Degree name (abbreviation) | M.C.T.M. |
| 6. Major Subject | None |
| 7. Credit | 36 Credits |
| 8. Level of Degree | Master degree |
| 9. Language | English |
| 10. Maximum number of student | 25/year |

11. Objectives of Programme

The course endorses the advance study of tropical medicine and travel medicine, employing multidisciplinary approaches to promote the understanding of the health challenges and their solutions in tropical diseases. Therefore, at the end, course provides:

- (1) Knowledge and understanding of the common tropical diseases, their challenges and solutions
- (2) Knowledge and skills in approaching patients with tropical diseases to get to the diagnosis and provide proper management and to plan for further prevention and control
- (3) Knowledge, skills and practical experience in conducting an international-standard clinical research
- (4) The capacity and skills to critically appraise the research publications
- (5) Skills and practical experience in communicating, developing professionalism
- (6) Skills in utilizing instruments to collect and analyze statistical data and presenting works with appropriate technology

12. Programme Expected Learning Outcomes

The Programme Learning Outcomes (PLOs) are as the followings. Upon completion of this programme, students should be able to fulfil all 5-element frameworks according to the higher education study.

1. Morality and Ethics

- 1.1 Reflect the ethical consideration on patient care and clinical research
- 1.2 Apply code of conduct in medical professionalism

2. Knowledge

- 2.1 Describe all important tropical diseases covering all detailed aspects
- 2.2 Describe the research methodologies and good clinical practice

3. Intellectual Skills

- 3.1 Approach and manage patients with common tropical diseases
- 3.2 Conduct an international standard clinical research in tropical diseases
- 3.3 Interpret the result of clinical research
- 3.4 Appraise and critique research articles according to the standard guidelines
- 3.5 Develop professionalism

4. Interpersonal Skills and Responsibility

- 4.1 Develop leadership, responsibility, and constructive relationship in career practice and clinical research
- 4.2 integrate lifelong learning in tropical diseases and research in international level

5. Numerical Analysis Skills, Communication and Information Technology

- 5.1 Use proper statistic and software programme to analyse data arising from clinical research
- 5.2 Perform a standard scientific presentation using proper presentation tools and presentation skill

13. Criteria for admission

Plan A(2): An applicant is required to have:

- 1. Graduated in medicine (either M.D. or M.B.B.S. or equivalent degrees) with GPA not lesser than 3.0 and be a qualified registered medical practitioner who practices for more than 3 years, with recommendation and confirmation documents, or
- 2. Graduated in Diploma of Tropical Medicine and Hygiene (D.T.M. & H.) or other equivalent diploma degrees within 5 years, and
- 3. English language proficiency test with IELTS score more than 5.5, or a TOEFL score more than 500 or passed Mahidol University English Language Proficiency Test.

Plan B: An applicant is required to have:

- 1. Graduated in medicine (either M.D. or M.B.B.S. or equivalent degrees) with GPA not lesser than 2.7 and be a qualified registered medical practitioner who practices for more than 1 years, with recommendation and confirmation documents, or
- 2. Graduated in Diploma of Tropical Medicine and Hygiene (D.T.M. & H.) or other equivalent diploma degrees within 5 years, and
- 3. English language proficiency test with IELTS score more than 5.5, or a TOEFL score more than 500 or passed Mahidol University English Language Proficiency Test.

14. Programme Outline

| | Plan A(2) | Plan B |
|-----------------------|---------------------|----------------------------|
| Core subjects | 22 credits | 22 credits |
| Elective subjects | At least 2 credits | At least 8 credits |
| Thesis/Thematic paper | 12 credits (thesis) | 6 credits (thematic paper) |
| Total | 36 credits | 36 credits |

The study plan is shown in the following table.

| Plan A(2) | | |
|-----------|--|--|
| Year | Semester I | Semester II |
| 1 | TMID 525 Food- and Water-borne Diseases (I) and Soil-transmitted Helminthiases 3 (2-2-5) | TMCD 526 Tropical Medicine Apprenticeship 6 (3-6-9) |
| | TMID 527 Mosquito-borne Diseases 3 (2-2-5) | TMCD 527 Clinical Case Teaching 3 (3-0-6) |
| | TMID 528 Non-mosquito Vector-borne Diseases and Zoonosis 2 (2-0-4) | TMCD 535 Seminar in Clinical Tropical Medicine 3 (2-2-5) |
| | TMCD 509 Medical Problems in the Tropics 2 (2-0-4) | |
| | Elective course not less than 2 credits | |
| | Total 12 credits | Total 12 credits |
| 2 | TMCD 698 Thesis 6 (0-18-0) | TMCD 698 Thesis 6 (0-18-0) |
| | Total 6 credits | Total 6 credits |
| Plan B | | |
| Year | Semester I | Semester II |
| 1 | TMID 525 Food- and Water-borne Diseases (I) and Soil-transmitted Helminthiases 3 (2-2-5) | TMCD 504 Clinical Apprenticeship 6 (3-6-9) |
| | TMID 527 Mosquito-borne Diseases 3 (2-2-5) | TMCD 527 Clinical Case Teaching 3 (3-0-6) |
| | TMID 528 Non-mosquito Vector-borne Diseases and Zoonosis 2 (2-0-4) | TMCD 535 Seminar in Clinical Tropical Medicine 3 (2-2-5) |
| | TMCD 509 Medical Problems in the Tropics 2 (2-0-4) | |
| | Elective course not less than 5 credits | Elective course not less than 3 credits |
| | Total 15 credits | Total 15 credits |
| 2 | TMCD 697 Thematic paper 3 (0-9-0) | TMCD 697 Thematic paper 3 (0-9-0) |
| | Total 3 credits | Total 3 credits |

List of Elective courses

| Code | Course Title | Credit |
|----------|--|-----------|
| TMID 510 | Statistics for Clinical Research | 3 (2-2-5) |
| TMID 526 | Food- and Water-borne Diseases (II) (Tissue Parasites) | 2 (2-0-4) |
| TMID 543 | Travel Medicine I | 1 (1-0-2) |
| TMCD 503 | Introduction to Clinical Research | 1 (1-0-2) |
| TMCD 521 | Literature Review | 2 (0-4-2) |
| TMCD 523 | Clinical Laboratory Methods for Research | 1 (1-0-2) |

| Code | | Course Title | Credit |
|------|-----|---|-----------|
| TMCD | 524 | Interesting Case Report | 1 (0-2-1) |
| TMCD | 530 | Tropical Infectious Diseases Case Study | 1 (0-2-1) |
| TMCD | 531 | Tropical Clinical Pathology | 1 (1-0-2) |
| TMCD | 532 | Travel Medicine II | 2 (2-0-4) |
| TMCD | 533 | Special Clinics in Tropical Medicine | 1 (1-0-2) |
| TMCD | 534 | Practical Statistic for Clinical Research | 1 (0-2-1) |

15. Mapping of courses and expected learning outcomes

| LO | Outcome | Knowledge | | Skills | | Teaching and Learning Activities | Assessment Scheme |
|-------|--|-----------------------|---|---|--|---|--|
| | | Generic | Specific | Generic | Specific/Competency | | |
| LO1.1 | Reflect the ethical consideration on patient care and clinical research | (TMCD503) | | TMCD535 TMCD697/8 (TMCD521) | TMCD504, TMCD526, TMCD527, TMCD697/8 (TMCD524, TMCD530, TMCD533) | Ward round/Case discussion Field Trip, Lecture Critical appraisal/Topic review Ethical submission Thesis/Thematic paper | Attendant, Discussion Long case Examination, OSCE, MEQ, Rubric scale assessment, Ethical approval, Thesis/Thematic paper |
| LO1.2 | Apply code of conduct in medical professionalism | | | TMCD535 TMCD697/8 (TMCD521) | TMCD504, TMCD526, TMCD527, TMCD697/8 (TMCD524, TMCD530, TMCD533) | Ward round/Case discussion Critical appraisal/Topic review Field Trip/Ethical submission Thesis/Thematic paper | Attendant, Discussion Long case Examination, OSCE, MEQ, Rubric scale assessment, Ethical approval, Thesis/Thematic paper |
| LO2.1 | Describe all important tropical diseases covering all detailed aspects | | TMID525, TMID527 TMID528, TMCD509 (TMID526, TMID543 TMCD532) | | TMCD504, TMCD526, TMCD527 (TMCD523, TMCD524, TMCD530, TMCD531, TMCD533) | Lecture Ward round/Case discussion Field Trip | Attendant, Discussion, MCQ, Short Essay, Oral, OSCE, MEQ, Long case Examinations, Rubric scale assessment |
| LO2.2 | Describe the research methodologies and good clinical practice | (TMCD503, TMID510) | | TMCD535 TMCD697/8 (TMCD521, TMCD534) | | Lecture, Demonstration, Discussion Critical appraisal/Topic review Ethical submission Thesis/Thematic paper | Ethical approval, attendant, Rubric scale assessment, Thesis/Thematic paper |
| LO3.1 | Approach and manage patients with common tropical diseases | | TMID525, TMID527 TMID528, TMCD509 (TMID526, TMID543 TMCD532) | | TMCD504, TMCD526, TMCD527 (TMCD523, TMCD524, TMCD530, TMCD531, TMCD533, TMID543, TMCD532) | Lecture Ward round/case discussion Field Trip | Attendant, Discussion, MCQ, Short Essay, Oral, OSCE, MEQ, Long case Examinations, Rubric scale assessment |
| LO3.2 | Conduct an international standard clinical research in tropical diseases | (TMID510) | | TMCD697/8 (TMCD534) | TMCD697/8 | Thesis/Thematic paper | Thesis/Thematic paper |
| LO3.3 | Interpret the result of clinical research | (TMCD503, TMID510) | | TMCD535 TMCD697/8 (TMCD521, TMCD534) | TMCD535, TMCD697/8 (TMCD521) | c | Attendant, Discussion, Rubric scale assessment, Thesis/Thematic paper |
| LO3.4 | Appraise and critique research articles according to the standard guidelines | | | TMCD535 TMCD697/8 (TMCD521) | TMCD535, TMCD697/8 (TMCD521) | Critical appraisal/Topic review Oral presentation Thesis/Thematic paper | Attendant, Discussion, Rubric scale assessment, Thesis/Thematic paper |
| LO3.5 | Develop professionalism | | | TMCD535 TMCD697/8 (TMCD521) | TMCD504, TMCD526 TMCD535, TMCD697/8 (TMCD521, TMCD524, TMCD530, TMCD533, TMID543, TMCD532) | Lecture/Demonstration Ward round/Case discussion Case Presentation/Field Trip Critical appraisal/Topic review Thesis/Thematic paper | Attendant, Discussion, OSCE, Long case Examinations, Rubric scale assessment Thesis/Thematic paper |

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|-------|--|-----------|--|---|--|--|---|
| LO4.1 | Develop leadership, responsibility, and constructive relationship in career practice and clinical research | | | TMCD504 TMCD526 TMCD535 TMCD697/8 (TMCD521, TMCD530) | | Ward round/Case discussion Case Presentation/Field Trip Critical appraisal/Topic review Thesis/Thematic paper | Attendant, Discussion, Rubric scale assessment, Thesis/Thematic paper |
| LO4.2 | Integrate lifelong learning in tropical diseases and research in international level | | | TMCD535 TMCD697/8 (TMCD521) | TMCD504, TMCD526 TMCD535, TMCD697/8 (TMCD521, TMCD524, TMCD530) | Ward round/Case discussion Case Presentation/Field Trip Critical appraisal/Topic review Thesis/Thematic paper | Attendant, Discussion, Rubric scale assessment, Thesis/Thematic paper |
| LO5.1 | Use proper statistic and software programme to analyze data arising from clinical research | (TMID510) | | TMCD697/8 (TMCD534) | | Practice in class Thesis/Thematic paper | Attendant, Participation, Practice Thesis/Thematic paper |
| LO5.2 | Perform a standard scientific presentation using proper presentation tools and presentation skill | | | TMCD535 TMCD697/8 (TMCD521, TMCD524, TMCD530, TMCD534) | | Critical appraisal/Topic review Thesis/Thematic paper Slide preparation/Presentation | Rubric scale assessment Thesis/Thematic paper |

Note: Elective courses in brackets; TMCD697/8 (TMCD697/TMCD698): Thesis/Thematic paper

Courses in Green: Basic knowledge in tropical diseases

Courses in Purple: Clinical applications for tropical diseases

Courses in Blue: Basic research and statistic knowledge

Courses in Red: Skill and application of all principles to research in general and in tropical medicine

16. Tuition Fee: 8,000 US for the whole study period

17. Programme Instructors

1. Dr Wirongrong Chierakul, M.D., Dip.Thai Board of Int.Med., Ph.D., E-mail: wirongrong.chi@mahidol.ac.th
2. Asst Prof Dr Supat Chamnanchanunt, M.D., Dip.Thai Board of Haem., E-mail: supat.cha@mahidol.ac.th
3. Asst Prof Dr Udomsak Silachamroon, M.D., Dip.Thai Board of Pulm., E-mail: udomsak.sil@mahidol.ac.th
4. Dr Chatporn Kittittrakul, M.D., Dip.Thai Board of Gastroenterology, E-mail: chatporn.kit@mahidol.ac.th
5. Dr Maleerat Sutherat, M.D., Dip. Thai Board of Radiology, E-mail: maleerat.sut@mahidol.ac.th

18. Programme Committee

1. Dr Wirongrong Chierakul, Director
2. Asst Prof Dr Supat Chamnanchanunt, Secretary and member of committee
3. Asst Prof Dr Udomsak Silachamroon, member of committee
4. Dr Chatporn Kittittrakul, member of committee
5. Dr Maleerat Sutherat, member of committee
6. Assoc Prof Benjaluck Phonrat, member of committee
7. Prof Arjen Dondorp, Consultant