

Course syllabus

TMMH 502 Food- and Water-Borne Diseases: Soil-Transmitted Helminthiasis

Academic Year 2018-2022

1. **Institute** Mahidol University
Faculty/Department Faculty of Tropical Medicine, Department of Clinical Tropical Medicine
2. **Course Name:**
 - a. **Course Code:** TMMH 502
 - b. **Course Title:** Food- and Water-Borne Diseases: Soil-Transmitted Helminthiasis
3. **Number of credits:** 3 (2-2-5)
4. **Programme use:** Graduate Diploma Programme in Tropical Medicine and Hygiene
 Master of Clinical Tropical Medicine
 Master of Clinical Tropical Medicine (Tropical Paediatrics)
5. **Prerequisite:** None
6. **Type of Course:** Core Course
7. **Condition: class size:** None
8. **Session/Academics year:** The first semester of each academic year
9. **Course description:**

Food and water-borne gastrointestinal diseases caused by bacteria, viruses, protozoa and soil-transmitted helminths, life-cycle, pathogenesis, pathology, clinical manifestations, diagnosis, management, prevention and control
10. **Course expected learning outcomes:**

At the end of the course, the students should be able to

CLO1: Describe comprehensive knowledge of the Food- and Water-Borne Diseases and Soil-Transmitted Helminthiasis in the aspect of epidemiology, diagnosis, treatment and prevention.

CLO2: Apply knowledge in Food- and Water-Borne Diseases and Soil-Transmitted Helminthiasis for laboratory diagnosis, treatment and prevention by discussion

11. Course outline and constructive alignment

Topic	Title	Hours			Instructors	Course Learning Outcome	Programme ELOs	Teaching & Learning Strategies	Assessment
		Lecture	Lab	Self-study					
1.	Epidemiology and Control of Food and Water-borne Diseases & STH	2	0	4	Prof Srivicha	3	2	PowerPoint presentation, Q&A	MCQ & Short Essay Examination
2.	Amoebiasis	3	2	7	Prof Polrat, Assoc Prof Parnpen, Asst Prof Kriengsak, Dr Chatporn, Asst Prof Kittiyod, Asst Prof Saengduen, Ms Rachatawan, Asst Prof Supaluk, Asst Prof Aongart, Assoc Prof Porntip, Dr Khuanchai	1,2,3	2	PowerPoint presentation, Laboratory demonstration, Case Discussion, Q&A	Discussion, laboratory practice, MCQ & Short Essay Examination
3.	Diarrhea caused by protozoa in immunocompetent patients	2	2	5	Dr Wirongrong, Dr Chatporn, Assoc Prof Porntip et al	1,2,3	2	PowerPoint presentation, Laboratory demonstration, Case Discussion, Q&A	Discussion, laboratory practice, MCQ & Short Essay Examination
4.	Diarrhea caused by protozoa in immunocompromised patients	2	2	5	Dr Wirongrong, Dr Chatporn, Prof Sasithon, Prof Punnee, Assoc Prof Porntip et al	1,2,3	2	PowerPoint presentation, Laboratory demonstration, Case Discussion, Q&A	Discussion, laboratory practice, MCQ & Short Essay Examination
5.	Antiparasitic Drugs	2	0	4	Prof Punnee, Asst Prof Watcharee, Assoc Prof Kriengsak	1,2,3	2	PowerPoint presentation, Laboratory demonstration, Case Discussion, Q&A	Discussion, laboratory practice, MCQ & Short Essay Examination
6.	Intestinal nematode I (hookworm, strongyloid, capillaria)	2	1	4.5	Prof Punnee, Dr Chatporn, Assoc Prof Chukiat, Asst Prof Teera, Asst Prof Supawat	1,2,3	2	PowerPoint presentation, Laboratory demonstration, Case Discussion, Q&A	Discussion, laboratory practice, MCQ & Short Essay Examination
7.	Cholera and Dysentery	1	1	2.5	Prof Punnee, Prof Polrat, Dr Chatporn, Asst Prof Kittiyod	1,2	2	PowerPoint presentation, Laboratory demonstration and practice, Q&A	Discussion, laboratory practice, MCQ & Short Essay Examination
8.	Rota Diarrhea & Lab	1	1	2.5	Asst Prof Kriengsak, Asst Prof Pornsawan	1,2,3	2	PowerPoint presentation, Laboratory demonstration, Case Discussion, Q&A	Discussion, laboratory practice, MCQ & Short Essay Examination
9.	Laboratory Practice-Stool Examination I (Protozoa)	0	3	1.5	Assoc Prof Porntip, et al	1,2,3	2	PowerPoint presentation, Laboratory demonstration, Case Discussion, Q&A	laboratory practice MCQ & Short Essay Examination

Topic	Title	Hours			Instructors	Course Learning Outcome	Programme ELOs	Teaching & Learning Strategies	Assessment
		Lecture	Lab	Self-study					
10.	Intestinal Nematodes II (Ascaris, Trichuris, Enterobius)	2	1	4.5	Assoc Prof Chukiat, Asst Prof Dorn, Asst Prof Teera, Asst Prof Supawat	1,2,3	2	PowerPoint presentation, Laboratory demonstration, Case Discussion, Q&A	Discussion, MCQ & Short Essay Examination
11.	Intestinal Flukes :Case Discussion and Clinical Management & Laboratory Demonstration	1	1	2.5	Asst Prof Urusa Asst Prof Dorn Asst Prof Teera	1,2,3	2	PowerPoint presentation, Laboratory demonstration, Case Discussion, Q&A	Discussion, MCQ & Short Essay Examination
12.	Persistent Diarrhea in children	1	0	2	Assoc Prof Chukiat	1,2,3	2	PowerPoint presentation, Laboratory demonstration, Case Discussion, Q&A	Discussion, laboratory practice, MCQ & Short Essay Examination
13.	Approach Chronic Diarrhea	2	0	4	Prof Chutima, Dr Chatporn	1,2,3	2	Student presentation, Case discussion, seminar	Discussion, laboratory practice, MCQ & Short Essay Examination
14.	Diarrheal diseases vaccines	2	0	4	Prof Punnee, Dr Chatporn, Asst Prof Supawat	1,2,3	2	PowerPoint presentation, Laboratory demonstration, Case Discussion, Q&A	Discussion, laboratory practice, MCQ & Short Essay Examination
15.	Food poisoning	1	0	2	Asst Prof Kittiyod, Dr Chatporn	1,2,3	2	PowerPoint presentation, Laboratory demonstration and practice, Q&A	Discussion, laboratory practice, MCQ & Short Essay Examination
16.	Acute Diarrhea: Clinical Approach & Laboratory Diagnosis	2	1	4.5	Prof Polrat, Asst Prof Kittiyod, Assoc Prof Chukiat, Asst Prof Muthita, Assoc Prof Nitaya, Asst Prof Supawat, Mr Witawat	1	2	PowerPoint presentation, Laboratory demonstration and practice, Q&A	Discussion, laboratory practice, MCQ & Short Essay Examination
17.	Typhoid and Salmonellosis	2	1	4.5	Asst Prof Watcharapong, Asst. Prof Watcharee, Dr Chatporn, Asst Prof Nitaya, Asst Prof Muthita, Asst Prof Kittiyod, Dr Thundon	1,2	2	PowerPoint presentation, Laboratory demonstration and practice, Q&A	Discussion, laboratory practice, MCQ & Short Essay Examination
18.	Intestinal Cestodes: Clinical manifestation & Laboratory Demonstration	1	1	2.5	Asst Prof Teera, Ms Supaporn, Dr Prakaykaew	1,2	2	PowerPoint presentation, Laboratory demonstration and practice, Q&A	Discussion, laboratory practice, MCQ & Short Essay Examination

Topic	Title	Hours			Instructors	Course Learning Outcome	Programme ELOs	Teaching & Learning Strategies	Assessment
		Lecture	Lab	Self-study					
19.	Seminar on Food and Water-borne Diseases in Different Regions: Student's Experiences	0	3	1.5	Prof Polrat, Prof Srivicha, Asst Prof Weerawan, Assoc Prof Chukiat, Prof Yaowalark, Asst Prof Kittiyod, Asst Prof Supawat	1,2	2	Student presentation, Case discussion, seminar	Group presentation, participation, discussion, MCQ & Short Essay Examination
20.	Fluid and Electrolyte Replacement	2	0	4	Assoc Prof Chukiat, Assoc Prof Kriengsak	1,2	2	PowerPoint presentation, Laboratory demonstration and practice, Q&A	Discussion, laboratory practice, MCQ & Short Essay Examination
21.	Laboratory Practice: Stool Examination II (Helminth)	0	3	1.5	Assoc Prof Paron, et al	1,2	2	PowerPoint presentation, Laboratory demonstration and practice, Q&A	laboratory practice MCQ & Short Essay Examination
22.	Use, and Care of Light Microscope	0	3	1.5	Assoc Prof Porntip, Assoc Prof Dorn, Ms Rachatawan, Assoc Prof Paron, Assoc Prof Chalit, Assoc Prof Chamnam, Ms Supaporn, Ms Chantira, Mr Amorn, School Office Staff	1,2	2	PowerPoint presentation, Laboratory demonstration and practice, Q&A	laboratory practice MCQ & Short Essay Examination
23.	Laboratory Practice: Stool Examination (unknown sample)	0	3	1.5	Assoc Prof Porntip, Ms Rachatawan, Assoc Prof Paron, Assoc Prof Chalit, Assoc Prof Chamnam, Ms Supaporn, Ms Chantira, Mr Amorn	1,2	2	Laboratory demonstration and practice, Q&A	laboratory practice MCQ & Short Essay Examination
	Total	30	30	60					

12. Teaching and Learning Activities

- Lecture
- Case discussion and seminar/student presentation
- Laboratory demonstration

13. Teaching media

- PowerPoint presentation
- Case Scenario
- Microscope

14. Course achievement and evaluation

- Laboratory examination 20%
- Multiple-choice question and short essay examination 80%

Students who get grade lower than B, will need oral re-examination by 2 committees within 2 weeks after first examination. Student who pass the re-examination will get grade B.

15. Course evaluation

- Discussion and comments session at the end of the course
- Questionnaire for contentment and suggestion for the course

16. References

- 16.1. Guerrant RL, et al. Tropical Infectious Diseases: Principles, Pathogens, & Practice. 3rd ed: Elsevier Inc.; 2011
- 16.2. Cook G. Manson's Tropical Diseases. 24th ed: Saunders; 2014.
- 16.3. Mandell GL, et al. Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases. 8th ed: Elsevier Inc.; 2015.
- 16.4. Anthony SF, Braunwald E, Kasper DL, and Hauser SL. Harrison's Principles of Internal Medicine 19th ed; 2015.

17. Instructors:

- Prof Polrat Wilairatana
- Prof Punnee Pitisuttithum
- Prof Srivicha Krudsood
- Prof Yaowalark Sukthana
- Assoc Prof Dr Dom Watthanakulpanich
- Assoc Prof Dr Chalit Komalamisra
- Assoc Prof Chamnarn Apiwathnasorn
- Assoc Prof Chukiat Sirivichayakul
- Assoc Prof Kriengsak Limkittikul
- Assoc Prof Dr Nitaya Indrawattana
- Assoc Prof Dr Parnpen Viriyavejakul
- Assoc Prof Dr Paron Dekumyoy
- Assoc Prof Dr Porntip Petmitr
- Asst Prof Aongart Mahittikorn
- Asst Prof Kittiyod Poovorawan
- Asst Prof Dr Muthita Vanaporn
- Asst Prof Dr Pornsawan Leungwutiwong
- Asst Prof Supawat Chatchen

Asst Prof Saengduen Moonsom
Asst Prof Supaluk Popruk
Asst Prof Dr Teera Kusolsuk
Asst Prof Dr Urusa Thaenkham
Asst Prof Viravarn Luvira
Asst Prof Watcharapong Piyaphanee
Asst Prof Dr Watcharee Arunsodsai
Asst Prof Weerawan Hattasingh
Lect Chayasin Mansanguan
Lect Dr Khuanchai Koompapong
Lect Dr Prakaykaew Charunwatthana
Lect Rachatawan Chiabchalard
Lect Dr Wirongrong Chierakul
Prof Chutima Pramoolsinsap

18. Course responsibility:

Prof Polrat Wilairatana

Department of Clinical Tropical Medicine, Faculty of Tropical Medicine, Mahidol University