

## Course Specification

Name of Institution	Mahidol University
Campus/faculty/department	Salaya campus Mahidol University International College Science Division

### Section 1 General Information

**1. Course Code and course title**

(Thai) ICBI 403 เวชศาสตร์เขตร้อนขั้นแนะนำ

(English) ICBI 403 Introduction to Tropical Medicine

**2. Number of Credits** 4(4-0-8) (Lecture/Lab/Self-study)

**3. Curriculum and type of subject**

1 Curriculum Bachelor of Science (Biological Science)

2 Type of subject Elective course

**4. Responsible faculty member**

Associate Professor Summon Chomchai

Dr. Pattaraporn Mekavuthiku

**5. Trimester / year of study**

5.1 Trimester 2<sup>nd</sup> or 3<sup>rd</sup> / year of study 2<sup>nd</sup>, 3<sup>rd</sup> or 4<sup>th</sup> year

5.2 Number of students 7-25 students

**6. Pre-requisite(s)** none

**7. Co-requisite(s)** none

**8. Venue of study** Mahidol University, Salaya campus

9. Date of latest revision 12 April 2023

## Section 2 Goals and Objectives

### 1. Goal

Students should be able to explain about the factors that facilitate endemic diseases; to explain the distribution and transmission of diseases in tropical countries; to know the prevention of the tropical diseases.

### 2. Objective of development revision

To up-date the knowledge content of the course

## Section 3 Course Management

### 1. Course Description

(Thai) ปัจจัยสภาวะแวดล้อมในประเทศเขตร้อนที่เอื้ออำนวยต่อการระบาดของโรคเรื้อรังประจำท้องถิ่น การกระจายทางภูมิศาสตร์และการแพร่กระจายของโรคที่เกิดจากจุลินทรีย์ โปรโตซัว และปรสิต โดยเฉพาะในทวีปเอเชียอาคเนย์ โรคที่ไม่ติดต่อในแถบภูมิภาคนี้ เช่น โรคที่เกิดจากโภชนาการเกินและบกพร่อง โรคอาหารเป็นพิษ โรคที่เกิดจากพิษงูและแมลงต่างๆ  
ข้อเสนอแนะต่อชาวต่างชาติที่อาศัยอยู่ในประเทศไทย หรือนักท่องเที่ยว

(English) Environmental factors in tropical countries which facilitate endemic diseases; geographical distribution and transmission of commonly found diseases caused by microbes, protozoa, and helminthes with special reference to Southeast Asia; non-infectious diseases existing in the region such as nutritional disorders, food poisoning, snake and other venomous bites and stings ; Prevention of the tropical diseases.

### 2. Credit hours / trimester

Lecture (hours)	Additional Class	Laboratory/field trip/internship	Self-study (hours)
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	(hours)	(hours)	
36 (4 hours x 11 weeks)	-	12 ((fieldtrips) 4 hours x 11 weeks)	88 hours (8 hours x 11 weeks)

### 3. Numbers of hours that the lecturer provides individual counseling and guidance

1 hour/week

## Section 4 Development of Students' Learning Outcome

### 1. Expected outcome on students' skill and knowledge

Student will be able to apply the knowledge from lecturer and additional research with the ideas received from analysis and synthesis to set up solutions / precautions to benefit individuals and their community.

### 2. Teaching Methods

- Lecture
- Self-study
- Fieldtrips

### 3. Evaluation methods

#### 1. Morality and Ethics

##### 1.1 *Expected outcome on morality and ethics:*

- (1) To possess morality and ethics
- (2) To have self-discipline, honesty, kindness, self-responsible and social responsibility
- (3) To demonstrate academic ethical behavior
- (4) To respect others' rights and be a good listener
- (5) To respect rules and regulations
- (6) To have good attitude toward professors/career
- (7) To demonstrate Leadership, team player

##### 1.2 *Teaching method:*

Learning Centered Education: Emphasis on knowledge development, important skills in career development and living, encourage students to use their full potentials

- Lecture
- Case studies with past experiences and current events
- Emphasis on morality and ethics
- Group discussion
- Group assignment

### 1.3 *Evaluation methods:*

- Written examination
- Presentation
- Class attendance, class participation and behavior in class
- On-time submission of reports and assignments and their quality

## 2. Knowledge development

### 2.1 *Expected outcome on knowledge development:*

- (1) To possess basic knowledge, theories and concepts towards the understanding of self, society, surrounding in order to be well-rounded person
- (2) To process the knowledge related to principles, theories and practice in the course
- (3) To integrate the knowledge to other related subjects
- (4) To remain current in research and new knowledge

### 2.2 *Teaching method:*

Learning Centered Education: Emphasis on knowledge development, important skills in career development and living, encourage students to use their full potentials

- Lecture
- Case studies with past experiences and current events
- Emphasis on morality and ethics
- Group discussion
- Group assignment

### 2.3 *Evaluation methods:*

- Written examination
- Presentation
- Class attendance, class participation and behavior in class
- On-time submission of reports and assignments and their quality

### 3. Intellectual development

#### 3.1 *Expected outcome on intellectual development:*

- (1) To have systematic and analytical thinking
- (2) To be able to search, consolidate and evaluate ideas and evidence for problem solving
- (3) To be able to apply knowledge and experience to analyze and creatively solve problems both in general and academic

#### 3.2 *Teaching method:*

- Lecture
- Case studies with past experiences and current events
- Group discussion
- Group assignment

#### 3.3 *Evaluation methods:*

- Written examination
- Presentation
- Class attendance, class participation and behavior in class
- On-time submission of reports and assignments and their quality

### 4. Interpersonal relationship and responsibility

#### 4.1 *Expected outcome on interpersonal relationship and responsibility:*

- (1) To possess good interpersonal relationship skills (self-esteem and dignity) and have respect for the rights and value of others
- (2) To possess leadership and initiative in problem solving
- (3) To be constructive team member (in various roles) and be responsible for assignment tasks, professional and society

#### 4.2 *Teaching method:*

- Group discussion in case studies
- Group discussion
- Group assignment
- Fieldtrips

#### 4.3 *Evaluation methods:*

- Presentation
- Class attendance, class participation and behavior in class
- On-time submission of reports and assignments and their quality

### 5. **Mathematical analytical thinking, communication skills and information technology skills**

#### 5.1 *Expected outcome on mathematical analytical thinking, communication skills and information technology skills:*

- (1) To be able to select and apply appropriate statistical and mathematical methods to research problems
- (2) To be able to apply information technology for data gathering, processing, interpreting and presenting information/results
- (3) To have the ability to communicate effectively and select appropriate methods of presentation

#### 5.2 *Teaching method:*

- Lecture
- Case studies with past experiences and current events
- Group discussion
- Group assignment

#### 5.3 *Evaluation methods:*

- Written examination
- Presentation
- Class attendance, class participation and behavior in class
- On-time submission of reports and assignments and their quality

## Section 5 Teaching and Evaluation Plans

### 1. Teaching plan

week	Topics	Hours	Teaching methods/mulimedia	Instructor
1	Introduction and overview of tropical diseases	4	Interactive lecture & group discussion	SC
2	Public health issues in the tropics	4	Interactive lecture & group discussion	SC
3	Arthropod-borne diseases ( Malaria, Dengue and JE), vector-borne diseases, zoonosis	4	Interactive lecture & group discussion	SC
4	Respiratory infections	4	Interactive lecture & group discussion	SC
5	Food-borne bacterial and viral diseases , diarrheal disease	4	Interactive lecture & group discussion	SC
6	<b>Midterm Exam</b>	4		
7	HIV and STDs in the tropics, Parasitic infestations, Cancers and chronic diseases	4	Interactive lecture & group discussion	SC
8	Nutritional and environmental disorders	4	Interactive lecture & group discussion	SC
9	Natural toxins, bites and stings, miscellaneous	4	Interactive lecture & group discussion	SC

10	Fieldtrip 1	4	Field trip	SC & PM
11	Fieldtrip 2	4	Field trip	SC & PM
12	Review and Project Presentation	4	Group discussion	SC & PM
13	<b>Final Examination</b>	4		
	Total	48		

SC, Summon Chomchai; PM, Pattaraporn Mekavuthiku

## 2. Evaluation plan

Expected outcomes	Methods / activities	Week	Percentage
1. (1) to (4)	Attendance	1-12	10
2. (1) to (5)	Individual assignment	1-12	10
3. (1) to (5)	Long-term project	1-12	20
4. (2) to (3)	Examination	13	60  (Midterm: 40  Final: 40)

## Section 6 Teaching Materials and Resources

### 1. Texts and main documents

Beeching N, Gill G. Tropical Medicine Lecture Note. 7<sup>th</sup> Ed. New York: Wiley Blackwell; 2014.

Davidson R, Brent AJ, Seale AC, Blumberg L. Oxford handbook of Tropical Medicine. 5<sup>th</sup> Ed. Oxford: Oxford Press; 2021.

### 2. Documents and important information

Lecture notes on Tropical Medicine

### 3. Documents and recommended information



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## Section 7 Evaluation and Improvement of Course Management

### 1. Strategies for effective course evaluation by students

1.1 Evaluation of peers by students

1.2 Student evaluation

1.2.1 Course content

1.2.2 Course management

1.2.3 Suggestions

1.2.4 Overall opinion

### 2. Evaluation strategies in teaching methods

2.1 Student evaluation

2.2 Presentation

### 3. Improvement of teaching methods

Workshop on course improvement with the participation of all instructors in the course

### 4. Evaluation of students' learning outcome

Analysis of students' learning outcomes using scores from class attendance, group activity and presentation of project and poster presentation

### 5. Review and improvement for better outcome

Review the course before trimester starts and before each teaching period