

## COURSE SPECIFICATION

Name of Institution Mahidol University  
 Campus/Faculty/Program ASEAN Institute for Health Development

### Section 1 General Information

**1. Code and Course Title:** ADPM 645 One Health and Environmental Health in Primary Health Care  
 สอสม ๖๔๕ สุขภาพหนึ่งเดียวและอนามัยสิ่งแวดล้อมทางสาธารณสุขมูลฐาน

**2. Total Credits:** 3 (3-0-6) credits (Lecture - Practice - Self Study)

#### 3. Curriculum and Course Category

Master of Primary Health Care Management (International) (Elective Course)

#### 4. Course Coordinator/Course Instructors

##### 4.1 Course Coordinator

Assoc.Prof. Dr.Thunwadee Sujsaroj  
 Contact: ASEAN Institute for Health Development  
 Tel. 02 441 9040 ext 34

##### 4.2 Course Instructors

Assoc.Prof. Dr.Thunwadee Sujsaroj  
 Contact: ASEAN Institute for Health Development  
 Tel. 02 441 9040 ext 30, email: thunwadee.suj@mahidol.edu

Assoc.Prof. Dr.Cheerawit Rattanapan  
 Contact: ASEAN Institute for Health Development  
 Tel. 02 441 9040 ext 62, Email: Cheerawit.rat@mahidol.edu

Assoc Prof Dr. Piyapong Janmaimool  
 Contact: ASEAN Institute for Health Development  
 Tel. 02 441 9040 ext 25, Email: piyapong.jan@mahidol.ac.th

Assoc.Prof. Dr.Orapin Laosee  
 Contact: ASEAN Institute for Health Development  
 Tel. 02 441 9040 ext 63, email: orapin.lao@mahidol.edu

**5. Semester / Academic Year of Study:** 2/2023

**6. Pre-requisite:** There are no specific prerequisite courses, but learners must be able to work with equations and perform basic mathematical calculations.

**7. Co-requisite:** none

8. **Venue:** ASEAN Institute for Health Development, Mahidol University

9. **Latest Date of Course Specification Development or Modification:** 1 September 2023

## Section 2 Aims and Objectives

### 1. Course Aims

Upon successful completion of this course, the learners will be able to:

- 1.1 Describe the relationship of environment, animal and human health.
- 1.2 Explain effect of physical, chemical, biological and social determinants to the changes of health outcomes.
- 1.3 Identify the socio-environmental factors that contribute to the emerging of diseases.
- 1.4 Describe the important of primary health care system in emerging and re-emerging diseases response.
- 1.5 Discuss the supporting factors and barriers exist and how they affect to the achievement of emerging and re-emerging diseases control

### 2. Objectives of Course Development/Modification

This course is designed to introduce students to important theories, concepts, and interconnection between people, animals and plants. The learners will expose to the fundamental science to explain effect of physical, chemical, biological and social determinants to the change of health outcomes. In addition, the interaction of multi-sectoral, and transdisciplinary approach working in local, regional, national, and global scale to achieve optimal human and ecological health outcomes will be discussed.

## Section 3 Course Description and Implementation

### 1. Course Description

Interconnection between people, animals, and plants in shared environments; integration of fundamental science to explain effect of physical, chemical, biological and social determinants to the changes of health outcomes; the current and emerging environmental health issues and trends; environmental health risk management; the collaborative, multi-sectoral, and transdisciplinary approach working in local, regional, national, and global scale to achieve optimal human and ecological health outcomes; case studies in one health

ความเชื่อมโยงระหว่างมนุษย์ สัตว์ และพืชในสิ่งแวดล้อมร่วมกัน การผสมผสานหลักการทางวิทยาศาสตร์ เพื่ออธิบายผลกระทบทางกายภาพ เคมี ชีวภาพและปัจจัยกำหนดทางสังคม เพื่อเปลี่ยนแปลงผลลัพธ์สุขภาพ

ปัญหาด้านสุขภาพในปัจจุบันและแนวโน้มปัญหาที่เกิดขึ้นใหม่ การจัดการความเสี่ยงต่อสุขภาพด้านสิ่งแวดล้อม การทำงานร่วมกัน หลายหน่วยงาน แนวทางการทำงานข้ามศาสตร์ ทั้งในระดับท้องถิ่น ภูมิภาค ประเทศ และระดับโลก เพื่อการบรรลุผลลัพธ์ด้านสุขภาพและความเป็นมนุษย์ที่ดีที่สุด กรณีศึกษาด้านสุขภาพหนึ่งเดียว

## 2. Number of Hours per Semester

Lecture	45	Hours
Tutorial	0	Hour
Practice / Field Experience /Practicum	0	Hour
Self-Study	90	Hours

## 3. Number of hours provided for academic advice and guidance to an individual student

Every Wednesday 14.00-16.00 at Building 1, 2<sup>nd</sup> floor ASEAN Institute for Health Development; Office hours (at least 2 hours/week)

## Section 4 Development of the expected learning outcomes

1. A brief summary of the knowledge or skills expected to develop in students; the course-level expected learning outcomes (CLOs)

On completion of the course, students will be able to:

CLO1 Describe the relationship of environment, animal and human health.

CLO2 Explain effect of physical, chemical, biological and social determinants to the changes of health outcomes.

CLO3 Identify the socio-environmental factors that contribute to the emerging of diseases.

CLO4 Describe the important of primary health care system in emerging and re-emerging diseases response.

CLO5 Discuss the supporting factors and barriers exist and how they affect to the achievement of emerging and re-emerging diseases control

2. How to organize learning experiences to develop the knowledge or skills stated in number 1 and how to measure the learning outcomes

CLOs	Teaching and learning experience management			Learning outcomes measurements			
	Lecture	Individual Work	Group Work	Test	Assignment quality	Individual Reports	Group Reports
CLO1	x			x	x		

CLO2	x	x		x	x	x	
CLO3	x	x		x	x	x	
CLO4	x		x		x		X
CLO5	x		x		x		x

## Section 5 Teaching Plan and Evaluation Plan

### 1. Teaching Plan

Week No.	Topic	Hrs.			Teaching and Learning Activities	Instructor(s)
		Lecture	Practice	Self-study		
1	Principle of one health I: Global challenges from emerging and re-emerging diseases	3	0	6	Lecture, Discussion	Thunwadee Suksaroj
2	Principle of one health II: One Health Concepts and Knowledges	3	0	6	Lecture, Discussion	Thunwadee Suksaroj
3	Principle of one health III: Scientific background of diseases emerged and transmission pathway	3	0	6	Lecture, exercise	Thunwadee Suksaroj
4	Factors affecting animal and human health: Environmental Health	3	0	6	Lecture, discussion	Cheerawit Rattanapan
5	Factors affecting animal and human health: Behavioral Change	3	0	6	Exercise, case study	Cheerawit Rattanapan
6	Infectious Disease Management: Epidemiology and Risk Analysis	3	0	6	Lecture, case study	Invited Lecturer
7	Rapid assessment of acute public health events	3	0	6	Lecture, exercise	Cheerawit Rattanapan
8	Risk communication	3	0	6	Lecture, discussion	Piyaphong Janmaimool
9	One health comprehensive approaches: multi-sectoral approach	3	0	6	Lecture, exercise	Cheerawit Rattanapan
10	One health comprehensive approaches: strengthening one health preparedness	3	0	6	Lecture, case study	Cheerawit Rattanapan
11	Community of Practice responding to One Health	3	0	6	Lecture, exercise	Thunwadee Suksaroj

Week No.	Topic	Hrs.			Teaching and Learning Activities	Instructor(s)
		Lecture	Practice	Self-study		
12	One health comprehensive approaches: strengthening trans boundary one health preparedness	3	0	6	Lecture, case study	Orapin Laosee
13	Primary health care system reforms: emerging issues in the healthcare sector, including home and community care	3	0	6	Lecture, exercise	Orapin Laosee
14	Case studies and discussion	3	0	6	Discussion with case studies	Thunwadee/Cheera wit
15	Presentation	3	0	6	Presentations	Lecturers
Total		45	0	90		

## 2. Evaluation Plan

No.	Learning Outcomes	Evaluation Method	Week of Evaluation	Evaluation Allotment
1.	Describe the relationship of environment, animal and human health.	Quiz	2	5%
		Assignments	1-3	10%
2.	Explain effect of physical, chemical, biological and social determinants to the changes of health outcomes.	Quiz	6	5%
		Assignments	4-6	10%
3.	Identify the socio-environmental factors that contribute to the emerging of diseases.	Assignments	6-11	15%
		Individual report	11	20%
4.	Describe the important of primary health care system in emerging and re-emerging diseases response	Assignment	12-13	15%
5	Discuss the supporting factors and barriers exist and how they affect to the achievement of emerging and re-emerging diseases control	Group presentation	14-15	20%

## 1. Measurement and evaluation of student achievement

A = 85-100 %

B+ = 75– 84 %

B = 65 – 74 %

C+ = 55 – 64 %

C = 45 – 54 %

F = 0- 44 %

## Section 6 Teaching Materials and Resources

### 1. Main Textbook and Course Materials

FAO, OIE, WHO (2008) Contributing to One World, One Health\* A Strategic Framework for Reducing Risks of Infectious Diseases at the Animal–Human–Ecosystems Interface.

Retrieved from <http://www.fao.org/3/aj137e/aj137e00.pdf>

European centre for disease prevention and control (2018) Technical report towards one health preparedness. Retrieved from

<https://www.ecdc.europa.eu/sites/portal/files/documents/One-Health-preparedness-24-May-2018.pdf>

Lebov J, Grieger K, Womack D, et al. A framework for One Health research. *One Health*. 2017;3:44–50. Published 2017 Mar 24. doi:10.1016/j.onehlt.2017.03.004

WHO. A one health priority research agenda for antimicrobial resistance, 2023. Published 3 July 2023. <https://www.who.int/publications/i/item/9789240075924>

### 2. Important Documents and Information

-

### 3. Suggested Learning Resources

-

## Section 7 Course Evaluation and Improvement

### 1. Evaluation Strategies for Course Effectiveness by Students

Strategies for effective course evaluation by students

1.1 Evaluation of students by peer students to be done by the Faculty of Graduate Studies (Education Services Section)

1.2 Student evaluation to be done by Course Directors at the end of the course

- Course content
- Course management
- Suggestions

- Overall opinion

## 2. Teaching Evaluation Strategies

- Observation of student behaviors, attitudes, and academic contents during activities of class participation
- Students self-assessments and analysis
- Peer assessments and feedback
- Question and answer
- Volunteering in class organization and designing in summarization of class activities

## 3. Teaching Improvement

Presentation of course development, techniques used in teaching, and improvement with the participation of program management committee members of AIHD at program management committee meetings.

## 4. Verification of Students Achievements in the Course

- Analysis of students' learning outcomes using scores from class attendance, individual report activity and presentation
- Observing changes in perception and attitude of individual students and development i.e. personality, presentation, participation in working group, participatory action

## 5. Course Revision and Improvement Plan

- Meeting with all lecturers teaching the course to discuss and review the course before the semester starts and before each period of teaching
- Teaching materials sharing among lecturers for mutual learning, understanding, and development
- Meeting with all lecturers teaching the course to discuss and review after the course closed to consider requests, feedback, and suggestions of students and make minor improvements to the course syllabus and materials before the next academic year.

## Appendix

### Relations between the Course and the Program

#### Program Learning Outcomes

PLO1 Exhibit responsibility, discipline, and honesty according to organizational rules, academic and professional ethics, and morality.

PLO2 Explain the interconnection of multidisciplinary knowledge associated with primary health care management.

PLO3 Design research in primary health care management based on systematic process.

PLO4 Defend in significant ways with questions or points of view or controversies about the area of the primary health care system.

PLO5 Interact professionally when working as a team as both leader and member for solving and managing work assigned.

PLO6 Perform statistical data analysis as they support evaluating, planning, and managing the primary health care system.

PLO7 Communicate clearly and effectively to an array of audiences for a range of purposes.

PLO8 Use information technology effectively to support the study, research, and their efforts to accomplish a specific purpose.

Course	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8
<b>Elective course</b>								
ADPM 645 One Health and Environmental Health in Primary Health Care 3 (3-0-6)	R	P	R	P	M	I	P	P

I = ELO is introduced & assessed P = ELO is practiced & assessed

R = ELO is reinforced & assessed M = Level of Mastery is assessed



### Curriculum Mapping

● Primary responsibility

○ Secondary responsibility

Course Objectives (CLOs)	Program learning domains												
	1. Morality and ethics			2. Knowledg e		3. Intellectual skills			4. Interperson al Skills and Responsibili ty		5. Numeral Analysis Skills, Communication and Use of Information Technology		
	1.1	1.2	1.3	2.1	2.2	3.1	3.2	3.3	4.1	4.2	5.1	5.2	5.3
CLO1 Describe the relationship of environment, animal and human health.					●	○							○
CLO2 Explain effect of physical, chemical, biological and social determinants to the changes of health outcomes.				●	●	○							
CLO3 Identify the socio-environmental factors that contribute to the emerging of diseases.		●						●			○		
CLO4 Describe the important of primary health care system in	○			●	●				●				

Course Objectives (CLOs)	Program learning domains												
	1. Morality and ethics			2. Knowledge		3. Intellectual skills			4. Interpersonal Skills and Responsibility		5. Numerical Analysis Skills, Communication and Use of Information Technology		
	1.1	1.2	1.3	2.1	2.2	3.1	3.2	3.3	4.1	4.2	5.1	5.2	5.3
emerging and re-emerging diseases response.													
CLO5 Discuss the supporting factors and barriers exist and how they affect to the achievement of emerging and re-emerging diseases control		O								O	•	•	•

### Expected Outcome (TOF.2)

#### 1. Morality and Ethics

- 1.1 Exhibits discipline, honesty, and punctuality
- 1.2 Behave according to morals and ethics of academic and professional practice
- 1.3 Avoid academic plagiarism

#### 2. Knowledge

2.1 Explain the theoretical and practical knowledge associated with primary health care management

2.2 Explain the interconnection of various fields of knowledge in primary health care management

### **3. Intellectual skills**

3.1 Perform the manners of continuously seeking knowledge

3.2 Design the research to solve the problem identified in the primary health care management system

3.3 Defend in significant ways with questions or points of view or controversies in related fields.

### **4. Interpersonal Skill and Responsibility**

4.1 Perform interpersonal communication skills to establish and enhance personal and work-based relationships.

4.2 Perform the role of a leader and working team member appropriately

### **5. Numeral Analysis Skills, Communication, and Use of Information Technology**

5.1 Demonstrate the statistical analysis and its interpretation

5.2 Communicate clearly and effectively to an array of audiences for a range of purposes.

5.3 Use information technology effectively to support the study, research, and efforts to accomplish a specific purpose

### Relations between CLOs and PLOs

Course Objectives (CLOs)	PLOs							
	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8
CLO1 Describe the relationship of environment, animal and human health.		√						
CLO2 Explain effect of physical, chemical, biological and social determinants to the changes of health outcomes.		√			√		√	
CLO3 Identify the socio-environmental factors that contribute to the emerging of diseases.	√							√
CLO4 Describe the important of primary health care system in emerging and re-emerging diseases response.				√		√		
CLO5 Discuss the supporting factors and barriers exist and how they affect to the achievement of emerging and re-emerging diseases control					√			√

### Program Learning Outcomes

PLO1 Exhibit responsibility, discipline, and honesty according to organizational rules, academic and professional ethics, and morality.

PLO2 Explain the interconnection of multidisciplinary knowledge associated with primary health care management.

PLO3 Design research in primary health care management based on systematic process.

PLO4 Defend in significant ways with questions or points of view or controversies about the area of the primary health care system.

PLO5 Interact professionally when working as a team as both leader and member for solving and managing work assigned.

PLO6 Perform statistical data analysis as they support evaluating, planning, and managing the primary health care system.

PLO7 Communicate clearly and effectively to an array of audiences for a range of purposes.

PLO8 Use information technology effectively to support the study, research, and their efforts to accomplish a specific purpose.