



Program: Doctor of Philosophy
Major: Occupational Health and Safety
Course: Advanced Occupational Health and Safety
Code: PHOH 660

Level: Bachelor Master Doctoral
 Grad. Diploma Adv.Grad. Diploma
Department of Occupational Health and Safety
Faculty of Public Health, Mahidol University

TQF 3 Course Specification

Section 1 General Information

1. Course Code and Title

PHOH 660 Advanced Occupational Health and Safety

2. Number of Credits

3 (3–0–6) Credits (Lecture – Practice – Self-study)

3. Curriculum and Course Type

3.1 Program of Study

Doctor of Philosophy (Occupational Health and Safety)

3.2 Course Type

Elective Course

4. Course Coordinator and Instructor

4.1 Course Coordinator

Lect. Dr. Wisanti Laohaudomchok

Sc.D. (Occupational Health)

Affiliation: Department of Occupational Health and Safety

Contact: Room 2603 Building 2 – 6th Floor

Faculty of Public Health

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4.2 Course Instructor

- 1) Lect. Dr. Wisanti Laohaudomchok
- 2) Prof. Dr. Pornpimol Kongtip
- 3) Assist. Prof. Dr. Amarin Kongtawelert
- 4) Assist. Prof. Dr. Suchinda Jarupat-Maruo
- 5) Lect. Dr. Sumate Pengpumkiat
- 6) Lect. Dr. Saisattha Noomnual



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5. Semester, Class Level, and Number of Students

5.1 Semester/Class Level

1st Semester / 1st year Students

5.2 Number of Students Allowed

Approximately 8 Students

6. Pre-requisite (if any) - None -

7. Co-requisites (if any) - None -

8. Study Site Location

Department of Occupational Health and Safety
Faculty of Public Health, Mahidol University (Phayathai Campus)

9. Date of Preparation/Latest Revision of the Course Specifications

July 10, 2021



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Section 2 Aims and Objectives

1. Course Goals

After the completion of this course, students shall be able to:

- 1.1 Describe either the common or advanced principles of occupational and safety as well as the situation and administration at national, regional and global levels;
- 1.2 Identify the current topics, emerging issues, and research priorities in Occupational Health and Safety;
- 1.3 Explain in advanced details on applications of occupational epidemiology, exposure and risk assessments, occupational medicine, safety technology, environmental health, etc., for their research works.

2. Objectives in Course Development/Revision

2.1 Course Objectives

This course is designed and administered to develop students' knowledge and skill, as well as personal characteristics as follow:

- 1) Fulfill with morals, ethics, and have either self- or social responsibility;
- 2) Be able to describe and apply the advanced knowledge on occupational health and safety for future researches and works;
- 3) Be able to propose the guidelines for technical development of occupational health and safety and policies to be in line with national and international standards;
- 4) Build-up good relationship between students and team work skills;
- 5) Be able to apply computer technology and English for searching and accessing advanced technical information on occupational health and safety.

2.2 Course-level Learning Outcomes (CLOs)

By the end of the course, students are able to:

- CLO1 Demonstrate morals, ethics, as well as self- and social responsibility
- CLO2 Describe advanced knowledge on occupational health and safety and its application in researches and work practices
- CLO3 Propose the guidelines for technical development of occupational health and safety to be in line with national and international standards
- CLO4 Demonstrate good relationship with classmates and team work skills
- CLO5 Apply computer technology and English for searching and accessing advanced information on international occupational health and safety



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Section 3 Course Description and Implementation

1. Course Description

Principles of occupational health and safety; the institutions promulgating legislation; techniques for investigation, evaluation and control of risks; techniques for inspection, correction and changing the behavior of human in order to achieve safety in the workplace and reduce impacts in the community; inspection for prevention of accident and occupational diseases in accordance with the safety promotion programs at various levels; principles of correcting and rehabilitating the environments and human by the co-operation between the private enterprises and the government.

2. Number of Hours (per semester)

Lecture	Supplemental Teaching	Practice Field Works/Internship	Self-study
45 hours per semester (3 hours per week)	- none -	- none -	90 hours per semester (6 hours per week)

3. Number of Hours per Week for Individual Advice

Lecturers will provide consultation and academic advice outside of class to students in person or via e-mail/other online media. Number of hours for such advice depends on the magnitude of problem and amount of advice given.



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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)

By the end of course, students who successfully complete this course will be able to:

- CLO1 Demonstrate morals, ethics, as well as self- and social responsibility
- CLO2 Describe advanced knowledge on occupational health and safety and its application in researches and work practices
- CLO3 Propose the guidelines for technical development of occupational health and safety to be in line with national and international standards
- CLO4 Demonstrate good relationship with classmates and team work skills
- CLO5 Apply computer technology and English for searching and accessing advanced information on international occupational health and safety

2. How to organize learning experiences to develop the knowledge or skills stated above, and how to measure the learning outcomes

	Description	Teaching and Learning Experience Management	Learning Outcomes Measurement
CLO1	Demonstrate morals, ethics, as well as self- and social responsibility	<ul style="list-style-type: none"> • Record of students' participation • Lectures/group discussions • Assign tasks • Self-study 	<ul style="list-style-type: none"> • Class attention and their active participation • Final examination results • Assigned tasks
CLO2	Describe advanced knowledge on OH&S and application in researches and work practices	<ul style="list-style-type: none"> • Lectures/group discussions • Assign tasks • Self-study 	<ul style="list-style-type: none"> • Final examination results • Assigned tasks • Project presentation and discussion
CLO3	Propose the guidelines for technical development of OH&S to be in line with international standards	<ul style="list-style-type: none"> • Lectures/group discussions • Assign tasks 	<ul style="list-style-type: none"> • Assigned tasks • Project presentation and discussion
CLO4	Demonstrate good relationship with classmates and team work skills	<ul style="list-style-type: none"> • Lectures/group discussions • Assign tasks 	<ul style="list-style-type: none"> • Participation & interaction • Individual/group behavior during project presentation and discussion
CLO5	Apply IT and English for searching and accessing OH&S information	<ul style="list-style-type: none"> • Assign tasks that require information from international resources • Self-study 	<ul style="list-style-type: none"> • Final examination results • Assigned tasks • Project presentation and discussion



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Section 5 Lesson Plan and Evaluation

1. Lesson Plan

Week	Topic/Details	Number of Hours			Teaching Activities/Media*	Instructor
		Lecture	Practice	Self-Study		
1	- Course Introduction & Assignments - Occupational Health and Safety Situation and Administration at National, Regional and Global Levels	3	-	6	Lecture, Discussion PowerPoint Assigned Tasks**	Lect. Dr. Wisanti Laohaudomchok
2	- International Occupational Health and Safety: • Policies, Strategies, and Regulations • International Collaborations	3	-	6	Lecture, Discussion PowerPoint Assigned Tasks**	Lect. Dr. Wisanti Laohaudomchok
3	- Current Topics, Emerging Issues, and Research Priorities in Occupational Health and Safety	3	-	6	Lecture, Discussion PowerPoint Assigned Tasks**	Lect. Dr. Wisanti Laohaudomchok
4	- Advanced Occupational Epidemiology: • General Aspects & Key Concepts • Overview of Study Designs • Epi. Basis in OH&S Development	3	-	6	Lecture, Discussion PowerPoint Assigned Tasks**	Lect. Dr. Wisanti Laohaudomchok
5	- Exposure Assessment Techniques in Occupational Epidemiology: • Cumulative Exposure Modeling • Biomarkers of Exposure	3	-	6	Lecture, Discussion PowerPoint Assigned Tasks**	Lect. Dr. Wisanti Laohaudomchok
6	- Agricultural Health and Safety: • Pesticide Use – Situation & Trend • Health Hazards, Exposures, and Outcomes	3	-	6	Lecture, Discussion PowerPoint Assigned Tasks**	Prof. Dr. Pornpimol Kongtip
7	- Agricultural Health and Safety: • Special Issues & Research Studies	3	-	6	Lecture, Discussion PowerPoint Assigned Tasks**	Prof. Dr. Pornpimol Kongtip
8	- Promotion of Workers' Physical & Mental Health and Well-being	3	-	6	Lecture, Discussion PowerPoint Assigned Tasks**	Assist. Prof. Dr. Suchinda Jarupat Maruo
9	- Industrial Psychology: • Theoretical Principles & Concepts • Occupational Stress and Psycho-behavioral Assessment	3	-	6	Lecture, Discussion PowerPoint Assigned Tasks**	Assist. Prof. Dr. Suchinda Jarupat Maruo



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Week	Topic/Details	Number of Hours			Teaching Activities/Media*	Instructor
		Lecture	Practice	Self-Study		
10	- Health Risk Assessment in Occupational And Environmental Medicine	3	-	6	Lecture, Discussion PowerPoint Assigned Tasks**	Lect. Dr. Saisattha Noomnual
11	- Advanced Aspects of Environmental Exposure – Monitoring, Evaluation & Control	3	-	6	Lecture, Discussion PowerPoint Assigned Tasks**	Lect. Dr. Saisattha Noomnual
12	- Advanced Aspects of Occupational Safety – Technology and Management	3	-	6	Lecture, Discussion PowerPoint Assigned Tasks**	Assist. Prof. Dr. Amarin Kongtawelert
13	- Advanced Chemical Analysis Technology for Occupational Health and Safety	3	-	6	Lecture, Discussion PowerPoint Assigned Tasks**	Lect. Dr. Sumate Pengpumkiat
14	- Presentation of Individual Projects and Discussion	3	-	6	Presentation and Discussion	Lect. Dr. Wisanti Laohaudomchok
15	- Final Examination	(3)			Written Exam	Lect. Dr. Wisanti Laohaudomchok
Total Number of Hours		45	-	90		

* Lecture presentations are prepared using Microsoft PowerPoint. Additional teaching materials/references are available in PDF format and can be accessed from the course website (www.thaiosh.net/phoh660). Online teaching (if necessary) will be conducted via Webex.

** Students are required to work on assignments (research, review, present, discuss and critique, as well as propose their ideas on how to apply advanced knowledge on occupational health and safety in research and practice.



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2. Evaluation of the CLOs

2.1 Measurement and Evaluation of learning achievement

A. Formative Assessment

The assessment of learning achievement for student development and further improvement of class activities will be done through weekly group discussions, including observing behavior during the class by asking and answering questions.

B. Summative Assessment

1) Tool and weight for measurement and evaluation

1.1 In-class Participation:

- Attending all class meetings, no absence without a reasonable issue (CLO1) 10 %
- Participating in class discussion, Q&A, etc. (CLO1 & CLO4) 10 %

1.2 Assignments, including:

- Assigned tasks to search, review & critique technical papers and write a short summary (individual work) (CLO5) 20 %
- Individual term project with presentation and report (CLO2, CLO3 & CLO5) 30 %

[* The ratings are based on the quality of work presented and delivered, i.e. the subject matter, content, concluding points/supporting reasons. accuracy/completeness clarity/conciseness, technique of presentation, use of appropriate media, answering questions, teamwork, etc.]

1.3 Examination:

- Final examination (CLO2 & CLO3) 30 %

[* Exams will be combination of multiple-choice and subjective questions (both short answers or an analytical explanation to show knowledge and understanding of concepts and guidelines for implementation. However, due to various restrictions in online examination, evaluation method and the proportion of scores may be adjusted as appropriate later.]



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2) Measurement and evaluation

Judgment of the learning outcomes is based on Mahidol University guidelines for measurement and evaluation of Bachelor students' learning outcomes, as well as overall class performance. Grades will be given as A, B+, B, C+, C, D+, D, or F with the following approximated criteria:

Total Score (%)	Symbol	Grade Point
85-100	A	4.0
80-85	B+	3.5
75-80	B	3.0
70-75	C+	2.5
65-70	C	2.0
60-65	D+	1.5
55-60	D	1.0
< 55	F	0.0

3) Re-examination (if the course allows any)

Typically, there is no re-examination in this course. However, in case of force majeure or some circumstances, re-examination may be offered as necessary.

3. Students' Appeal

Students who have questions, concerns or want to appeal about the activities including evaluated students' learning performance and examination results can discuss with the instructor or coordinator of the course for advice. He/she can also send a request to the educational administration section of the Graduate School to help in solving that problem.

If the problem cannot be easily solved, the staff of educational administration section will contact the chairman of this Ph.D. program to make decision or bring the matter to discuss at the Department meeting to go through the process of considering such appeal.



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Section 6 Teaching Resources

1. Required Texts

Throughout the course, the textbooks and main documents are referenced as follows:

1.1 The presentation materials for teaching in each topic which have been prepared as electronic file (PPT) and made available on the course website (www.ThaiOSH.net/PHOH660).

1.2 The textbooks or documents those are required by the lecturer of each topic.

2. Suggested Materials

Published documents or information websites as suggested by the lecturer of each topic.

3. Other Resources (if any)

Accessible scientific papers, technical information, guidelines or standards on occupational health and safety from relevant organizations or authorities.



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Section 7 Evaluation and Improvement of Course Implementation

1. Strategy for Course Effectiveness Evaluation by Students

The evaluation will be conducted in accordance with the regulations of the Faculty of Graduate Studies, Mahidol University. Results from the course assessment and recommendations for improvement from the group discussions of instructor-in-charge, other instructors and student representatives as well as other observed data will also be used. Data from classroom observers and a teaching team or the student's academic performance will also be reviewed and used as input to evaluate the course effectiveness.

2. Strategy for Teaching Evaluation

Teaching quality will be evaluated by students, teaching staff, and teaching evaluation committee of the Faculty of Graduate Studies. In addition, students' learning performance and their test results as well as the verification of these results will also be employed as other strategies for teaching evaluation.

3. Teaching Improvement

On regular basis, course instructors must attend workshops, trainings or academic conferences on teaching and learning development, media and research. After learning the results of the course evaluation, instructors and teaching staff will meet to determine the effectiveness of the course and to figure out the strategies for further improvement.

4. Verification of Standard of Learning Outcome for the Course

During the course administration, the standard of learning outcome for each topic will be verified in each topic by means of quizzical examination, class assignments and group works. Students will also be randomly asked to express their needs and expectations from the course. At the end of the course, overall achievement will be verified by setting up a committee in the field of study to examine the results of student learning assessment and course evaluation.



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5. Revision Process and Improvement Plan for Course Effectiveness

Results from the evaluation and verification of the course achievement and effectiveness will be used as inputs in the planning for the course administration and teaching strategies in order to improve the overall quality.

5.1 Course administration will be officially reviewed and updated every 3 years according to recommendations and results of standard verification.

5.2 Mechanisms and methods to improve the course teaching and effectiveness also include the change of instructors who are specialized in those teaching topics to provide students with perspectives and experiences so that they gain more ideas on applying knowledge in the real world of works.

Each year, there will be Executive Board Meeting to review and improve the course (which is reported in the TQF5 in every semester), classroom research, and workshops for teaching improvement.