

## Course Detail

### Master of Science (Occupational and Environmental Health)

- 1. Course Title:** Master of Science (Occupational and Environmental Health) (International Program)
- 2. Master Degree:** Master of Science (Occupational and Environmental Health)
- 3. Academic Institution:** Faculty of Public Health, Thammasat University
- 4. Duration:** 24 months from August 2025 to May 2027
- 5. Background and Rational:**

This course aims to produce researchers with special skills in these areas equipped with up-to-date knowledge of relevant technological innovations. There is comprehensive coverage of theory and practice and an emphasis on the development of research skills enabling students to apply their knowledge to find practical solutions to real public health issues.

The M.Sc. provides the necessary skills, knowledge, and competencies to enable students to critically evaluate risk posed by the full range of occupational and environmental health hazards, or stressors, which have impacts on human health and well-being. Courses will be delivered by academic staff with wide practical experience as well as active research interests.

The course is conducted using a practically-based teaching and learning processes including lectures, workshops, group work, case studies, practical assignments, site visits, and student centered learning. This ensures graduates to gain experience on the challenge of current problem-based research and state of the art methods.

This program offers several specialized subjects in three fields; occupational health, ergonomics, and safety and environmental health. It will be conducted in a semester system with 36 credits in total. For the first two semesters, students focus on core compulsory courses and scientific topics related to their selected fields of study. Elective courses complement the core courses and their interested research topics.

### Program Learning Outcomes

PLO 1: Apply knowledge of occupational health and environmental health to predict, assess, control, and manage problems.

PLO 2: Able to use techniques and tools to calculate, analyze, and solve occupational and environmental health problems correctly.

PLO 3: Able to apply information technology to develop research appropriately.

PLO 4: Demonstrate leadership and work in a multicultural team, trendy with changes in global society, and working with multidisciplinary professionals.

PLO 5: Comply with the ethics and code of conduct of occupational and environmental health professions.

### **Occupational and Environmental Health Careers**

What are the job options with an MSc in Occupational and Environmental Health degree?

- A lecturer in Occupational and Environmental Health
- Researcher/ Academic/ Expert profession / Innovator in Occupational and Environmental Health, WHO, Ministry of State
- Analysis consultant of Occupational and Environmental Health

### **6. Objectives:**

The M.Sc. (Occupational and Environmental Health) provides graduates with:

- 1) developing technical competence necessary to successful academic and professional work;
- 2) acquiring and integrating knowledge and skills from a variety of occupational and environmental health perspectives in order to become effective problem solvers, innovators, and decision makers; and 3) mastering the knowledge and practice in occupational and environmental health through the process of research and field practice.

## 7. Course Synopsis and Methodology:

### 7.1 Study plan

<b>FRIST YEAR</b>	
<b>Plan A (Thesis Track)</b>	
<b>First semester</b>	
OE601 Statistics and Research Methodology	3 credits
OE611 Occupational and Environmental Epidemiology	3 credits
OE631 Occupational and Environmental Health	3 credits
OE661 Occupational and Environmental Health Seminar	(non-credit) 1 credit
OE6xx Compulsory in concentration	3 credits
<b>Total</b>	<b>13 Credits</b>
<b>Second semester</b>	
OE6xx Compulsory in concentration	3 credits
OE6xx Compulsory in concentration	3 credits
OE6xx Elective	3 credits
OE6xx Elective	3 credits
OE800 Thesis	3 credits
<b>Total</b>	<b>15 Credits</b>
<b>SECOND YEAR</b>	
<b>First semester</b>	
OE800 Thesis	6 credits
<b>Total</b>	<b>6 credits</b>
<b>Second semester</b>	
OE800 Thesis	3 credits
<b>Total</b>	<b>3 credits</b>

**Plan A (Thesis Track)**

**Plan for study MSC-OEH Program: for TICA Students AY 2025**

		Activity	Distribution of Thesis Credits		progress to earn credits Thesis OE800	Remark	
			Term	Achieved Credits			
Aug – Dec 2025	Semester 1/2025	- Complete Compulsory core course and Compulsory in concentration - Passed English Proficiency test	Term - 1				
Jan – May 2026	Semester 2/2025	- Complete Compulsory in concentration, elective courses and develop concept paper					
		1. Approved thesis concept paper	Term - 2	1	3	1. Students develop manuscript chapters 1-3	
		2. Thesis proposal developed		2			
Aug – Dec 2027	Semester 1/2026	<b>Thesis Proposal examination</b> 3. Pass thesis proposal examination, including turn-it-in report & proposal submitted for ethical approval (If applicable)	Term - 3	2	5	1. Advisor supervise, plan a date for examination and committee 2. Students must pass the Thesis Proposal examination by Oct 2027.	
		4. Prepared the data collection process		1			9
		5. Completed data collection		1			
		6. Completed data analysis	2	3. Advisor supervises ethics process and completes data collection, and			

						analysis by Dec 2027.
Jan – May 2027	Semester 2/2026	<b>Thesis defense examination</b> 7. Complete the (draft) thesis report, including turn-it-in report.	Term - 4	1	<b>10</b>	1. Advisor supervises, plan a date for examination and committee 2. Students provide and revise manuscript chapters 4-5 3. Students must pass the Thesis Defense examination by May 2027.
		8. Pass thesis finale examination		1	<b>11</b>	
		9. Submitted following report & documents: • Plan A thesis: ○ Submitted final report in TU format ○ Submitted publication international journal form or acceptance letter (Journal)		1	<b>12</b>	
		Total study credits obtained		<b>12</b>	<b>12</b>	If student complete all criteria, they can be graduation

**Note:** the criteria for international journals according to the criteria set in the Announcement of the Office of the Higher Education Commission on Dissemination of Academic Papers such as

- ERIC, MathSciNet, Pubmed, Scopus,
- Web of Science ( in specific SCIE, SSCI, and AHCI), JSTOR and Project Muse.

## 7.2 Course Content:

### *a. Pre-program workshop*

Although the pre-program workshop is considered as a non-credit co-curricular learning experience, all enrolled students are expected to participate prior to registration in the 1<sup>st</sup> semester of the academic year.

***b. Core compulsory courses***

Students must complete a total of 9 credits and Occupational and Environmental Health Seminar (credit not counted) of the following Occupational and Environmental Health core courses:

OE 611: Occupational and Environmental Epidemiology	3 (3-0-9) Credits
OE 601: Statistics and Research Methodology	3 (3-0-9) Credits
OE 631: Occupational and Environmental Health	3 (3-0-9) Credits

**Compulsory course (credit not counted)**

OE 661: Occupational and Environmental Health Seminar	1 (0-2-4) Credits
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***c. Compulsory in field courses***

Students must complete a total of 9 credits of the following compulsory courses:

**Concentration on Occupational Health**

OE 621: Occupational and Environmental Toxicology	3 (3-0-9) Credits
OE 632: Occupational and Environmental Sampling and Analysis	3 (2-3-7) Credits
OE 633: Workplace Exposure Assessment and Control	3 (3-0-9) Credits

**Concentration on Environmental Health**

OE 621: Occupational and Environmental Toxicology	3 (3-0-9) Credits
OE 632: Occupational and Environmental Sampling and Analysis	3 (2-3-7) Credits
OE 651 Environmental Health Technology	3 (3-0-9) Credits

***d. Elective courses***

Plan-A: Students opting for Plan-A must select at least 6 credits of coursework from either minor concentration courses or the following set of free electives courses.

OE 602: Advanced Statistics for Occupational and Environmental Health Research	3 (3-0-9) Credits
OE 612: Molecular Epidemiology	3 (3-0-9) Credits
OE 634: Risk Assessment and Management	3 (3-0-9) Credits
OE 635: Air Pollution and Control	3 (3-0-9) Credits
OE 636: Indoor Air Quality and Control	3 (3-0-9) Credits
OE 641: Safety Engineering	3 (3-0-9) Credits

OE 642: Safety, Health and Environmental Management	3 (3-0-9) Credits
OE 643: Human Factors and Ergonomics	3 (3-0-9) Credits
OE 644: Task Analysis and Design	3 (3-0-9) Credits
OE 652: Environmental and Health Impact Assessment	3 (3-0-9) Credits
OE 653: Waste Management	3 (3-0-9) Credits
OE 654: Water and Waste Water management	3 (3-0-9) Credits
OE 655: Disaster Management	3 (3-0-9) Credits

Thesis (Plan-A)

OE 800: Thesis 12 Credits

### **8. Graduation Conditions:**

8.1 Complete all coursework with an overall cumulative grade point average not lower than 3.00 and fulfill all the requirements in the curriculum.

8.2 Pass English proficiency test as required by the Programs as well as University.

All master degree students must have:

- a TOEFL Paper-based score with a minimum of 550; or
- a TOEFL Internet-based score with a minimum of 79; or
- an IELTS Academic module score with a minimum of 6.5; or
- a TU-GET (Thammasat University General English Test) Paper-based score with a minimum of 550 score; or
- a TU-GET (Thammasat University General English Test) Computer-based score with a minimum of 79 score

8.3 Pass the thesis defense, and submit the final thesis following the University's template.

8.4 Have on manuscript form the thesis accepted for publication in a recognized international journal according to the criteria set in Announcement of Office of the Higher Education Commission on Dissemination of Academic Paper, or a full paper presented at an international conference and published in the conference proceedings.

### **9. Applicant Qualifications:**

Master of Science in Occupational and Environmental Health International Program

9.1 applicants who hold a B.Sc. or equivalent fields and they must have taken at least 2 of the following courses: Chemistry and Analytical Chemistry, Biology, Industrial

Hygiene, Occupational Health and Safety, Environmental Health and Toxicology. Applicants must also have taken Statistic during the Bachelor programs.

9.2 Have a minimum grade point average of 2.75

9.3 Have a proven minimum of two years professional experience in Occupational Health and

Safety or Environmental Health.

9.4 Admission Criteria for International Programs.

English competence standards and English competence assessment criteria of master degree students.

the result is not being older than 2 years at the date of application.

All master degree students must have:

- Minimum TOEFL score of 500 (paper based),
- TOEFL score of 61 (computer-based),
- or IELTS not less than 6.0
- or TU-GET score paper-based) not less than 500
- or score of 61TU-GET computer-based)

- For all non-native speakers, proven English language proficiency is a precondition for program enrolment.

9.5 Having a research proposal or full concept paper

\*\*\* If applicants are not submitting a concept paper the program disqualification in any case.

## **10. Document Required:**

10.1 Full Curriculum Vitae and Not less than 2 years of experience in Occupational Health and Safety or Environmental Health.

10.2 Copy of degree certificates (English official certificate)

10.3 Copy of transcript Bachelor degree GPA not less than 2.75 (English official certificate)

10.4 English competence standards and English competence assessment criteria of master degree students. the result is not being older than 2 years at the date of application.

All master degree students must have:

- a TOEFL Paper-based score with a minimum of 550; or
- a TOEFL Internet-based score with a minimum of 79; or
- an IELTS Academic module score with a minimum of 6.5; or



- a TU-GET (Thammasat University General English Test) Paper-based score with a minimum of 550 score; or

- a TU-GET (Thammasat University General English Test) Computer-based score with a minimum of 79 score

10.5 Having a research proposal or full concept paper ready to present as one essential support

document in once application (Concept paper the title must be related in the field of Occupational and Environmental Health, education background, and experiences of their work that candidates aim to develop a thesis in the program.)

\*\*\* If applicants are not submitting a concept paper the program disqualification in any case.

10.6 Recommendation Letter 1 referee

10.7 Copy identification card or copy passport 1 copy

10.8 A photograph straight face files as .jpg/jpeg/png, size not more than 2 MB, blue or white background.

10.9 A Medical certificate shows is not an obstacle to education. (English official certificate, the certificate is not older than the valid 1 month).

10.10 Income documents that show candidates can be expense self-reliant during study overseas such as bank statements, and salary slips of 12 months approximately 80,000 - 100,000 THB.

## **11. Contact:**

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11.2 Coordinators

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