

Course Detail

Master of Science Program in Environmental, Safety Technology and Health

Course Title:	Master of Science Program in Environmental, Safety Technology and Health (International Program)
Master Degree:	M.Sc. (Environmental, Safety Technology and Health)
Academic Institution:	School of Public Health, Walailak University
Duration:	2 years (August 2020 - July 2022)

Background and Rationale

Disruptive change in social and economic development in the last decade has directly led to the impact on the environment, safety and human health. According to the World Health Organization, an estimated 12.6 million people died as a result of living or working in an unhealthy environment in 2012 – nearly 1 in 4 of total global deaths. Environmental risk factors, such as air, water and soil pollution, chemical exposures, climate change, and ultraviolet radiation, contribute to more than 100 diseases and injuries. In addition, the effect of global environmental change, for instance, climate change, disaster, continuously results in several social, economic and health impacts. Obviously, several countries worldwide (especially developing countries) have been adversely affected by these problems. However, the number of specialists in these issues in those countries is quite limited.

This multidisciplinary program “Environmental, Safety technology and Health” (International Programs) aims to integrate knowledge from three inter-related aspects (environment, safety, health).to solve the complex problems of environment, occupational health and safety that consequently relate to the health problem. The main objective of this program is directly in line with the United Nations sustainable development goals (SDGs) especially in SDGs no. 3 (Good health and well-being) 6 (Clean water and sanitation) 7 (Affordable and clean energy) 9 (Industry, Innovation) 11 (Sustainable cities and communities) 12 (Responsible consumption and production) 13 (Climate action) 14 (Life below water) and 15 (Life on land). The teaching and learning philosophy of this program is based on United Kingdom Professional Standards Framework (UKPSF), which focuses on various active learning methods, effective formative assessment. Finally, the program has several international collaborations, for example, Hokkaido University, Kyoto University, Seoul National University, University Putra Malaysia, Chung Yuan Christian University, which is a benefit for conducting student’s dissertation.

Objectives

To produce high skilled specialist who has academic potential in the integrated discipline of environment, safety technology, health as well as critical, analytical and communication skills with a professional orientation

Course Synopsis and Methodology

Study plan: Plan A1 (Research Plan or Thesis Only) consists of a total of 45 credits of thesis

Compulsory Coursers

ESH61-950* Seminar in Environmental, Safety Technology and Health I	2 Credits
ESH61-951* Seminar in Environmental, Safety Technology and Health II	2 Credits

Thesis

ESH61-920 Thesis	45 Credit
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* *Non-credit courses*

The student may need to enroll in some non-credit elective courses (based on the suggestion of a supervisor) to fulfil their academic skills before conducting a thesis.

1. Regular master's study program

Total credit required 45 credit (trimester)

Year	Semester 1	Semester 2	Semester 3
1	ESH61-920 Thesis 5 credit	ESH61-950* Seminar in Environmental, Safety Technology and Health Seminar I 8 credit	ESH61-951* Seminar in Environmental, Safety Technology and Health Seminar II Thesis 8 credit
	Total 5 credit	Total 8 credit	Total 8 credit
2	ESH61-920 Thesis 8 credit	ESH61-920 Thesis 9 credit	ESH61-920 Thesis 7 credit
	Total 8 credit	Total 9 credit	Total 7 credit

* Non-credit courses

2. Fast-track master's study program)

Total credit required 45 credit (trimester)

Year	Semester 1			Semester 2			Semester 3		
1	ESH61-950*	Seminar in Environmental, Safety Technology and Health Seminar I	2(0-6-3)	ESH61-951*	Seminar in Environmental, Safety Technology and Health Seminar II	2(0-6-3)	ESH61-920	Thesis	15 credit
	ESH61-920	Thesis	15 credit	ESH61-920	Thesis	15 credit			
	Total 15 credit			Total 15 credit			Total 15 credit		

* Non-credit courses

Thesis Roadmap

Semester	Target
1	Approval of thesis title & Advisor appointment
2	Proposal development and defend
3	- Human ethic approval (if needed) - 40% Thesis progress
4	- 70% Thesis progress - Preparation for manuscript
5	- Complete thesis research work - Present and publish manuscript
6	Thesis defense and finalize thesis book

Course Content/Study Topic**List of courses (course description in appendix)****1. Thesis****ESH61-920 Thesis****45 credit**

2. Remedial courses

Remedial courses are non-credit and course grades will not be included in GPA calculation. Students without the background in areas specified by environmental, safety technology and health committee can be requested by the committee to enroll in remedial courses. Numerous remedial courses (non-credit) are available in various subspecialty areas of environmental, safety technology and health.

ESH61-950*	Seminar in Environmental, Safety Technology and Health I	2(0-6-3)
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Remark* Non-credit course

ESH61-951*	Seminar in Environmental, Safety Technology and Health II	2(0-6-3)
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Remark* Non-credit course

ESH61-600	Statistics and Research Methodology	3(2-3-6)
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ESH61-601	Environmental Technology Innovation	3(3-0-6)
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ESH61-602	Advanced Safety Technology	3(3-0-6)
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ESH61-603	Health Impact Assessment	3(3-0-6)
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- Environmental Technology

ESH61-610	Air Pollution Control Technology	3(3-0-6)
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ESH61-611	Solid Waste Management and Energy Recovery	3(3-0-6)
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ESH61-612	Innovative Technologies for Hazardous Waste Treatment	3(3-0-6)
ESH61-613	Water and Wastewater Treatment for Industry	3(3-0-6)
ESH61-614	Sustainable Industrial Management	3(3-0-6)
ESH61-615	Greenhouse Gas Mitigation Technology	3(3-0-6)
ESH61-616	Renewable Energy Technologies	3(3-0-6)
ESH61-617	Environmental Pollution Monitoring	3(2-3-6)
<u>- Safety Technology</u>		
ESH61-621	Risk Assessment and Management Technique	3(3-0-6)
ESH61-622	Fire prevention Technology	3(3-0-6)
ESH61-623	Advanced Accident Prevention and Control	3(3-0-6)
ESH61-624	Process Safety Management and Major Hazards	3(3-0-6)
ESH61-625	Transportation Safety	3(3-0-6)
ESH61-626	Construction Safety	3(3-0-6)

-Environmental Health and Occupational Health

ESH61-630	Applied Safety and Environmental System Standards and Auditing	2(2-0-4)
ESH61-631	Information Technology in Environment, Safety and Health	2(2-0-4)
ESH61-632	Industrial Hygiene Technology	3(3-0-6)
ESH61-633	Applied Toxicology	3(3-0-6)
ESH61-634	Human factors and Applied Ergonomic	3(3-0-6)
ESH61-635	Climate Change and Health Impact	3(3-0-6)
ESH61-636	Environmental and Occupational Health Issues at Different Age	3(3-0-6)
ESH61-637	Disaster and Emergency Management	3(3-0-6)
ESH61-638	Environmental Diseases	3(3-0-6)
ESH61-639	Health Sciences and Technology	3(3-0-6)
ESH61-640	Core Biological Concepts of Health Practice	3(3-0-6)

Graduation conditions

Graduation conditions include;

- Pass all compulsory courses (mentioned in section 7) and collect 45 credits of thesis

- Publish his/her thesis-related work at one full paper proceeding in the peer-reviewed international conference.
- In case that the program accepts students, who has English proficiency test lower than mentioned in section 9, to study. Those students must pass the English proficiency test before graduation

Application Qualifications

1. The applicant must hold a Bachelor degree in the Sciences, Engineering, Technology, Health Science in the field of Health Science, Environmental Health, Occupational Health and Safety, Public Health, Environmental Science, Environmental Technology, Environmental Engineering, Safety Engineering or other related fields with the least final GPAX of 2.75 or the applicant have at least 5 years of work experience related to program. In case the applicant did not graduate in mentioned fields, the qualification of an applicant will be considered and approved by the committee of the program.

2. Applicant should pass standard English proficiency test standard TOFEL-PBT 450 score, TOEFL-CBT 153 score, TOEFL-IBT 45 score, IELTS 4.5, CU-TEP 57 score, CEFT B1 level

(Exemption: An applicant who is a native English-speaking student, for example, from Australia, Canada, New Zealand, United Kingdom, or USA can be exempted from the above English proficiency requirements)

3. The applicant should present a tentative interest research topic and concept paper. For those who would like to apply in a fast track system (1-year program), a full proposal must be submitted. It is recommended that the applicants may consult with their potential supervisor on the possible thesis topic before applying.

Document Required

1. Transcripts (if incompletes, must be submitted a certification letter)
2. Result of the English proficiency test (Remark: The score must not be older than two years)
3. ID card or copy of passport (Bio page)
4. Letters of recommendations
5. Concept paper (max. 3 pages) or a tentative full proposal for an applicant in a fast track system
6. One recent photograph of 1-inch size

Contacts:

Lecturer responsible programs:

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***Please remind that the application will complete when TICA receive the hard copy of the application form and other related documents through the Royal Thai Embassy/Permanent Mission of Thailand to the United Nations/Royal Thai Consulate – General accredited to eligible/territories.