

Course Detail
Master of Science (Environmental Science)

Course Title:	Master of Science (Environmental Science)
Master Degree:	M.S. (Environmental Science)
Academic Institution:	Faculty of Science, Chiang Mai University
Duration:	2 years (June 2020 – May 2022)

Background and Rational**Environmental Science program at CMU**

It is well recognized that rapid economic development brings with it serious environmental problems such as deforestation, soil erosion, loss of biodiversity, pollution and climatic change. In most developing countries in Asia, environmental problems are arising faster than they did during the industrial revolution in the West. These problems often go undetected until it is too late to solve them.

The Environmental Science (ES) program provides students with the basic tools and concepts of environmental monitoring and emphasizes a multidisciplinary approach to the assessment, analysis and solving of environment problems in developing countries. Students who successfully complete the program will be competent in such activities as pollution monitoring, land use planning, ecosystem rehabilitation and the preparation of environmental impact assessments for development projects.

Lecturers and Staff

Lecturers are mainly from 3 departments (Chemistry, Biology and Geology) of Faculty of Science, Chiang Mai University and some supports come from Department of Environmental Engineering, Faculty of Engineering and The Institute of Health Science Research as well as Faculty of Medicine.

Objectives

To develop the knowledge and technology needed to solve emerging pollution problems and to plan for their prevention.

1. To carry out research to determine the fate of pollutants in ecosystems and to determine the risk of their detrimental effects on human health and agriculture.
2. To train students in surveying and monitoring techniques to determine the original condition of ecosystems and to enable rapid assessments to be made for hazard prevention.
3. To promote research to encourage the proper use of natural resources that minimize waste and hazards to health and the environment.

Course Synopsis and Methodology

This program requires the student to take courses not less than 21 credits plus 15 credits for thesis. To At least 1 master's thesis work or a part of master's thesis work must be published or at least accepted to publish in international journal listed in ACI, Scopus, ISI Web of Science, IEEE, PubMed database or as a full paper in an international academic conference with proceedings.

Study Plan

1st year

1st semester		Credits	2nd semester		Credits
213706	Biomonitoring and Ecosystem Management	3	213708	Experimental Design and Environmental Data Analysis	3
213707	Environmental	3		Elective course	3
	Elective course	3		Elective course	2
	Elective course	2		ES Seminar	
	ES Seminar			Thesis Proposal	
	Total	11		Total	8

2nd year

1st semester		Credits	2nd semester		Credits
213791	Seminar in Environmental Science 1	1	213792	Seminar in Environmental Science 2	1
213799	Master's Thesis	9	213799	Master's Thesis	6
	Study tour				
	Total	10		Total	7

Course Content/Study Topic

A.	Coursework	a minimum of	21	credits
	1.1 Field of Specialization	a minimum of	18	credits
	1.1.1 Required courses		11	credits
	213706	Biomonitoring and Ecosystem Management	3	credits
	213707	Environmental Analysis	3	credits
	213708	Experimental Design and Environmental Data	3	credits
	213791	Seminar in Environmental Science 1	1	credit
	213792	Seminar in Environmental Science 2	1	credit
	1.1.2 Elective courses	a minimum of	7	credits

202770	Tropical Plant Ecology	3	credits
202773	Limnology	3	credits
202873	Wildlife Conservation	3	credits
205808	Contaminant Hydrogeology	4	credits
213703	Environmental Science Concepts	3	credits
213711	Environmental Impact Assessment	3	credits
213712	Standard and Regulations in Environmental	1	credit
213713	Environmental Modeling	3	credits
213714	Environmental Risk Assessment	2	credits
213715	Health Impact Assessment	2	credits
213716	Environmental Microbiology	3	credits
213717	Air Quality Monitoring and Assessment	3	credits
213718	Fate and Transport of Pollutants in	3	credits
213719	Environmental Organic Chemistry	3	credits
213720	Soil and Groundwater Remediation	3	credits
213763	Integrated Waste Management Technology	3	credits
213769	Selected Topics in Environmental Science 1	1	credit
213779	Selected Topics in Environmental Science 2	2	credits
213789	Selected Topics in Environmental Science 3	3	credits
1.2	Other courses (if any)	a maximum of	3 credits

Student may enroll in graduate courses upon approval of graduate program administrative committee.

B. Thesis

213799	Master's Thesis	15	credits
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Graduation Conditions

At least 1 publication or acceptance to publish in an international journal listed in ISI, Scopus, IEEE, PubMed or Web of Science databases.

Applicants Qualifications

Applicants should have a bachelor degree in biology, chemistry, geological sciences, geography, agriculture, environmental science, environmental engineering or related fields with the least final GPA of 2.5. Other applicants may be admitted on conditions that they receive approval from the Environmental Science Program Committee.

Document Required

1. Certified copy of transcript of record for Bachelor degree (in English)
2. Photocopy of the National ID card or passport.
3. Two letters of recommendations from faculty member of the home institute or Employer.
4. English language certificate (TOEFL, IELTS or equivalent test result), if available

Contact

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***The application procedure will complete when TICA has received 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 countries/ territories.