

PhD in Industrial Toxicology and Risk Assessment, program curriculum (English program)

Total curriculum credits

Program 1.1 An applicant holding a master degree	48 credits
Duration: 3 years or less than 6 years	
Program 1.2 An applicant holding a bachelor degree	73 credits
Duration: 4 years or less than 8 years	

Curriculum structure	Program 1.1	Program 2.2
Coursework credit	-	25
Required courses	-	17
Elective courses	-	8
Thesis credit	<u>48</u>	<u>48</u>
Total curriculum credit	<u>48</u>	<u>73</u>

Courses offered

Foundation courses

For an applicant who does not hold a bachelor degree in Environmental Science must take below foundation courses and complete them for S or U grading or under the judgment of the curriculum board.

2308500 Applied Environmental Toxicology	3(3-0-9)
2308502 Environmental and Community Impact Assessment	3(3-0-9)
2308508 Detection of Industrial Pollutants and Monitoring to Community Effects	3(3-0-9)

Program 1.1

Require courses (grading for S/U and no credit)

2308894 Doctoral Dissertation Seminar	S/U
2308897 Qualifying Examination	S/U

Thesis

2308828 Dissertation	48
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Note: 1) If an applicant does not have sufficient necessary knowledge regarding the regulation of the Thai Council of Science and Technology Professional in practice of registered profession of science and technology in an area of environmental impact assessment and pollution control 2013, the curriculum board may arrange foundation courses or additional academic activities for no credit.

2) Every student must take 2308894 Doctoral Dissertation Seminar every semester till graduation and 2308897 Qualifying Examination regarding the regulation of the graduate school.

Program 2.2

Required courses 17 credits

2308520 Applied Toxicology for Industrial Environment	3(3-0-9)
2308521 Applied Ecotoxicology for Industry	2(2-0-6)
2308522 Risk Assessment for Industrial Environment	3(3-0-9)
2308601 Research Methodology	2(2-0-6)
2308602 Analysis of Industrial Toxic Agents	1(0-3-0)
2308701 Seminar I	S/U
2308702 Seminar II	S/U
2308894 Doctoral Dissertation Seminar	S/U
2308897 Qualifying Examination	S/U

Note: every student in program 2.2, once completing 2308701 Seminar I and 2308702 Seminar 2 must take 2308894 Doctoral Dissertation Seminar every semester till graduation and 2308897 Qualifying Examination regarding the regulation of the graduate school.

Required courses by choosing 2 of 3 courses below

2308504 Environmental Sanitation	3(3-0-9)
2308506 Essential Epidemiology for Environmental Scientists	3(3-0-9)
2308509 Toxicological Hazards in Industrial Environment	3(3-0-9)

Elective courses 8 credits

2308501 Exposure Evaluation and Control in Work Environment	3(3-0-9)
2308503 Current Issues in Environmental Management	3(3-0-9)
2308505 Social Impact Assessment for Environmental Scientists	3(2-3-4)
2308507 Journal Club in Chemical Safety and Toxicology	1(1-0-3)
2308510 Air Pollution Management	3(3-0-9)
2308511 Noise and Vibration Control	3(3-0-9)
2308512 Wastewater Research and Innovation	3(3-0-9)
2308513 Advance Solid Waste Management	3(3-0-9)
2308514 Hazardous Waste Management	3(3-0-9)
2308523 Aquatic Toxicology and Risk Assessment	3(3-0-9)
2308526 Risk Communication and Perception	3(2-3-4)
2308527 Advanced Industrial Pollutant Toxic Impact Assessment	2(2-0-6)

2308528 Environmental Modelling and Application	3(3-0-9)
2308558 Applied Biostatistics for occupational Health, Safety and Environment	3(2-2-8)
2308560 Hazard and Emergency Management in Workplace	3(3-0-9)
2308603 Special Topics in Industrial Toxicology	2(2-0-6)

In addition to the above courses, students may take other graduate courses of the Department of Environmental Science with the approval of the curriculum board.

Thesis 48 credits

2308828 Dissertation	48
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Study plan

Program 1.1

Year 1, first semester **credits**

2308894 Doctoral Dissertation Seminar	S/U
2308828 Dissertation	3
Total	3

Year 1, second semester

2308894 Doctoral Dissertation Seminar	S/U
2308828 Dissertation	9
Total	9

Year 2, first semester

2308894 Doctoral Dissertation Seminar	S/U
2308828 Dissertation	9
Total	9

Year 2, second semester

2308894 Doctoral Dissertation Seminar	S/U
2308897 Qualifying Examination	S/U
2308828 Dissertation	9
Total	9

Year 3, first semester

2308894 Doctoral Dissertation Seminar	S/U
2308828 Dissertation	9
Total	9

Year 3, second semester

2308894 Doctoral Dissertation Seminar	S/U
2308828 Dissertation	9

Total	<u>9</u>
Total credits of the program 1.1	<u>48</u>
 Program 2.2	
Year 1, first semester	credits
2308500 Applied Environmental Toxicology ¹	S/U
2308502 Environmental and Community Impact Assessment ¹	S/U
2308508 Detection of Industrial Pollutants and Monitoring to Community Effects ¹	S/U
2308520 Applied Toxicology for Industrial Environment	3
2308701 Seminar 1	S/U
2308xxx Required course	3
Total	6
Year 1, second semester	
2308521 Applied Ecotoxicology for Industry	2
2308522 Risk Assessment for Industrial Environment	3
2308601 Research Methodology	2
2308602 Analysis of Industrial Toxic Agents	1
2308702 Seminar 2	S/U
2308xxx Required course	3
2308xxx Elective course	3
Total	14
Year 2, first semester	
2308894 Doctoral Dissertation Seminar	S/U
2308xxx Elective course	5
2308828 Dissertation	3
Total	8
Year 2, second semester	
2308894 Doctoral Dissertation Seminar	S/U
2308897 Qualifying Examination	S/U
2308828 Dissertation	9
Total	9
Year 3, first semester	
2308894 Doctoral Dissertation Seminar	S/U
2308828 Dissertation	9
Total	9

Year 3, second semester	
2308894 Doctoral Dissertation Seminar	S/U
2308828 Dissertation	9
Total	<u>9</u>
Year 4, first semester	
2308894 Doctoral Dissertation Seminar	S/U
2308828 Dissertation	9
Total	9
Year 4, second semester	
2308894 Doctoral Dissertation Seminar	S/U
2308828 Dissertation	9
Total	9
Total credits of the program	<u>73</u>

¹ Foundation courses for students who did not hold a degree of MSc in Industrial Toxicology and Risk Assessment and a degree of BSc in Environmental Science or do not have sufficient essential knowledge judged by the curriculum board. Grading of these courses is S or U.