

**MINISTRY OF EDUCATION AND TRAINING
UNIVERSITY OF TECHNOLOGY AND EDUCATION**

**UNDERGRADUATE DEGREE PROGRAM
(Applied since 2013)**

TRAINING PROGRAM	ENVIRONMENTAL ENGINEERING TECHNOLOGY
PROGRAM	ENVIRONMENTAL ENGINEERING TECHNOLOGY
PROGRAM CODE	52510406
TRAINING DEGREE	BACHELOR OF ENGINEERING
TYPE OF TRAINING	OFFICIAL

Issued base on decision number :
of Director of HCMUTE, date :

Ho Chi Minh City, 2014

UNDERGRADUTE DEGREE PROGRAM

Name of program: ENVIRONMENTAL ENGINEERING TECHNOLOGY

Training degree Bachelor of Engineering

Training program: ENVIRONMENTAL ENGINEERING TECHNOLOGY

Type of training: OFFICIAL

(Issued base on decision number : of Director of HCMUTE, date :)

I. Training time: 4 years

II. Candidates: High school graduated

III. Evaluate, Training process, graduate conditions

- **Grading scale:** 10
- **Training process:** Base on regulation issued by decision no.43/2007/GDDT
- **Gradute conditions:**
- *General conditions:* Base on regulation issued by decision no.43/2007/GDDT
Specialized conditions : None

IV. Programme objectives and expected learning outcome

Mission

Training engineers in Environmental Technology in order to have:

Political kind, moral, people-serving duty, and health; Basic and professional knowledge to identify, analyze, solve and propose solutions; Capability to design, construct and manage in environmental industry; Communication skills and teamwork with appropriate professional attitude. So that they can meet the requirements of the industry development and nation construction and protection; or they can work in industrial zones, waste treatment plants, environmental monitoring stations, environmental consulting companies, universities, research institutes and government agencies.

Programme objectives:

PO1. Graduates will have utilized a foundation in engineering and science to achieve a successful career in the environmental engineering technology field or a professional field consistent with their career goals.

PO2. Graduates will have become effective leaders and team members to solve the realistic challenges of environment – economic – society.

PO3. Graduates will have participated in continuing education or professional development activities and pursued a graduate degree.

Expected learning outcomes

ELO1. Apply science, natural and society knowledge in engineering.

ELO2. Apply core fundamental knowledge in the field of environmental engineering technology.

ELO3. Apply specialized knowledge in the field of environmental engineering technology.

ELO4. Identify, analyze and solve problems.

ELO5. Conduct experiments, analyze and interpret data.

ELO6. Achieve the broad education necessary to understand and solve the realistic contradictions of environment – economic – society.

ELO7. Recognize the need and responsibility in life-long learning.

ELO8. Have professional and ethical responsibility, determine objectives and orientate career.

ELO9. Function as a leader and as a team member.

ELO10. Communicate effectively by means of documents, electronic media, presentation and negotiation.

ELO11. Use English in communication, especially in Environmental technology.

ELO12. Be aware of role and responsibility of professional career to the society.

ELO13. Conceive ideas, model system, implement and manage projects.

ELO14. Design waste management and treatment system.

ELO15. Implement and monitor waste management and treatment system.

ELO16. Operate waste management and treatment system.

V. Total number of credits : 150 credits

(not including Physical Education and GDQP-AN)

VI. Program structure:

Name	Credit		
	Total	Required	Elective
General Education	56	50	6
Politics	10	10	
Social Sciences	8	2	6
Foreign Languages	9	9	
Science and Maths	23	23	
Introduction to Environmental Engineering Technology	3	3	
Informatics	3	3	
Professional Education	94	88	6
Funamental courses	28	28	
Specialized courses	36	30	6
Practice	20	20	
GraduationThesis	10	10	

VII. Program content (name and required courses structure)

VII.1.Required course

VII.1.1. General Education (56 credits)

No.	Course Code	Course Name	Credit	Note
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I		Political Education	12	
1	LLCT150105	Principles of Marxist -Lenism	5	
2	LLCT230214	Revolutionary Lines of VCP	3	
3	LLCT120314	Ho Chi Minh's Ideology	2	
4	GELA220405	General Laws	2	
II		Foreign Languages	9	
5	ENGL130137	English 1	3	
6	ENGL230237	English 2	3	
7	ENGL330337	English 3	3	
III		Introduction	3	
8	ITET 130110	Introduction to Environmental Engineering Technology	3	(2+1)
IV		Informatics	3	
9	ADPR131185	MS Access program	3	(2+1)
V		Natural Science and Maths	23	
10	MATH130101	Advanced Mathematics 1	3	
11	MATH130201	Advanced Mathematics 2	3	
12	MATH130301	Advanced Mathematics 3	3	
13	MATH130401	Applied Probability	3	
14	PHYS130102	General Physics A1	3	
15	PHYS120202	General Physics A2	2	(2+1)
	PHYS110302	Practice Physics	1	
16	GCHE 130103	General Chemistry A1	3	
17	ENSO221610	Environmental System Optimization	2	
VI		Physical Education	5	
18	PHED110513	Physical Education 1	1	
19	PHED110613	Physical Education 2	1	
20	PHED130715	Elective Physical Education 3 (<i>Student register</i>)	3	
VII		National Defense Education		
21		National Defense Education ⁽⁷⁾	165 tiết	Ministry of Education and Training

VII.1.2. Professional Education (94 credits)

VII.1.2.1. Fundamental Courses

No.	Course Code	Course Name	Credit	Note
22	EDDG230120	Technical Draw B	3	Khoa Xây dựng quản (2+1)
23	CADM230320	Basic Auto CAD	3	
24	GREN123110	General Environment	2	
25	ENEC233210	Environmental Engineering Chemistry	3	(3+2)
26	ENHE223510	Environmental Hydraulics and Hydrology	2	
27	PEET233410	Process and Equipment in Environmental Technology	3	
28	EHAH223510	Environmental Hydraulic Engineering	2	
29	ENAC233610	Environmental Analytical Chemistry	3	(3+1)
30	EIET223710	English in Environmental Technology	2	

31	ENMI233910	Environmental Microbiology	3	(3+2)
Total			28	

VII.1.2.2. Specialized Courses (For theoretical courses)

No.	Course Code	Course Name	Credit	Note
32	SPRT424010	Soil pollution and remediation techniques	2	(2+1)
33	SWMT424110	Solid Waste Management and Treatment	2	
34	ANCT434210	Air and Noise Pollution Control Techniques	3	
35	SWTR434310	Supply Water Treatment	3	
36	WWTR434410	Wastewater Treatment	3	
37	ENMA134510	Environmental Management	3	
38	WSDN424710	Water Supply and Drainage Network	2	
39	CLPR124610	Cleaner production	2	
40	HSEN125610	Health, Safety and Environment	2	
41	EIAA124810	Environmental Impact Assessment	2	
42	DSWT415010	Design project on Supply Water Treatment	1	
43	DWWT415110	Design project on Wastewater Treatment	1	
44	DAPT415210	Design project on Air Pollution Treatment	1	
45	ENMO125310	Environmental Monitoring	2	
Total			30	

VII.1.2.3. Specialized Courses (For experiment and practice courses)

No.	Course Code	Course Name	Credit	Note
47	GRPR326010	<i>Graduation Practice</i>	2	
48	PRVI326110	<i>Practical Visiting</i>	2	
50	PWSD316210	<i>Practice in Water Supply and Drainage Network</i>	1	
51	PIEM316310	<i>Practice in Environmental Monitoring</i>	1	
52	EOWS326410	<i>Experiments on Water Treatment</i>	2	
53	EOWT326510	<i>Experiments on Wastewater Treatment</i>	2	
54	EEEEC326610	<i>Experiments on Environmental Engineering Chemistry</i>	2	
55	EEAC316710	<i>Experiments on Environmental Analytical Chemistry</i>	1	
56	EAPT326910	<i>Experiments on Air Pollution Treatment</i>	2	
57	EOMI327010	<i>Experiments on Environmental Microbiology</i>	2	
58	EOSP317110	<i>Experiments on Soil pollution</i>	1	
	REES327410	<i>Environmental Research Methodology</i>	2	
Total			20	

VII.1.2.4. Graduation Thesis

No.	Course Code	Course Name	Credit	Note
59	GRTH407210	Graduation Thesis	10	
Total			10	

VII.2. Elective Courses:

VII.2.1. General Education (Social Sciences)

No.	Course Code	Course Name	Credit	Note
60	GEEC220105	General Economics	2	(Choose 6 credits)
61	IQMA220205	Introduction to Quality Management	2	
62	PRSK320705	Presentation Skill	2	
63	PLSK320605	Planning Skill	2	
64	INLO220405	Introduction to Logics	2	
65	TDTS320805	Writing Scientific and Technical Documents	2	
Total				06

VII.2.2. Professional Education (For theoretical courses)

No.	Course Code	Course Name	Credit	Note
66	GISM124910	Geographic Information System	3(2+1)	(Choose 6 credits)
67	ENPM128310	Environmental project management	2	
68	ENTO125410	Environmental Toxicology	2	
69	ENEC125510	Environmental Economics	2	
71	ENSM125810	Environmental System Modelling	2	
72	ELAP125910	Environmental Law and Policy	2	
73	IAUP125710	Industrial architecture and urban planning	2	
Total				

VIII. Curriculum planning (anticipated and applied for the main semesters: from 1st semester to 8th semester)

No.	Course Code	Course Name	Credit	Prerequisite Course Code
1st Semester				
1	LLCT150105	Principles of Marxist -Lenism	5	
2	ENGL130137	English 1	3	
3	MATH130101	Advanced Mathematics 1	3	
4	GCHE130103	General Chemistry A1	3	
5	ITET131710	Introduction to Environmental Engineering Technology	3	
6	PHED110513	Physical Education 1	1	
Total			18	
2nd Semester				
7	ENGL230237	English 2	3	
8	ADPR131185	MS Access program	3	
9	MATH130201	Advanced Mathematics 2	3	
10	PHYS120102	General Physics A1	3	
11	GREN123110	General Environment	2	

12	ENAC233610	Environmental Analytical Chemistry	3	
13	EEAC316710	<i>Experiments on Environmental Analytical Chemistry</i>	1	
14	PHED110613	Physical Education 2	1	
15	Elective	Social Sciences 1 (Choose 1 among 2 courses)	2	
	GEEC220105	General Economics	2	
	IQMA220205	Introduction to Quality Management	2	
Total			21	
3rd Semester				
16	PHYS120202	General Physics A2	2	
17	MATH130301	Advanced Mathematics 3	3	
18	ENGL330337	English 3	3	
19	EDDG230120	Technical Draw B	3	
20	EHAH223510	Environmental Hydraulic Engineering	2	
21	ENEC233210	Environmental Engineering Chemistry	3	
22	PHYS110302	Practice Physics	1	
23	EEEC326610	<i>Experiments on Environmental Engineering Chemistry</i>	2	
24	PHED130715	Physical Education 3	3	
25	Elective	Social Sciences 2 (Choose 1 among 2 courses)	2	
	PRSK320705	Presentation Skill	2	
	TDTS320805	Writing Scientific and Technical Documents	2	
Total			24	
4th Semester				
26	MATH130401	Applied Probability	3	
27	GELA220405	General Laws	2	
28	PEET233410	Process and Equipment in Environmental Technology	3	
29	ENRD227810	Environmental research methodology	2	
30	ENMI233910	Environmental Microbiology	3	
31	ENHE223510	Environmental Hydraulics and Hydrology	2	
32	ENSO221610	Environmental System Optimization	2	
34	EOEM327010	<i>Experiments on Environmental Microbiology</i>	2	
	Elective	Social Sciences 3 (Choose 1 among 2 courses)	2	
35	PLSK320605	Planning Skill (*)	2	
	INLO220405	Introduction to Logics (*)	2	

	Total		21	
5th Semester				
36	ENSO221610	Environmental System Optimization	2	
37	LLCT230214	Revolutionary Lines of VCP	3	
38	EFET233710	English in Environmental Technology	3	
39	SWMT424110	Solid Waste Management and Treatment	2	
40	ANCT434210	Air and Noise Pollution Control Techniques	3	
41	DAPT415210	Design project on Air Pollution Treatment	1	
42	EAPT326910	<i>Experiments on Air Pollution Treatment</i>	2	
43	EOSP317110	<i>Experiments on Soil pollution</i>	1	
	Elective	Professional Theoretical Course 1,2 (Choose 2 among 5 courses)	2	
	ELAP125910	Environmental Law and Policy	2	
	ENTO125410	Environmental Toxicology	2	
	ENEC125510	Environmental Economics	2	
	ENSM125810	Environmental System Modelling	2	
	Total		21	
6th Semester				
47	SWMT434110	Solid Waste Management and Treatment	3	
48	SWTR434310	Supply Water Treatment	3	
49	WSDN424710	Water Supply and Drainage Network	2	APCT424210
50	AWVI326110	<i>Awareness Visits</i>	2	
51	DSWT415010	Design project on Supply Water Treatment	1	
53	EOWS326410	<i>Experiments on Water Treatment</i>	2	
53	PWSD316210	<i>Practice in Water Supply and Drainage Network</i>	1	
54	EIAA124810	Environmental Impact Assessment	2	
	Elective	Professional Theoretical Course 1,2 (Choose 2 among 5 courses)	4	Choose course (*)
	ENPM128310	Environmental project management	2	
55	IAUP125710	Industrial architecture and urban planning	2	
56	GISM124910	Geographic Information System	3	(2+1)
	Total		21	
7th Semester				
57	WWTR434410	Wastewater Treatment	3	

58	ENMO125310	Environmental Monitoring	2	
59	LLCT120314	Ho Chi Minh's Ideology	2	
60	CLPR124610	Cleaner production	2	
	HSEN125610	Health, Safety and Environment	2	
61	<i>EOEM316310</i>	<i>Practice in Environmental Monitoring</i>	<i>1</i>	
62	<i>PWWT415110</i>	Design project on Wastewater Treatment	<i>1</i>	
63	<i>EOWT326510</i>	<i>Experiments on Wastewater Treatment</i>	<i>2</i>	
64	<i>PFGR326010</i>	<i>Graduation Practice</i>	<i>2</i>	
	Total		17	
8th Semester				
	GRTH407210	Graduate Thesis	10	
67	Total		10	