

*** Environmental Engineering (Dated September 30th, 2015)**

Total credits of the curriculum :	140 credits
- General education knowledge:	28 credits
<i>(Not including physical education, military defense education and soft skills)</i>	
- Basic courses:	6 credits
- Fundamental courses:	27 credits
- Core courses:	15 credits
+ <i>Required:</i>	<i>12 credits</i>
+ <i>Elective:</i>	<i>3/9 credits</i>
- Advanced courses:	64 credits
+ <i>Required:</i>	<i>45 credits</i>
+ <i>Elective:</i>	<i>12/60 credits</i>
+ <i>Graduation thesis/Subjects replace thesis:</i>	
	<i>7 credits</i>

Available curriculum

No.	Code	Subject	Credits	Credit hours			Prerequisite
				Lecture	Practice	Self-study	
I		General education knowledge <i>(Not including subjects 10 - 12)</i>	28				
1	PHI1004	<i>Fundamental Principles of Marxism - Leninism 1</i>	2	24	6		
2	PHI1005	<i>Fundamental Principles of Marxism - Leninism 2</i>	3	36	9		PHI1004
3	POL1001	<i>Ho Chi Minh Ideology</i>	2	20	10		PHI1005
4	HIS1002	<i>The Revolutionary Line of the Communist Party of Vietnam</i>	3	42	3		POL1001
5	INT1003	<i>Introduction to Informatics 1</i>	2	10	20		
6	INT1005	<i>Introduction to Informatics 3</i>	2	12	18		INT1003
7	FLF2101	<i>General English 1</i>	4	16	40	4	
8	FLF2102	<i>General English 2</i>	5	20	50	5	FLF2101
9	FLF2103	<i>General English 3</i>	5	20	50	5	FLF2102
10		<i>Physical Education</i>	4				
11		<i>National Defense Education</i>	8				
12		<i>Soft Skills</i>	3				
II		Basic courses	6				
13	HIS1056	<i>Fundamentals of Vietnamese Culture</i>	3	42	3		
14	GEO1050	<i>Earth and Life Sciences</i>	3	30	10	5	
III		Fundamental courses	27				
15	MAT1090	<i>Linear Algebra</i>	3	30	15		
16	MAT1091	<i>Calculus 1</i>	3	30	15		
17	MAT1092	<i>Calculus 2</i>	3	30	15		MAT1091
18	MAT1101	<i>Probability and Statistics</i>	3	27	18		MAT1091
19	PHY1100	<i>Mechanics - Thermodynamics</i>	3	30	15		MAT1091
20	PHY1103	<i>Electromagnetism - Optics</i>	3	30	15		MAT1091
21	CHE1080	<i>General chemistry</i>	3	42		3	
22	CHE1081	<i>Organic Chemistry</i>	3	42		3	CHE1080

No.	Code	Subject	Credits	Credit hours			Prerequisite
				Lecture	Practice	Self-study	
23	CHE1057	<i>Analytical Chemistry</i>	3	42		3	CHE1080
IV		Core courses	15				
IV.1		Required	12				
24	BIO1061	<i>Basic Biology</i>	3	42		3	
25	EVS2301	<i>Natural Resources</i>	3	36	9		EVS2304
26	EVS2302	<i>Fundamentals of Environmental Science</i>	3	38	7		GEO1050
27	EVS2304	<i>Principles of Soil, Water and Air Environments</i>	3	36	9		CHE1080 BIO1061 EVS2302
IV.2		Elective	3/9				
28	EVS2305	<i>Climate Change</i>	3	35	10		EVS2304
29	EVS2306	<i>Environmental Geology</i>	3	35	10		EVS2304
30	EVS2307	<i>Environmental Ecology</i>	3	42		3	EVS2301
V		Advanced courses	64				
V.1		Required	45				
31	EVS3240	<i>Environmental Microbiology</i>	3	30	15		BIO1061 EVS2302
32	EVS3241	<i>Environmental Chemistry</i>	3	40		5	EVS2304
33	EVS3242	<i>Environmental Analysis Methods</i>	3	25	15	5	CHE1057 EVS2304
34	EVS3243	<i>Fundamentals of Environmental Technology</i>	3	45			BIO1061 CHE1057 CHE1081 EVS2302
35	EVS3244	<i>Environmental Management</i>	3	42		3	EVS2302
36	EVS2039	<i>Fundamentals of Biochemical Technology</i>	2	30			CHE1080 EVS3240
37	EVS3230	<i>Environmental Health and Toxicology</i>	2	30			BIO1061 EVS2302
38	EVS3287	<i>Applied Fluid Mechanics</i>	3	45			CHE1080 MAT1091 PHY1100

No.	Code	Subject	Credits	Credit hours			Prerequisite
				Lecture	Practice	Self-study	
39	EVS3288	<i>Separation – Mass and Energy Transfer</i>	3	30	15		CHE1057 CHE1081 EVS3241
40	EVS3232	<i>Graphics and Engineering drawing</i>	2	20	10		
41	EVS2051	<i>Cleaner Production</i>	2	30			
42	EVS3233	<i>Physical and Coloidal Chemistry</i>	3	42		3	
43	EVS3247	<i>Environmental Assessment</i>	3	45			
44	EVS2095	<i>Field Study</i>	2	30			EVS2304
45	EVS4071	<i>Practical Chemistry</i>	2	5	25		CHE1057 CHE1081
46	EVS4073	<i>Practical Environmental Technology</i>	2	5	25		EVS3243
47	EVS4074	<i>Annual Essay on Environmental Technology</i>	2	10	20		EVS3243
48	EVS2044	<i>Industrial Internship</i>	2	5	25		EVS3243 EVS3247
V.2		Elective	12/ 60				
V.2.1		<i>The intensive subjects on water treatment</i>	12				
49	EVS3291	<i>Industrial Wastewater Treatment</i>	3	45			
50	EVS3292	<i>Supply Water Treatment</i>	3	30	15		
51	EVS3293	<i>Domestic Wastewater Treatment</i>	3	30	10	5	EVS3243
52	EVS3294	<i>Wastewater Treatment Calculation and Design</i>	3	30	15		EVS3243
V.2.2		<i>The intensive modules on Gas Processing</i>	12				
53	EVS3295	<i>Dust Removal Technology</i>	3	40		5	EVS2304 EVS3243 EVS3287 EVS3288

No.	Code	Subject	Credits	Credit hours			Prerequisite
				Lecture	Practice	Self-study	
54	EVS3296	<i>Toxic Exhaust Gases Treatment Technology</i>	3	40		5	EVS2304 EVS3243 EVS3287 EVS3288
55	EVS3297	<i>Exhaust Gases Treatment Calculation and Design</i>	3	30	15		EVS3243
56	EVS3298	<i>Ambient Air Pollution Control</i>	3	30	15		EVS2304 EVS3243
V.2.3		<i>The intensive modules on handling solid waste</i>	12				
57	EVS3299	<i>Hazardous Solidwaste Control and Treatment</i>	3	30	15		
58	EVS3300	<i>Organic Solidwaste Treatment</i>	3	30	10	5	EVS3243
59	EVS3301	<i>Solidwaste Colletion, Transport and Landfill</i>	3	30	15		EVS3243
60	EVS3302	<i>Treatment of Wastesludge and Polluted Sediments</i>	3	25	15	5	EVS3242 EVS3243
V.2.3		<i>The intensive modules on environmental materials</i>	12				
61	EVS3303	<i>Natural Environmental Material</i>	3	30	15		EVS2304
62	EVS3304	<i>Environmental Material Preparation</i>	3	30	15		EVS3243
63	EVS3305	<i>Environmental Material Analysis and Assessment</i>	3	25	15	5	EVS3242
64	EVS3306	<i>Applied Environmental Material</i>	3	25	15	5	EVS3241 EVS3242 EVS3243
V.2.4		<i>The intensive module on processing technology contaminated soil</i>	12				
65	EVS3256	<i>Soil pollution and Remediation</i>	3	40		5	EVS2304
66	EVS3308	<i>Polluted Soil Biological Treatment</i>	3	45			EVS2304 EVS3240
67	EVS3309	<i>New Materials in Polluted Soil Treatment</i>	3	25	15	5	EVS2304 EVS3242

No.	Code	Subject	Credits	Credit hours			Prerequisite
				Lecture	Practice	Self-study	
							EVS3243
68	EVS3310	<i>Degenerated Soil Treatment and Remediation</i>	3	40		5	EVS2304
V.3		<i>Graduation thesis/ Subjects replacing thesis</i>	7				
V.3.1		<i>Graduation thesis</i>	7				
69	EVS4085	<i>Graduation Thesis</i>	7				
V.3.2		<i>Subjects replacing thesis</i>	7				
70	EVS4079	<i>Fundamentals of Environmental Engineering and Technology</i>	3	30	15		
71	EVS4077	<i>Practical Environmental Analysis and Impact Assessment</i>	2	10	20		EVS3242
72	EVS4081	<i>Environmental Engineering Design</i>	2	5	25		
		Total	140				