I. PROGRAM OBJECTIVES AND EXPECTED LEARNING OUTCOME (ELO)

1.1. Program objectives

General objective

The training program in Environmental Engineering Technology equips learners with knowledge, skills, and self-discipline to take up positions related to technology - engineering in appropriate environmental protection. with the trend of scientific - technical, economic and social development of the country.

Specific objectives

Students after graduating from Environmental Engineering Technology:

Program objective 1 (PO1): Training technical staff for research and development of technology-environmental protection techniques for the prevention and reduction of pollution impacts of waste sources arising from development activities;

Program objective 2 (PO2): Being motivated to expand knowledge, creativity and innovation in the design of waste treatment works (solid, liquid, gas) and water supply to contribute to environmental protection;

Program objective 3 (PO3): Master the skills of planning, designing, operating the system, the ability to work independently in a diverse working environment;

1.2. Expected Learning Outcome (ELO)

Upon completion of the training program, students have the following knowledge, skills, attitute:

Content	**Expected Learning Outcome (ELO)**
General knowledge	ELO1: Apply knowledge of natural sciences, politics, society, humanities, laws and economics in the field of pollution control;
Professional knowledege	ELO2: Applying knowledge of natural sciences and principles of technology-engineering in pollution control
	ELO3: Evaluation of waste treatment technology according to sets of criteria/standards on environmental protection
	ELO4: Design waste treatment works (solid, liquid, gas) to meet technical regulations on environment and related aspects;
	ELO5: Apply critical and creative thinking based on scientific principles in proposing waste use models to protect the environment;

General skills	ELO6: Work independently and lead the team to achieve set goals;
	ELO7: Communicating effectively verbally and in multimedia with stakeholders in a diverse working environment;
Professional skills	ELO8: Performing information investigation skills for the design, testing and evaluation of the effectiveness of technology and waste treatment systems (solid, liquid, gas);
	ELO9: Using information technology and technical equipment to effectively design and evaluate technology, waste treatment systems;
	ELO10: Apply technical, managerial and economic principles applied to waste treatment project formulation;
Attitute	ELO11: Clear future orientation, passion for career and a sense of lifelong learning;
	ELO12: Show respect for organizational culture, professional ethical standards and responsibility for environmental protection;

II. CAREER ORIENTATION AFTER Graduation

Learners after graduating from Environmental Engineering Technology can work in the following positions and fields and units:

* Workplace:
  + Research staff;
  + Environmental technical staff;
  + Officer in charge of the environment;
  + Environmental consultant;
  + Staff to observe and assess environmental quality;
  + Lecturer;
  + Environmental police.
  + Start your own business
* Fields and units of work:
  + Institutes, scientific research centers in the field of environment;
  + Universities and colleges;
  + Enterprises and companies in industrial parks and export processing zones;
  + Enterprises, production and business establishments;
  + Public and private environmental monitoring center.

III. ORIENTATION FOR ADVANCED LEARNING AFTER GRADUATION

Graduates from the field of Environmental Engineering Technology can participate in domestic and abroad graduate training programs in the following majors:

+ Master program in Environmental science;
+ Master program in Environmental technology
+ Master program in Environmental engineering technology;
+ Master program in Environmental engineering;
+ Master program in Environmental management;
+ Master program in Natural Resources Management and Environment.
+ Doctor program in Environmental science;
+ Doctor program in Environmental technology
+ Doctor program in Environmental engineering;

IV. PROGRAM CONTENT (NAME AND VOLUME OF MODULES):

No	Year Code	Code	English name	Total	Theory	Practice	Previous Course	Code	Compulsory
I	**TOTAL GENERAL COURSES**			**41**	**36,5**	**4,5**			**39**
1	1	ML01020	Philosophy of Marxism and Leninism	3	3	0			x
2	1	ML01021	Political economy of Marxism and Leninism	2	2	0			x
3	2	ML01022	Socialism	2	2	0			x
4	2	MT01005	Ho Chi Minh ideology	2	2	0			x
5	3	ML01023	Vietnamese Communist Party History	2	2	0			x
6	1	SN00010	Pre English	1	1	0			-
7	1	SN00011	English 0	2	2	0			-
8	2	SN01032	English 1	3	3	0	English 0	**SN00011**	x
9	2	SN01033	English 2	3	3	0	English 1	**SN01032**	x
10	1	TH01009	General Informatics	2	1,5	0,5			x
11	1	MT01016	Basic Ecology	2	2	0			x
12	1	ML01009	Introduction to laws	2	2	0			x
13	1	MT01001	General Chemistry	2	1,5	0,5			x
14	1	MT01002	Organic Chemistry	2	1,5	0,5			x
15	2	MT01004	Analytical Chemistry	2	1,5	0,5			x
16	1	TH01011	Higher mathematics	3	3	0			x
17	1	TH01007	Probability and Statistics	3	3	0			x
18	1	CD02157	Technical Drawing on Computer	2	2	0	General Informatics	**TH01009**	x
19	1	SH01001	General Biology	2	1,5	0,5			x
20	1	TH01018	Physics	2	2	0			x
II	**TOTAL BASED MAJOR COURSES**			**29**	**30,5**	**7,5**			**23**
21	1	MT02043	General Meteorology	2	1,5	0,5			x
22	1	CD03223	Hydraulics	2	1,5	0,5			x
23	2	QL02044	Hydrology	3	2	1			x
24	2	MT02033	Basic Microbiology	2	1,5	0,5			x
25	2	MT03008	Environmental monitoring	2	2	0			x

No	Year Code	Code	English name	Total	Theory	Practice	Previous Course	Code	Compulsory
26	2	MT02003	Environmental Chemistry	2	1,5	0,5	General Chemistry	**MT01001**	x
27	2	MT02017	GIS For Environmental Studies	2	1	1			x
28	2	CN02704	Applied statistics in environmental engineering	2	1,5	0,5	Probability and Statistics	**TH01007**	x
29	2	QL02047	Pedology	2	1,5	0,5			x
30	2	MT01003	Colloid and Surface Chemistry	2	1,5	0,5			x
31	1	MT02005	Basic of production processes	2	2	0			x
32	2	ML02012	Environmental Law	2	2	0	Introduction to laws	**ML01009**	
33	2	QL02007	Soil Chemistry	3	2	1	Pedology	**QL02047**	
34	2	QL02006	Environmental Geology	2	2	0	Pedology	**QL02047**	
35	2	QL03047	Biologycal Indicators for Environment	2	2	0	General Biology	**SH01001**	
36	2	MT01010	Agroecology	2	2	0	General Biology	**MT01016**	
37	3	MT02004	Instrumental Analysis	2	1	1	Analytical Chemistry	**MT01004**	
38	2	MT02015	Environmental education and communications	2	2	0			
III	**TOTAL MAJOR COURSES**			**63**	**24,5**	**32,5**			**57**
39	2	MT03023	System analysis in Environmental Studies	2	1	1			x
40	2	MT03004	Environmental impact assessment	2	2	0			x
41	3	MT03015	Wastewater Engineering	2	2	0			x
42	3	MT03016	Air Pollution Engineering	2	2	0	Hydraulics	**CD03223**	x
43	3	MT03011	Environmental impact assessment: practice	1	0	1	Environmental impact assessment	**MT03004**	x
44	3	KT03008	Environmental Economics	2	2	0			x

No	Year Code	Code	English name	Total	Theory	Practice	Previous Course	Code	Compulsory
45	3	SN03053	Special English for Environmental science	2	1,5	0,5	English 2	**SN01033**	x
46	3	MT02002	Hazardous waste management	2	2	0	Environmental management	**MT02011**	x
47	3	MT02011	Environmental management	2	2	0			x
48	3	MT03024	Waste Audit	2	2	0			x
49	3	MT03018	Supply water engineering	2	2	0			x
50	3	MT03017	Solid waste treatment engineering	2	2	0			x
51	3	MT03058	Environmental Biotechnology	2	2	0	Basic Microbiology	**MT02033**	x
52	3	MT03010	Cleaner production	2	2	0			x
53	3	MT03074	Environmental Awareness: Practice	4	0	4	Environmental monitoring	**MT03008**	x
54	4	MT04001	Environmental engineering capstone design	16	0	16			x
55	4	MT04998	Thesis in Environmental Engineering	10	0	10	Environmental engineering capstone design	**MT04001**	x
56	3	MT03009	Environmental monitoring: practice	2	0	2	Environmental monitoring	**MT03008**	
57	2	MT02032	Soil Biology	2	2	0			
58	4	MT03021	Heath safety and environment	2	2	0			
59	4	MT03025	Biological procedure for polluted soil treatment and degenerative restoration	2	2	0			
60	3	MT03022	Climate change	2	1,5	0,5	General Meteorology	**MT02043**	
61	3	MT03019	Environmental Risk Assessment	2	2	0			
62	3	MT03020	Disposal on sludge and Sediment	2	2	0			
63	2	MT03005	Environmental toxicology	2	2	0	Environmental Chemistry	**MT02003**	

No	Year Code	Code	English name	Total	Theory	Practice	Previous Course	Code	Compulsory
64	4	MT03026	Solid Waste Treatment Design	2	2	0			
65	4	MT03027	Air Pollution Treatment Plant Design	2	2	0			
66	4	MT03028	Wastewater Treatment Plant Design	2	2	0			
67	4	MT03029	Supply Water Treatment Plant Design	2	2	0			
68	4	MT03030	Chemical residues in the environment	2	2	0			