BACHELOR IN ENVIRONMENTAL ENGINEERING TECHNOLOGY – TRAINING PROGRAM FRAMEWORK

No.	Course code	Knowledge area / Course title	Credits	Lec.	Lab.	Sem.	Proj.	Intern.	Term	Prior course	Prerequisite	
9.1		**General Education**										
9.1.1		**Social Sciences and Humanities**	13	13	0	0	0	0				
9.1.1.1		**Compulsory**										
1	LP6024	Marxist–Leninist Philosophy	3	3	0	0	0	0	1			
2	LP6025	Marxist–Leninist Political Economy	2	2	0	0	0	0	2	LP6024		
3	LP6026	Scientific Socialism	2	2	0	0	0	0	2	LP6024		
4	LP6027	History of the Communist Party of Vietnam	2	2	0	0	0	0	4			
5	LP6022	Ho Chi Minh Thought	2	2	0	0	0	0	3			
6	LP6021	Introduction to Law	2	2	0	0	0	0	4			
7	BS6046	Intercultural Communication	2	2	0	0	0	0	7			
9.1.1.2		**Electives (select 2 credits from Group 1 and 2 credits from Group 2)**	4	4	0	0	0	0				
Tc1		**Group 1**	2	2	0	0	0	0				
1	BS6047	Introduction to Scientific Research	2	2	0	0	0	0	5			
2	BM6091	Project Management	2	2	0	0	0	0	5			
3	BS6048	Labor Relations and Employment	2	2	0	0	0	0	5			
4	BS6049	Humans and the Environment	2	2	0	0	0	0	5			
5	SE6218	Introduction to Economics	2	2	0	0	0	0	5			
6	SM6186	Professional Work Practices	2	2	0	0	0	0	5			
Tc2		**Group 2**	2	2	0	0	0	0				
1	BS6050	Introduction to Music	2	2	0	0	0	0	7			
2	BS6051	Introduction to Art Studies	2	2	0	0	0	0	7			
3	BS6052	Introduction to Fine Arts	2	2	0	0	0	0	7	LP6025		
9.1.2		**Choose one of five foreign-language course sequences**	10	10	0	0	0	0				
		Chinese Language Course Sequence	10	10	0	0	0	0				
1	SL6347	Chinese Language 1	5	5	0	0	0	0	3	FL6561		
2	SL6348	Chinese Language 2	5	5	0	0	0	0	4	SL6347		

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		Korean Language Course Sequence	10	10	0	0	0	0				
1	SL6351	Korean Language 1	5	5	0	0	0	0	3	FL6564		
2	SL6352	Korean Language 2	5	5	0	0	0	0	4	SL6351		
		Japanese Language Course Sequence	10	10	0	0	0	0				
1	SL6349	Japanese Language 1	5	5	0	0	0	0	3	FL6563		
2	SL6350	Japanese Language 2	5	5	0	0	0	0	4	SL6349		
		English Language Course Sequence	10	10	0	0	0	0				
1	SL6579	English for Chemical Technology 1	5	5	0	0	0	0	3	FL6579		
2	SL6580	English for Chemical Technology 2	5	5	0	0	0	0	4	SL6580		
		German Language Course Sequence	10	10	0	0	0	0				
1	FL6582	German Language 1	5	5	0	0	0	0	3	FL6580		
2	FL6583	German Language 2	5	5	0	0	0	0	4	FL6582		
9.1.3		**Natural Sciences**	17									
9.1.3.1		**Compulsory**	12	10	2	0	0	0				
1	BS6002	Calculus	3	3	0	0	0	0	1			
2	CT6001	General Chemistry	3	2	1	0	0	0	1			
3	BS6027	General Physics	3	2	1	0	0	0	1			
4	BS6037	Linear Algebra	3	3	0	0	0	0	2			
9.1.3.2		**Elective**	5									
1	BS6032	Numerical Methods	2	2	0	0	0	0	2			
2	BS6044	Probability Theory	2	2	0	0	0	0	2			
3	BS6040	Engineering Mathematics	3	3	0	0	0	0	2			
4	CT6411	General Biology	3	2	1	0	0	0	2			
9.1.4		**Supplementary Studies**										
9.1.4.1		**Compulsory**										
1	SC6201	Digital Competence Development	3	2	1	0	0	0	2			
9.1.5		**National Defense Education**	8,5	5,0	3,5	0,0	0,0	0,0	1			
		In accordance with Circular No. 05/2020/TT-BGDDT dated 18 March 2020										

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9.1.6		**Physical Education**	3	0	3	0	0	0	1,2,3			
		In accordance with the University regulations on Physical Education (decision number/date pending in source)										
9.2		**Professional Education**	69									
9.2.1		**Field Foundations**	9	7.0	1	1.0	0	0				
9.2.1.1		**Compulsory**										
1	SM6050	Engineering Drawing	3	3.0	0	0	0	0	2			
2	SEE6164	Electrical and Electronic Engineering	3	2.0	1	0	0	0	2			
3	CT6108	Introduction to Engineering	3	2.0	0	1	0	0	1			
9.2.2		**Disciplinary Group Foundations**	9	7	2	0	0	0				
9.2.2.1		**Compulsory**										
1	CT6255	Organic Chemistry	3	2.0	1	0	0	0	4			
2	CT6256	Analytical Chemistry	3	2.0	1	0	0	0	3			
3	CT6257	Physical Chemistry	3	3.0	0	0	0	0	3			
9.2.3		**Discipline Foundations**	22									
9.2.3.1		**Compulsory**	17	8	4	0	0	1				
1	CT6375	Mass Transfer Processes and Equipment	2	2,0	0,0	0,0	0,0	0,0	4	CT6374		
2	CT6374	Mechanical Processes and Equipment	2	2,0	0,0	0,0	0,0	0,0	3	CT6001		
3	CT6344	Industrial Observation Placement	1	0,0	0,0	0,0	0,0	1	3	CT6339		
4	CT6339	Environmental Chemistry	2	2	0	0	0	0	2	CT6001		
5	CT6399	Environmental Chemistry Laboratory	1	0	1	0	0	0	2			
6	CT6435	Environmental Engineering Microbiology	3	2	1	0	0	0	3			
7	CT6364	Environmental Analysis	2	2	0	0	0	0	4	CT6339		
8	CT6378	Environmental Management	2	2	0	0	0	0	5			
9	CT6400	Environmental Analysis Laboratory	2	0	2	0	0	0	4	CT6399		
9.2.3.2		**Elective**	5	4	0	0,0	0	0,0				
1	CT6386	Physical Chemistry Laboratory	1	0,0	1,0	0,0	0,0	0,0	3	CT6001		
2	CT6277	Processes and Equipment Design Project	1	0,0	0,0	0,0	1,0	0,0	5	CT6375		
3	CT6402	Processes and Equipment Laboratory	2	0,0	2,0	0,0	0,0	0,0	4	CT6274		

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4	CT6337	Green Chemistry	2	2,0	0,0	0,0	0,0	0,0	4			
5	CT6363	Instrumental Analysis	2	2	0	0	0	0	4			
6	CT6380	Environmental Ecology	2	2	0	0	0	0	4	CT6339		
7	CT6330	Environmental Toxicology	2	2	0	0	0	0	5	CT6339		
8	CT6433	Environment and Sustainable Development	2	2	0	0	0	0	4			
9	CT6284	Fundamentals of Industrial Production Processes	2	2	0	0	0	0	4	CT6339		
9.2.4		**Specialized Courses**	29	22	5	2	0	0				
9.2.4.1		**Compulsory**	23	16	5	2	0	0				
1	CT6348	Air and Noise Pollution Control Engineering	2	2	0		0	0	5	CT6339		
2	CT6353	Water Treatment Engineering	2	2	0	0	0	0	5	CT6375, CT6256		
3	CT6261	Wastewater Treatment Engineering	3	3	0	0	0	0	5	CT6360		
4	CT6436	Environmental Impact Assessment	2	2	0	0	0	0	6	CT6378		
5	CT6382	Computer Applications in Environmental Engineering	2	2	0	0	0	0	6	CT6357		
6	CT6325	Environmental Engineering Technology Design Project	2	0	0	2	0	0	7	CT6261, CT6353		
7	CT6379	Solid and Hazardous Waste Management and Treatment	2	2	0	0	0	0	6	CT6339		
8	CT6393	Environmental Engineering Technology Laboratory 1	2	0	2	0	0	0	6	CT6261, CT6353		
9	CT6262	Environmental Monitoring	2	1	1	0	0	0	7	CT6400		
10	CT6394	Environmental Engineering Technology Laboratory 2	2	0	2	0	0	0	7	CT6348, CT6379		
11	CT6263	Materials for Environmental Treatment	2	2	0	0	0	0	7			
9.2.4.2		**Elective**	6	6	0	0	0	0				
1	CT6434	Climate Change	2	2	0	0	0	0	4		CT6339	
2	CT6361	Soil Pollution and Remediation Engineering	2	2	0	0	0	0	5	CT6339		
3	CT6364	Environmental and Resource Economics	2	2	0	0	0	0	6	CT6378		
4	CT6359	Principles of Cleaner Production	2	2	0	0	0	0	6			
5	CT6355	Environmental Law and Policy	2	2	0	0	0	0	7	CT6378		
6	CT6357	Environmental Modeling	2	2	0	0	0	0	5	BS6038		
7	CT6332	Environmental Management, Safety and Hygiene Systems	2	2	0	0	0	0	6	CT6261, CT6284		
8	CT6437	Waste Treatment System Design	2	0	0	2	0	0	7	CT6344		

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9.3		**Supplementary Studies**	2	2	0	0	0	0				
9.3.1		**Compulsory**	2	2	0	0	0	0				
1	SE6209	Innovation and Entrepreneurial Mindset	2	2	0	0	0	0	6			
9.3.2		**Electives (choose one of five foreign-language course sequences)**	10									
		Chinese Language Course Sequence										
	FL6560	**Basic Chinese 1**	5	5	0	0	0	0	1			
	FL6561	**Basic Chinese 2**	5	5	0	0	0	0	2	FL6560	FL6560	
		Korean Language Course Sequence										
	FL6564	**Basic Korean 1**	5	5	0	0	0	0	1			
	FL6565	**Basic Korean 2**	5	5	0	0	0	0	2			
		Japanese Language Course Sequence										
	FL6562	**Basic Japanese 1**	5	5	0	0	0	0	1			
	FL6563	**Basic Japanese 2**	5	5	0	0	0	0	2			
		German Language Course Sequence										
	FL6580	**Basic German 1**	5	5	0	0	0	0	1			
	FL6581	**[TRANSLATION REVIEW] Tiếng Đức cơ bản 2**	5	5	0	0	0	0	2			
		English Language Course Sequence										
	FL6578	**Basic English for Chemistry 1**	5	5	5	0	0	0	0			
	FL6579	**Basic English for Chemistry 2**	5	5	5	0	0	0	0	FL6578		
9.4		**Industrial Internship and Graduation Project/Thesis**	15									
1	CT6264	Industrial Internship	7	0	0	0	0	7	8	CT6057	CT6091	
2	CT6265	Graduation Project/Undergraduate Thesis	8	0	0	0	8	0	8	CT6264	CT6057	
		Total Credits	135									