



Ministry of Education and Training
Nong Lam University

Form: C2040.001

Version: BA2018

CREDIT BASED CURRICULUM

(Pursuant to the decision: 3434/QĐ-DHNL-DT, November -11- 2020 of President)

Credit based Training System: Formal Undergraduate (Full-time)

Faculty : Chemical Engineering Department

Discipline : Chemical Engineering and Processing

Major: Agro-Biochemical Engineering

Minimum credits: 158 Credits

Minimum GPA: 2.0

No	Module	English subjects	Credits	Total Number	Theory	Practice	Internship	Project	Thesis	Year	SM	Prior study	Prerequisite	Concurrent
1. Fundamental knowledge:														
Required subjects														
1	200101	Philosophy of marxism and Leninism	3	45	45	0	0	0	0	1	1			
2	200102	Political Economics of Marxism and Leninism	2	30	30	0	0	0	0	1	1			
3	202108	Advanced Mathematics A1	3	45	45	0	0	0	0	1	1			
4	202301	General Chemistry	3	45	45	0	0	0	0	1	1			
5	202304	General Chemistry Laboratory	1	30	0	30	0	0	0	1	1			
6	202501	Physical Education 1	1	45	0	0	45	0	0	1	1			
7	202622	General Law	2	30	30	0	0	0	0	1	1			
8	214103	General Informatics	3	60	30	30	0	0	0	1	1			
9	200103	Scientific Socialism	2	30	30	0	0	0	0	1	2			
10	200105	History of Vietnamese Communist Party	2	30	30	0	0	0	0	1	2			
11	200201	Military training (theory)	3	45	45	0	0	0	0	1	2			
12	200202	Military training (practice)	3	90	0	90	0	0	0	1	2			
13	202109	Advanced Mathematics A2	3	45	45	0	0	0	0	1	2			
14	202502	Physical Education 2	1	45	0	0	45	0	0	1	2			
15	213603	English 1	4	60	60	0	0	0	0	1	2			
16	213604	English 2	3	45	45	0	0	0	0	2	1	213603		
17	217301	General Biochemistry	2	30	30	0	0	0	0	2	1			



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18	217304	General Microbiology	2	30	30	0	0	0	0	2	1			
19	200107	Ho Chi Minh Ideology	2	30	30	0	0	0	0	4	2			
<i>Total</i>			<i>45</i>	<i>810</i>	<i>570</i>	<i>150</i>	<i>90</i>	<i>0</i>	<i>0</i>					
Elective subject - completed 0101 - accumulated at least 2 credits : 3 credits														
1	202201	General Physics 1	2	30	30	0	0	0	0	1	2			
2	202202	Physics Experiments 1	1	30	0	30	0	0	0	1	2			
3	202302	Analytical Chemistry	2	30	30	0	0	0	0	1	2	202301		
4	202305	Analytical Chemistry Laboratory	1	30	0	30	0	0	0	1	2			
<i>Total</i>			<i>6</i>	<i>120</i>	<i>60</i>	<i>60</i>	<i>0</i>	<i>0</i>	<i>0</i>					
2. Fundamental specialized knowledge:														
Required subjects														
1	217111	Physical Chemistry 1	2	30	30	0	0	0	0	2	1			
2	217112	Technical drawing	2	45	15	30	0	0	0	2	1			
3	217109	Physical Chemistry 2	3	60	30	30	0	0	0	2	2			
4	217202	Introduction to Chemical Engineering	3	45	45	0	0	0	0	2	2			
5	217209	Mechanical Separation Process	3	55	35	20	0	0	0	2	2			
6	217308	Biochemistry Technology and Application	3	60	30	30	0	0	0	2	2	217301		
7	217303	Organic Chemistry Synthesis Process	2	30	30	0	0	0	0	2	2	202301		
8	217307	General Electrical Engineering	2	38	23	15	0	0	0	2	2			
9	217110	Physical properties of material	3	60	30	30	0	0	0	3	1	217111		



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10	217227	Heat and Mass Transfer	4	75	45	30	0	0	0	3	1	217209 217111		
11	217211	Instrumentation and Process Control	2	35	25	10	0	0	0	3	1			
12	217224	Statistics and Experimental Design	3	60	30	30	0	0	0	3	1			
13	217226	Computer Application in Chemical Engineering	3	75	15	60	0	0	0	3	1			
14	217919	Laboratoy Safety	2	30	30	0	0	0	0	3	1	217302		
<i>Total</i>			<i>37</i>	<i>698</i>	<i>413</i>	<i>285</i>	<i>0</i>	<i>0</i>	<i>0</i>					
Elective subject - completed 0201 - accumulated at least 14 credits														
1	217107	Inorganic Chemistry	2	45	15	30	0	0	0	2	1			
2	217114	Basic Principles of Colloid Chemistry	2	45	15	30	0	0	0	2	1			
3	217117	Organic Chemistry	2	45	15	30	0	0	0	2	1			
4	217101	Instrumental Analytical Chemistry	3	60	30	30	0	0	0	2	2	202305 202302		
5	217108	Analytical Methods for Physio-chemical components	2	38	23	15	0	0	0	2	2	202304 202301		
6	217222	Freezing Technology and Application	2	38	23	15	0	0	0	3	1			
7	217707	Analytical Methods for Molecular Spectrometry	2	30	30	0	0	0	0	3	1			
8	217914	Marketing Basic	2	30	30	0	0	0	0	2	2			
9	217115	Start-up Basic	2	30	30	0	0	0	0	2	2			
10	217609	Quality Management for Food Plants	2	30	30	0	0	0	0	2	2			
11	217709	Green Chemistry	2	60	30	30	0	0	0	2	2			
12	217708	Methods of Separation & Refinery	2	45	30	15	0	0	0	3	1			
<i>Total</i>			<i>25</i>	<i>496</i>	<i>301</i>	<i>195</i>	<i>0</i>	<i>0</i>	<i>0</i>					



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No	Module	English subjects	Credits	Total Number	Theory	Practice	Internship	Project	Thesis	Year	SM	Prior study	Prerequisite	Concurrent
3. Specialized knowledge:														
Required subjects														
1	217212	Process Engineering Laboratory	1	30	0	30	0	0	0	3	2			
2	217215	Reaction Engineering	2	30	30	0	0	0	0	3	2	217109 217111		
3	217223	Chemical Separation Process	3	60	30	30	0	0	0	3	2	217202		
4	217229	Chemical Separation Process 2	2	30	30	0	0	0	0	3	2			
5	217415	Biofertilizer	2	30	30	0	0	0	0	3	2	202301		
6	217915	Engineering Design Project	5	135	15	0	0	120	0	3	2	217202		217215 217223
7	217903	Practical Work in Industry	1	30	0	0	30	0	0	3	2	217202		
8	217909	Technical Seminar	1	30	0	30	0	0	0	3	2			
9	217216	Catalyst Technology	2	30	30	0	0	0	0	4	1	217109 217111		
10	217419	Chemical fertilizer	3	60	30	30	0	0	0	4	1	217109 217204		
11	217815	Enzyme Technology - Biochemistry	3	60	30	30	0	0	0	4	1	217301		
12	217409	Environmental Engineering	3	60	30	30	0	0	0	4	1	217204 217301		
<i>Total</i>			28	585	255	180	30	120	0					
Elective subject - completed 0301 - accumulated at least 2 credits : 19 credits														
1	217219	Surfactant	2	30	30	0	0	0	0	3	2	202301		



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No	Module	English subjects	Credits	Total Number	Theory	Practice	Internship	Project	Thesis	Year	SM	Prior study	Prerequisite	Concurrent
2	217225	Applied Membrane Technology	2	38	23	15	0	0	0	3	2	217204		
3	217305	Analysis of Residues and Toxic In Agriculture Products	2	45	15	30	0	0	0	3	2			
4	217603	Packaging Technology	2	30	30	0	0	0	0	3	2			
5	217228	Modelling and Optimization	3	60	30	30	0	0	0	4	1			
6	217217	Chemical Plant Design	2	45	15	30	0	0	0	4	1	217215 217202 217204		
7	217218	Machine and Equipment in Chemical Industry	2	30	30	0	0	0	0	4	1	217204		
8	217423	Synthesis Technology of Compostion and Its Application in Agriculture	3	60	30	30	0	0	0	4	1	217204 217109		
9	217401	Pesticide Technology	2	30	30	0	0	0	0	4	1	217204 217109		
10	217411	Resources Recycling and Recover technology	3	60	30	30	0	0	0	4	1	217204 217109		
11	217412	Waste water and Air Pollution Treatment	3	60	30	30	0	0	0	4	1	217204 217109		
12	217414	Quality Management for Chemical Plants	2	30	30	0	0	0	0	4	1			
13	217416	Polymer and Biopolymer	3	52	38	14	0	0	0	4	1	217209		
14	217418	Applied Colloid	3	60	30	30	0	0	0	4	1	217301		
15	217506	Technology of Aromatic Chemicals	2	30	30	0	0	0	0	4	1	217303		
16	217612	Natural Pharmaceuticals	3	60	30	30	0	0	0	4	1	217303		
17	217422	Solid Waste Treatment	3	60	30	30	0	0	0	4	1			
18	217916	Management basic	2	30	30	0	0	0	0	4	1			
19	217920	ISO Laboratory	2	60	30	30	0	0	0	4	1			



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20	217611	Corrosion Metals and Materials	3	60	30	30	0	0	0	4	1	202301		
21	217805	Biosensory	3	60	30	30	0	0	0	4	1			
<i>Total</i>			<i>52</i>	<i>960</i>	<i>601</i>	<i>359</i>	<i>0</i>	<i>0</i>	<i>0</i>					
Elective subject - completed 0302 - accumulated at least 12 credits														
1	217907	Research Project	12	180	0	0	0	0	180	4	2			
2	217908	Minor Research project	6	90	0	0	0	90	0	4	2			
<i>Total</i>			<i>18</i>	<i>270</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>90</i>	<i>180</i>					

Total credits of required subjects: 110 credits

Total credits of elective subjects: 48 credits

(*) Compulsory modules, students have to pass them, however they are not accounted in the cumulative overall GPA.

Graduation Methods:

1. Thesis (12 credits)

2. Essay (6 credits) + completion of 6 credits of elective subjects 0301

Note: In addition to the above 158 credits, students must meet the output criteria of Foreign Language and Informatics in accordance with the regulations of the university.

Ho Chi Minh city, November 11 - 2020

Nong Lam University - Ho Chi Minh City

Academic Affairs Department

Dean of Faculty of Chemical Engineering Department