



Ministry of Education and Training  
Nong Lam University  
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## CREDIT BASED CURRICULUM

(Pursuant to the decision: 3641/QĐ-DHNL-DT, October -15- 2018 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: 136 Credits**

**Minimum GPA: 2.0**

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



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18	217304	General Microbiology	2	0	30	0	0	0	0	2	1			
19	200107	Ho Chi Minh Ideology	2	0	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>					
<b>Elective subject - completed 0101 - accumulated at least 2 credits : 3 credits</b>														
1	202201	General Physics 1	2	0	30	0	0	0	0	1	2			
2	202202	Physics Experiments 1	1	0	0	30	0	0	0	1	2			
3	202302	Analytical Chemistry	2	0	30	0	0	0	0	1	2	202301		
4	202305	Analytical Chemistry Laboratory	1	0	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>					
<b>2. Fundamental specialized knowledge:</b>														
<b>Required subjects</b>														
1	217111	Physical Chemistry 1	2	0	30	0	0	0	0	2	1			
2	217112	Technical drawing	2	0	15	30	0	0	0	2	1			
3	217109	Physical Chemistry 2	3	0	30	30	0	0	0	2	2			
4	217202	Introduction to Chemical Engineering	3	0	45	0	0	0	0	2	2			
5	217209	Mechanical Separation Process	3	0	35	20	0	0	0	2	2			
6	217302	Biochemistry Technology and Application	2	0	30	0	0	0	0	2	2	217301		
7	217303	Organic Chemistry Synthesis Process	2	0	30	0	0	0	0	2	2	202301		
8	217307	General Electrical Engineering	2	0	23	15	0	0	0	2	2			
9	217110	Physical properties of material	2	0	23	15	0	0	0	3	1	217111		



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10	217204	Heat and Mass Transfer	3	0	30	30	0	0	0	3	1	217209 217111		
11	217211	Instrumentation and Process Control	2	0	25	10	0	0	0	3	1			
12	217224	Statistics and Experimental Design	3	0	30	30	0	0	0	3	1			
13	217226	Computer Application in Chemical Engineering	3	0	15	60	0	0	0	3	1			
14	217306	Biochemistry Technology and Application Laboratory	1	0	0	30	0	0	0	3	1	217302		
<i>Total</i>			<i>33</i>	<i>631</i>	<i>361</i>	<i>270</i>	<i>0</i>	<i>0</i>	<i>0</i>					
<b>Elective subject - completed 0201 - accumulated at least 2 credits : 6 credits</b>														
1	217113	General Organic-Inorganic Chemistry	3	0	30	30	0	0	0	2	1			
2	217114	Basic Principles of Colloid Chemistry	2	0	15	30	0	0	0	2	1			
3	217101	Instrumental Analytical Chemistry	3	0	30	30	0	0	0	2	2	202305 202302		
4	217108	Analytical Methods for Physio-chemical components	2	0	23	15	0	0	0	2	2	202304 202301		
5	217222	Freezing Technology and Application	2	0	23	15	0	0	0	3	1			
6	217707	Analytical Methods for Molecular Spectrometry	2	0	30	0	0	0	0	3	1			
7	217708	Methods of Separation & Refinery	2	0	30	15	0	0	0	3	1			
<i>Total</i>			<i>16</i>	<i>316</i>	<i>181</i>	<i>135</i>	<i>0</i>	<i>0</i>	<i>0</i>					



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<b>3. Specialized knowledge:</b>														
<b>Required subjects</b>														
1	217212	Process Engineering Laboratory	1	0	0	30	0	0	0	3	2			
2	217215	Reaction Engineering	2	0	30	0	0	0	0	3	2	217109 217111		
3	217223	Chemical Separation Process	3	0	30	30	0	0	0	3	2	217202		
4	217415	Biofertilize technology	2	0	30	0	0	0	0	3	2	202301		
5	217902	Engineering Design Project	2	0	15	0	0	30	0	3	2	217202		217215 217223
6	217903	Practical Work in Industry	1	0	0	0	30	0	0	3	2	217202		
7	217909	Technical Seminar	1	0	0	30	0	0	0	3	2			
8	217216	Catalyst Technology	2	0	30	0	0	0	0	4	1	217109 217111		
9	217401	Pesticide Manufacturing Technology	2	0	30	0	0	0	0	4	1	217109 217204		
10	217419	Production technology of chemical fertilizer	3	0	30	30	0	0	0	4	1	217109 217204		
11	217811	Enzyme Technology - Biochemistry	2	0	30	0	0	0	0	4	1	217301		
12	217420	Practical pesticides and enzyme technology	3	0	0	90	0	0	0	4	2	217419 217401		
<b>Total</b>			<b>24</b>	<b>495</b>	<b>225</b>	<b>210</b>	<b>30</b>	<b>30</b>	<b>0</b>					
<b>Elective subject - completed 0301 - accumulated at least 2 credits : 15 credits</b>														
1	217219	Surfactant	2	0	30	0	0	0	0	3	2	202301		



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2	217225	Applied Membrane Technology	2	0	23	15	0	0	0	3	2	217204		
3	217305	Analysis of Residues and Toxic In Agriculture Products	2	0	15	30	0	0	0	3	2			
4	217603	Packaging Technology	2	0	30	0	0	0	0	3	2			
5	217115	Basic startup	2	0	30	30	0	0	0	4	1			
6	217217	Chemical Plant Design	2	0	15	30	0	0	0	4	1	217215 217202 217204		
7	217218	Machine and Equipment in Chemical Industry	2	0	30	0	0	0	0	4	1	217204		
8	217404	Synthesis Technology of Compostion and Its Application in Agriculture	2	0	30	0	0	0	0	4	1	217204 217109		
9	217409	Environmental Engineering	3	0	30	30	0	0	0	4	1	217204 217301 217109		
10	217411	Resources Recycling and Recover technology	3	0	30	30	0	0	0	4	1	217204 217109		
11	217412	Waste water and Air Pollution Treatment	3	0	30	30	0	0	0	4	1	217204 217109		
12	217414	Quality Management for Chemical Plants	2	0	30	0	0	0	0	4	1			
13	217416	Polymer and Biopolymer	3	0	38	14	0	0	0	4	1	217209		
14	217418	Applied Colloid	3	0	30	30	0	0	0	4	1	217301		
15	217506	Technology of Aromatic Chemicals	2	0	30	0	0	0	0	4	1	217303		
16	217601	Natural Pharmaceuticals	2	0	30	0	0	0	0	4	1	217303		
17	217609	Quality Management for Food Plants	2	0	30	0	0	0	0	4	1			



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18	217611	Corrosion Metals and Materials	3	0	30	30	0	0	0	4	1	202301		
19	217805	Biosensory	3	0	30	30	0	0	0	4	1			
<i>Total</i>			<i>45</i>	<i>840</i>	<i>541</i>	<i>299</i>	<i>0</i>	<i>0</i>	<i>0</i>					
<b>Elective subject - completed 0302 - accumulated at least 2 credits : 10 credits</b>														
1	217907	Research Project	10	0	0	0	0	0	150	4	2			
2	217908	Minor Research project	5	0	0	0	0	75	0	4	2			
<i>Total</i>			<i>15</i>	<i>225</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>75</i>	<i>150</i>					

*Total credits of required subjects: 102 credits*

*Total credits of elective subjects: 34 credits*

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

**Graduation Methods:**

1.Thesis (10 credits)

2.Essay (5 credits) + completion of 5 credits of elective subjects 0301

**Note: In addition to the above 136 credits, students must meet the output criteria of Foreign Language and Informatics in accordance with the regulations of the university.**

Nong Lam University - Ho Chi Minh City

Academic Affairs Department

Ho Chi Minh city, October 15 - 2018  
Dean of Faculty of Chemical Engineering Department