

* **Nuclear Technology** (*Dated September 30th, 2015*)

Total credits of the curriculum:	138 credits
- General education knowledge: (<i>Not including physical education, military defense education, and soft skills</i>)	28 credits
- Basic courses:	6 credits
- Fundamental courses:	15 credits
- Core courses:	31 credits
- Advanced courses:	58 credits
+ <i>Required:</i>	<i>40 credits</i>
+ <i>Elective:</i>	<i>11/40 credits</i>
+ <i>Undergraduate thesis/Courses replacing undergraduate 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>Revolutionary Strategies of Vietnamese Communist Party</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 Defence 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	15				
15.	PHY1106	<i>Linear Algebra</i>	3	30	15		
16.	PHY1107	<i>Caculus 1</i>	3	30	15		
17.	PHY1108	<i>Caculus 2</i>	3	30	15		PHY1107
18.	PHY1110	<i>Probability and Statistics for Nuclear Physics</i>	3	27	18		PHY1107
19.	CHE1080	<i>General chemistry</i>	3	42		3	
IV		Core courses	31				
20.	PHY2201	<i>Mathematics in physics 1</i>	3	30	15		PHY1108
21.	PHY2301	<i>Mechanics</i>	4	44	16		

No.	Code	Subject	Credits	Credit hours			Prerequisite
				Lecture	Practice	Self-study	
22.	PHY2302	<i>Thermodynamics and Molecular physics</i>	3	30	15		PHY1108 PHY2201
23.	PHY2303	<i>Electricity and Magnetism</i>	4	45	15		PHY1108
24.	PHY2304	<i>Optics</i>	3	30	15		PHY1108
25.	PHY2305	<i>Nuclear and Atomic Physics</i>	4	40	20		PHY2301
26.	PHY2306	<i>Quantum mechanics</i>	4	45	15		PHY2304
27.	PHY2307	<i>General Physics Practice 1</i>	2		30		PHY2301
28.	PHY2308	<i>General Physics Practice 2</i>	2		30		PHY2303
29.	PHY2309	<i>General Physics Practice 3</i>	2		30		PHY2304
V		Advanced courses	58				
V.1		Required	40				
30	PHY3176	<i>Nuclear structure and reactions</i>	3	30	15		PHY2305
31	PHY3374	<i>Nuclear electronics</i>	4	60			PHY2305
32	PHY3373	<i>Radiation detection and measurement</i>	3	45			PHY2305
33	PHY3803	<i>Nuclear analytical methods</i>	3	30	15		PHY3373
34	PHY2018	<i>Particle Accelerators</i>	2	30			PHY2303 PHY2305
35	PHY3160	<i>Neutron science and reactor physics</i>	4	40	20		PHY2302 PHY2305
36	PHY3802	<i>Radiation protection</i>	4	40	20		PHY3373
37	PHY3360	<i>Introduction to Nuclear Power Plants</i>	2	30			PHY3160
38	PHY3303	<i>Statistical physics</i>	3	30	15		PHY2306
39	PHY3801	<i>Nuclear electronics Laboratory</i>	2		30		PHY3374
40	PHY3364	<i>Nuclear Physics Laboratory 1</i>	2		30		PHY3373
41	PHY3804	<i>Nuclear Physics Laboratory 2</i>	2		30		PHY3373
42	PHY3806	<i>Monte-Carlo method for nuclear physics</i>	3	30	15		PHY3373 INT1005
43	PHY3370	<i>Nuclear Fuels Cycles</i>	3	45			PHY2305
V.2		Elective	11/40				

No.	Code	Subject	Credits	Credit hours			Prerequisite
				Lecture	Practice	Self-study	
44	PHY3161	<i>Thermal Hydraulic Fundamentals</i>	3	30	15		PHY3160
45	PHY3371	<i>Nuclear Safety Analysis</i>	3	30	15		PHY3360
46	PHY3811	<i>Medical physics</i>	3	30	15		PHY3373
47	PHY3814	<i>Application of nuclear techniques in Industry</i>	3	30	15		PHY3373
48	PHY3812	<i>Application of nuclear techniques in Environment study and Geophysics</i>	3	30	15		PHY3373
49	PHY3815	<i>Data analysis</i>	2	30			PHY2305
50	PHY3810	<i>Applications of irradiation</i>	2	30			PHY3373
51	PHY3808	<i>Control systems in Nuclear Power Plant</i>	2	30			PHY3160
52	PHY3092	<i>Nuclear Reactor Materials</i>	2	30			PHY3160
53	PHY3317	<i>Graduation practices</i>	2		30		PHY3373
54	PHY3502	<i>Computational Physics</i>	3	30	15		INT1005 PHY1106 PHY1108
55	PHY3163	<i>Mathematics in physics 2</i>	3	30	15		PHY1106 PHY1108
56	PHY3301	<i>Theoretical Mechanics</i>	3	30	15		PHY1106 PHY1108 PHY2301
57	PHY3302	<i>Electrodynamics</i>	3	30	15		PHY2304
58	PHY3365	<i>Introduction to Particle Physics and High Energy Physics</i>	3	30	15		PHY2305 PHY2306
V.3		<i>Undergraduate thesis/Courses replacing undergraduate thesis</i>	7				
59	PHY4082	<i>Thesis</i>	7				
		<i>Courses replacing undergraduate thesis</i>	7				
60	PHY3816	<i>The basic concepts on nuclear physics</i>	4	40	20		PHY2305
61		Select 1 subject (3 credits) among elective (V.2 block) which has not been learned	3				
		Total	138				

