

*** Mechanics – Mathematics** (*Dated September 28th, 2015*)

Total credits of the curriculum:	137 tín chỉ
- General education knowlwdge:	29 tín chỉ
<i>(not including physical education, military defense education, and soft skills)</i>	
- Basic courses:	6 credits
- Fundamental courses:	6 credits
- Core courses:	45 credits
- Advanced courses:	51 credits
+ <i>Required:</i>	<i>38 credits</i>
+ <i>Elective:</i>	<i>6 credits</i>
+ <i>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>	29				
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>The Revolutionary line of the Communist Party of Vietnam</i>	3	42	3		POL1001
5	INT1003	<i>Introduction to Informatics 1</i>	2	10	20		
6	INT1006	<i>Introduction to Informatics 4</i>	3	20	23	2	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	6				
15	PHY1101	<i>Mechanics - Thermodynamics</i>	3	30	15		MAT2302
16	PHY1103	<i>Electromagnetism - Optics</i>	3	30	15		MAT2302
IV		Core courses	45				
17	MAT2300	<i>Linear Algebra 1</i>	4	45	15		
18	MAT2301	<i>Linear Algebra 2</i>	4	45	15		MAT2300
19	MAT2302	<i>Analysis 1</i>	5	45	30		
20	MAT2303	<i>Analysis 2</i>	5	45	30		MAT2302
21	MAT2304	<i>Analysis 3</i>	4	40	20		MAT2303

No.	Code	Subject	Credits	Credit hours			Prerequisite
				Lecture	Practice	Self-study	
22	MAT2314	<i>Differential Equations</i>	4	45	15		MAT2301 MAT2303
23	MAT2306	<i>Partial Differential Equations 1</i>	3	30	15		MAT2304 MAT2314
24	MAT2307	<i>Numerical analysis 1</i>	4	45	15		MAT2314 INT1006
25	MAT2308	<i>Probability 1</i>	3	30	15		MAT2300 MAT2302
26	MAT2309	<i>Optimization 1</i>	3	30	15		MAT2301 MAT2303
27	MAT2310	<i>Analytic geometry</i>	2	20	10		MAT2301
28	MAT2311	<i>Applied Statistics</i>	4	45	15		MAT2308
V		Advanced courses	51				
V.1		Required	38				
29	MAT3344	<i>Complex Analysis</i>	4	45	15		MAT2301 MAT2304
30	MAT3304	<i>Mathematics Computer Laboratory</i>	2	15	15		INT1006 MAT2307
31	MAT3401	<i>Calculus of Variations</i>	3	30	15		MAT2304 MAT2314
32	MAT3402	<i>Theoretical Mechanics 1</i>	4	45	15		MAT2303 MAT2314
33	MAT3400	<i>Theoretical Mechanics 2</i>	5	60	15		MAT2304 MAT3402
34	MAT3404	<i>Continuum Mechanics</i>	4	45	15		MAT2314 MAT3402
35	MAT3405	<i>Strength of Material</i>	4	45	15		MAT2314 MAT3402
36	MAT3406	<i>Theory of Vibration</i>	3	30	15		MAT2306 MAT3400
37	MAT3407	<i>Theory of Elasticity</i>	3	30	15		MAT2306 MAT3404
38	MAT3408	<i>Mechanics of Fluid</i>	3	30	15		MAT2306 MAT3404
39	MAT3409	<i>Applied Functional Analysis</i>	3	30	15		MAT2301 MAT2304
V.2		Elective	6				
V.2.1		<i>The intensive credits in solid mechanics</i>	3/18				

No.	Code	Subject	Credits	Credit hours			Prerequisite
				Lecture	Practice	Self-study	
40	MAT3411	<i>Finite Element Method</i>	3	30	15		MAT3405
41	MAT3412	<i>Theory of Plasticity</i>	3	30	15		MAT3407
42	MAT3413	<i>Analytical Mechanics</i>	3	30	15		MAT3400
43	MAT3415	<i>Mechanics of Composite Materials</i>	3	30	15		MAT3404
44	MAT3416	<i>Structural Mechanics</i>	3	30	15		MAT3405
45	MAT3417	<i>Stability of Motions</i>	3	30	15		MAT3400
V.2.2		<i>Intensive credits in Fluid Mechanics</i>	3/9				
46	MAT3418	<i>Numerical methods in mechanics</i>	3	30	15		MAT2307 INT1006
47	MAT3419	<i>Multiphase Flows</i>	3	30	15		MAT3408
48	MAT3420	<i>Theory of Turbulence</i>	3	30	15		MAT3408
V.3		Internship and graduate knowledge	7				
<i>V.3.1</i>		<i>Undergraduate thesis</i>	<i>7</i>				
49	MAT4052	Undergraduate thesis	7				
<i>V.3.2</i>		<i>The courses replacing thesis</i>					
50	MAT3422	<i>Theory of Plates and Shells</i>	4	45	15		MAT3407
51	MAT3421	<i>Gas Dynamics</i>	3	30	15		MAT3408
		Total	137				