

*** Honors Program in Oceanography** (*Dated September 30th, 2015*)

Total credits of the curriculum : **156 credits**

- **General education knowledge:** **33 credits**

(Not including physical education, military defense education and soft skills)

- **Basic courses:** **6 credits**

- **Fundamental courses:** **23 credits**

- **Core courses:** **12 credits**

- **Advanced courses:** **83 credits**

+ *Required:* *54 credits*

+ *Elective:* *18/55 credits*

+ *Graduation thesis/ subjects replacing*

thesis: *10 credits*

Available curriculum

No.	Code	Subject	Credits	Credit hours			Prerequisite
				Lecture	Practice	Self-study	
I		General education knowledge <i>(Not including subjects 11 -13)</i>	33				
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	INT1005	<i>Introduction to Informatics 3</i>	2	12	18		
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	FLF2104	<i>General English 4</i>	5	20	50	5	FLF2103
11		<i>Physical Education</i>	4				
12		<i>National Defence Education</i>	8				
13		<i>Soft Skills</i>	3				
II		Basic courses	6				
14	HIS1056	<i>Fundamentals of Vietnamese culture</i>	3	42	3		
15	GEO1050	<i>Life and Earth Sciences</i>	3	30	10	5	
III		Fundamental courses	23				
16	MAT1090	<i>Linear algebra</i>	3	30	15		

No.	Code	Subject	Credits	Credit hours			Prerequisite
				Lecture	Practice	Self-study	
17	MAT1091	<i>Calculus 1</i>	3	30	15		
18	MAT1092	<i>Calculus 2</i>	3	30	15		MAT1091
19	MAT1101	<i>Probability and Statistics</i>	3	27	18		MAT1091
20	PHY1100	<i>Mechanics - Thermodynamics</i>	3	30	15		
21	PHY1103	<i>Electromagnetism - Optics</i>	3	30	15		PHY1100
22	CHE1080	<i>General chemistry</i>	3	42		3	
23	CHE1069	<i>General Chemistry Laboratory</i>	2		30		CHE1080
IV		Core courses	12				
24	HMO2201	<i>Computational methods</i>	3	36	6	3	MAT1092
25	HMO2202	<i>Fluid mechanics</i>	3	33	9	3	MAT1092 PHY1100
26	HMO2203	<i>GIS and Remote sensing</i>	3	30	12	3	
27	HMO2204	<i>Mathematical Physics Equations</i>	3	36	6	3	MAT1092
V		Advanced courses	82				
V.1		<i>Required</i>	<i>54</i>				
28	HMO3600	<i>General oceanography</i>	3	30	12	3	
29	HMO3601	<i>Marine hydrometry</i>	3	27	15	3	HMO3600
30	HMO3602	<i>Marine physics</i>	3	30	12	3	HMO2202 HMO3600
31	HMO3603	<i>Marine chemistry</i>	3	30	12	3	HMO3600
32	HMO3604	<i>Marine biology and ecology</i>	3	30	12	3	HMO3600
33	HMO3605	<i>Marine geology and geomorphology</i>	3	30	12	3	HMO3600

No.	Code	Subject	Credits	Credit hours			Prerequisite
				Lecture	Practice	Self-study	
34	HMO3606	<i>Ocean currents</i>	3	30	12	3	HMO3602
35	HMO3607	<i>Ocean waves and tide</i>	3	30	12	3	HMO3602
36	HMO3608	<i>Regional oceanography and East Vietnam Sea</i>	3	30	12	3	HMO3600
37	HMO3609	<i>Marine hydrological forecasting</i>	3	30	12	3	HMO3606 HMO3607
38	HMO3610	<i>Statistical methods in oceanography</i>	3	30	12	3	HMO3600
39	HMO3611	<i>Numerical methods in oceanography</i>	3	24	18	3	HMO3602
40	HMO3612	<i>River-sea interaction</i>	3	30	12	3	HMO3606 HMO3607
41	HMO3613	<i>Marine sediments</i>	3	30	12	3	HMO3605
42	HMO3631	<i>Marine hydrometry practice</i>	3		45		HMO3601
43	HMO3632	<i>Specialization practice</i>	3		45		
44	HMO3733	<i>Annual essay 1</i>	3	30	12	3	
45	HMO3732	<i>Annual essay 2</i>	3	30	12	3	
V.2		<i>Elective</i>	18/55				
46	HMO3614	<i>Coastal ocean circulation</i>	3	30	12	3	HMO3606
47	HMO3615	<i>Waves and sea level calculation</i>	3	24	18	3	HMO3607
48	HMO3616	<i>Coastal sediment processes</i>	3	30	12	3	HMO3606 HMO3607
49	HMO3617	<i>Air-sea interaction</i>	3	30	12	3	HMO3602
50	HMO3618	<i>Long wave in coastal zone</i>	3	30	12	3	HMO3607
51	HMO3619	<i>Boundary layer and mechanics of sediment transport</i>	3	30	12	3	HMO3613
52	HMO3620	<i>Modeling method in oceanography</i>	3	30	12	3	HMO3611
53	HMO3721	<i>Turbulence in the Ocean</i>	3	30	12	3	HMO3611

No.	Code	Subject	Credits	Credit hours			Prerequisite
				Lecture	Practice	Self-study	
54	HMO3623	<i>Marine environment and resources management</i>	3	27	15	3	HMO3600
55	HMO3624	<i>Marine economics</i>	3	30	12	3	HMO3608
56	HMO3625	<i>Sea water chemical analysis</i>	3	30	12	3	HMO3603
57	HMO3626	<i>Fishery oceanography</i>	3	30	12	3	HMO3608
58	HMO3627	<i>Coastal ecosystems</i>	3	30	12	3	HMO3604 HMO3608
59	HMO3628	<i>Transport of contaminants in marine environment</i>	3	30	12	3	HMO3602
60	HMO3629	<i>Marine environmental engineering</i>	3	30	12	3	HMO3600
61	HMO3730	<i>Environmental Control of Oil and hazardous materials</i>	3	30	12	3	HMO3604
62	HMO3204	<i>General Meteorology</i>	3	30	12	3	PHY1100
63	HMO3505	<i>Hydraulics</i>	4	42	15	3	HMO3602
V.3		<i>Graduation Thesis</i>	10				
64	HMO4075	<i>Graduation Thesis</i>	10				
		Total	156				