

*** Oceanography** (*Dated September 30th, 2015*)

Total credits of the curriculum :	136 credits
- General education knowledge:	28 credits
<i>(Not including physical education, military defense education and soft skills)</i>	
- Basic courses:	6 credits
- Fundamental courses:	23 credits
- Core courses:	9 credits
- Advanced courses:	70 credits
+ <i>Required:</i>	<i>51 credits</i>
+ <i>Elective:</i>	<i>12/49 credits</i>
+ <i>Graduation thesis/ subjects replacing 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>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		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 Vietnam culture</i>	3	42	3		
14	GEO1050	<i>Life and Earth Sciences</i>	3	30	10	5	
III		Fundamental courses	23				
15	MAT1090	<i>Linear algebra</i>	3	30	15		
16	MAT1091	<i>Calculus 1</i>	3	30	15		

No.	Code	Subject	Credits	Credit hours			Prerequisite
				Lecture	Practice	Self-study	
17	MAT1092	<i>Calculus 2</i>	3	30	15		MAT1091
18	MAT1101	<i>Probability and Statistics</i>	3	27	18		MAT1091
19	PHY1100	<i>Mechanics - Thermodynamics</i>	3	30	15		
20	PHY1103	<i>Electromagnetism - Optics</i>	3	30	15		PHY1100
21	CHE1080	<i>General chemistry</i>	3	42		3	
22	CHE1069	<i>General Chemistry Laboratory</i>	2		30		CHE1080
IV		Core courses	9				
23	HMO2201	<i>Computational methods</i>	3	36	6	3	MAT1092
24	HMO2202	<i>Fluid mechanics</i>	3	33	9	3	MAT1092 PHY1100
25	HMO2203	<i>GIS and Remote sensing</i>	3	30	12	3	
V		Advanced courses	70				
V.1		Required	51				
26	HMO3600	<i>General oceanography</i>	3	30	12	3	
27	HMO3601	<i>Marine hydrometry</i>	3	27	15	3	HMO3600
28	HMO3602	<i>Marine Physics</i>	3	30	12	3	HMO3600
29	HMO3603	<i>Marine chemistry</i>	3	27	15	3	HMO3600
30	HMO3604	<i>Marine biology and ecology</i>	3	30	12	3	HMO3600
31	HMO3605	<i>Marine geology and morphology</i>	3	30	12	3	HMO3600
32	HMO3606	<i>Ocean circulation</i>	3	30	12	3	HMO3602
33	HMO3607	<i>Ocean wave and tide</i>	3	30	12	3	HMO3602
34	HMO3608	<i>Regional Oceanography and Vietnam East Sea</i>	3	30	12	3	HMO3600
35	HMO3609	<i>Marine hydrodynamic forecast</i>	3	30	12	3	HMO3606 HMO3607
36	HMO3610	<i>Statistic methods in</i>	3	30	12	3	HMO3600

No.	Code	Subject	Credits	Credit hours			Prerequisite
				Lecture	Practice	Self-study	
		<i>oceanography</i>					
37	HMO3611	<i>Numerical methods in oceanography</i>	3	24	18	3	HMO3602
38	HMO3612	<i>River-sea interaction</i>	3	30	12	3	HMO3606 HMO3607
39	HMO3613	<i>Marine sediments</i>	3	30	12	3	HMO3605
40	HMO3631	<i>Marine hydrometry</i>	3		45		HMO3601
41	HMO3632	<i>Specialization practice</i>	3		45		
42	HMO3633	<i>Annual essay</i>	3	30	12	3	
V.2		<i>Elective</i>	<i>12/ 49</i>				
43	HMO3614	<i>Marginal sea circulations</i>	3	30	12	3	HMO3606
44	HMO3615	<i>Wave and water-level computations</i>	3	24	18	3	HMO3607
45	HMO3616	<i>Coastal sediment processes</i>	3	30	12	3	HMO3606 HMO3607
46	HMO3617	<i>Atmosphere-ocean interaction</i>	3	30	12	3	HMO3602
47	HMO3618	<i>Long waves in coastal zone</i>	3	30	12	3	HMO3607
48	HMO3619	<i>Boundary layer and sediment transport mechanisms</i>	3	30	12	3	HMO3613
49	HMO3620	<i>Modeling method in oceanography</i>	3	30	12	3	HMO3611
50	HMO3623	<i>Marine environment and resource managements</i>	3	30	10	5	HMO3600
51	HMO3624	<i>Marine Economics</i>	3	30	12	3	HMO3608
52	HMO3625	<i>Sea water analyse</i>	3	24	18	3	HMO3603
53	HMO3626	<i>Fishery oceanography</i>	3	30	12	3	HMO3608
54	HMO3627	<i>Coastal and estuarine ecologies</i>	3	30	12	3	HMO3604 HMO3608
55	HMO3628	<i>Transportation of marine pollutants</i>	3	30	12	3	HMO3602
56	HMO3629	<i>Techniques of marine environment</i>	3	30	12	3	HMO3600

No.	Code	Subject	Credits	Credit hours			Prerequisite
				Lecture	Practice	Self-study	
57	HMO3204	<i>General Meteorology</i>	3	30	12	3	PHY1100
58	HMO3505	<i>Hydraulics</i>	4	42	15	3	HMO3602
V.3		<i>Graduation thesis/ subjects replacing thesis</i>	7				
59	HMO4074	<i>Graduation thesis</i>	7				
		<i>Subjects replacing thesis</i>	7/11				
60	HMO4084	<i>Principles in oceanography</i>	3	30	12	3	HMO3606 HMO3607
61	HMO4085	<i>Marine hydrodynamics</i>	4	42	15	3	HMO3602 HMO3608 HMO3612
62	HMO4086	<i>Sustainable use of marine resources</i>	4	42	15	3	HMO3603 HMO3604 HMO3606 HMO3607
		Total	136				