

**Vue bloc du programme des cours**

Or Th Pr Au Cr

**Bloc 1 du programme de l'année**

**Compulsory course**

OCEA0057-7	<i>Marine Ecology</i> (anglais) - <i>Marine ecology</i> - Sylvie GOBERT, Mathieu POULICEK - [6j T. t.] - <i>Introduction to marine ecosystems modelling</i> - Marilaure GRÉGOIRE	Q1				<b>6</b>
			15	-	[+]	
			15	15	-	

Courses totaling 24 credits have to be chosen among :

**Framework : global environment**

OCEA0055-5	<i>Biogeochemical Cycles in the Ocean</i> (anglais) - <i>Biogeochemistry 1</i> - Bruno DELILLE, Anne MOUCHET - <i>Biogeochemistry 2</i>	Q1				<b>6</b>
			20	-	-	
			20	-	-	
OCEA0056-1	<i>Marine Plant Biology and Ecology</i> (anglais) - <i>Marine phanerogames ecology</i> - Sylvie GOBERT - <i>Techniques of sampling in marine ecology</i> - Sylvie GOBERT	Q1				<b>6</b>
			15	10	-	
			15	10	-	
OCEA0082-1	<i>Carbon, nutrient, greenhouse gases dynamics in marine ecosystems and geological oceanography</i> (anglais) - <i>Carbon, nutrient, greenhouse gases dynamics in marine ecosystems</i> - Alberto BORGES - <i>Geological oceanography</i> - Nathalie FAGEL - [1j T. t.]	Q1				<b>6</b>
			20	5	-	
			20	20	[+]	
OCEA0056-1	<i>Marine Plant Biology and Ecology</i> (anglais) - <i>Marine phanerogames ecology</i> - Sylvie GOBERT - <i>Techniques of sampling in marine ecology</i> - Sylvie GOBERT	Q1				<b>6</b>
			15	10	-	
			15	10	-	

**Scientific challenges & opportunities : marine environment protection & resources protection**

OCEA0060-1	<i>Advanced Marine Zoology</i> (anglais) - <i>Biology of benthos and necton animals : invertebrates</i> - Patrick DAUBY, Mathieu POULICEK - <i>Ecoethology of the marine animals</i> - Christian MICHEL - <i>Ecology of the coral reefs</i> - Mathieu POULICEK	Q1				<b>6</b>
			15	15	-	
			30	-	-	
			30	-	-	
OCEA0080-1	<i>Biochemistry, Physiology and Aquariology</i> (anglais) - <i>Physiology and biochemistry of the marine animals</i> - Philippe COMPÈRE - <i>Aquariology</i> - Christian MICHEL	Q1				<b>6</b>
			15	15	-	
			15	-	-	
OCEA0062-1	<i>Ecotoxicology and Biodegradation of Marine Pollutants</i> (anglais) - <i>Biodegradation of organic molecules in a sea environment</i> - Mathieu POULICEK - <i>Marine ecotoxicology</i> - Krishna DAS	Q1				<b>6</b>
			20	-	-	
			15	15	-	
OCEA0063-1	<i>Biology of Marine Mammals</i> (anglais) - <i>Part I : Ecology and ecotoxicology</i> - Krishna DAS - <i>Part II : Pathology and necropsies</i> - Thierry JAUNIAUX	Q1				<b>6</b>
			15	-	-	
			15	10	-	
OCEA0064-1	<i>Functional and Molecular Marine Microbiology</i> (anglais) - <i>Marine bacteriology</i> - Mathieu POULICEK - <i>Molecular approaches to the diversity of marine microorganisms</i> - Annick WILMOTTE	Q1				<b>6</b>
			15	30	-	
			15	15	-	

**Data analysis : interpretation of environmental data**

OCEA0081-1	<i>Numerical methods in geophysics - Part 2</i> - JeanMarie BECKERS	Q1	15	30	-	<b>6</b>
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**Bloc 2 du programme de l'année**

**Optional courses**