

**Block view of the study programme**

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**Block 1**
**Compulsory Courses**

 STFE9002-1 *Master thesis - COLLÉGIALITÉ* TA - - - **30**
**Focus courses**
**Single Focus**
**Research Focus**

OCEA0057-7	<i>Marine Ecology</i> (english language)	TA				<b>6</b>
	- <i>Marine ecology</i> - Sylvie GOBERT, Mathieu POULICEK		15	-	-	
	- <i>Introduction to marine ecosystems modelling</i> - Marilaure GRÉGOIRE		15	15	-	
	- <i>Introduction to marine ecosystems modelling</i> - Sylvie GOBERT, Mathieu POULICEK - [6d FW]		-	-	[+]	

Courses totaling 24 credits have to be chosen among :

**Framework : global ocean environment**

OCEA0055-5	<i>Biogeochemical Cycles in the Ocean</i> (english language)	Q1				<b>6</b>
	- <i>Biogeochemistry 1</i> - Bruno DELILLE, Anne MOUCHET		20	-	-	
	- <i>Biogeochemistry 2 (Advanced Marine Geochemistry)</i> - Bruno DELILLE, Anne MOUCHET		20	-	-	

OCEA0056-1	<i>Marine Plant Biology and Ecology</i> (english language)	Q1				<b>6</b>
	- <i>Marine phanerogames ecology</i> - Sylvie GOBERT		15	10	-	
	- <i>Techniques of sampling in marine ecology</i> - Sylvie GOBERT		15	10	-	

OCEA0082-1	<i>Carbon, nutrient, greenhouse gases dynamics in marine ecosystems and geological oceanography</i> (english language)	Q1				<b>6</b>
	- <i>Carbon, nutrient, greenhouse gases dynamics in marine ecosystems</i> - Alberto BORGES		20	5	-	
	- <i>Geological oceanography</i> - Nathalie FAGEL - [1d FW]		20	20	[+]	

OCEA0059-1	<i>Remote Sensing of the Oceans</i> (english language)	Q1				<b>6</b>
	- <i>Introduction to satellite oceanography</i> - Aida ALVERA AZCARATE		15	15	-	
	- <i>Advanced satellite oceanography</i> - Aida ALVERA AZCARATE		15	15	-	

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

OCEA0225-1	<i>Professional practice in marine / environmental sectors</i> (english language) - Sylvie GOBERT, Mathieu POULICEK	Q2	-	-	-	<b>6</b>
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OCEA0060-1	<i>Advanced Marine Zoology</i> (english language)	Q1				<b>6</b>
	- <i>Biology of benthos and necton animals : invertebrates</i> - Patrick DAUBY, Mathieu POULICEK		15	15	-	
	- <i>Ecoethology of the marine animals</i> - Christian MICHEL		30	-	-	
	- <i>Ecology of the coral reefs</i> - Mathieu POULICEK		30	-	-	

OCEA0080-1	<i>Biochemistry, Physiology and Aquariology</i> (english language)	Q1				<b>6</b>
	- <i>Physiology and biochemistry of the marine animals</i> - Philippe COMPÈRE		15	15	-	
	- <i>Aquariology</i> - Christian MICHEL		15	-	-	

OCEA0062-1	<i>Ecotoxicology and Biodegradation of Marine Pollutants</i> (english language)	Q1				<b>6</b>
	- <i>Biodegradation of organic molecules in a sea environment</i> - Mathieu POULICEK		20	-	-	
	- <i>Marine ecotoxicology</i> - Krishna DAS		15	15	-	

OCEA0063-1	<i>Biology of Marine Mammals</i> (english language)	Q1				<b>6</b>
	- <i>Part I : Ecology and Ecotoxicology</i> - Krishna DAS		15	-	-	
	- <i>Part II : pathology and necropsies</i> - Thierry JAUNIAUX		15	10	-	

OCEA0064-1	<i>Functional and Molecular Marine Microbiology</i> (english language)	Q1				<b>6</b>
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- <i>Marine bacteriology</i> - Mathieu POULICEK	15	30	-
- <i>Molecular approaches to the diversity of marine microorganisms</i> - Annick WILMOTTE	15	15	-

**Data analysis : interpretation of environmental data**

OCEA0081-1	<i>Numerical Methods in Geophysics - Part 2</i> (english language) - JeanMarie BECKERS	Q1	15	30	-	<b>6</b>
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