

## First Year

### Compulsory courses

#### First semester

OCEA0010-1	<i>Physical Oceanography</i> - JeanMarie BECKERS - [3d FW]	20	10	[+]	5
OCEA0013-1	<i>Chemical oceanography</i> - Alberto BORGES - [2d FW]	20	5	[+]	4
OCEA0014-1	<i>Mathematical analysis and modelling methods applied to the environment</i> - Eric DELHEZ	20	20	-	4
GCIV2040-2	<i>Tides and solicitations of marine structures</i> - Sébastien ERPICUM	15	5	-	2
GEOL0255-3	<i>Geological oceanography</i> - Nathalie FAGEL - [3d FW]	20	20	[+]	4
ENVT0726-1	<i>Marine Ecology</i> - Sylvie GOBERT, Mathieu POULICEK - [4d FW]	15	-	[+]	4
OCEA0003-1	<i>Introduction to satellite oceanography</i> - Yves CORNET	15	15	-	3

#### Second semester

OCEA0049-1	<i>Pelagian oceanography</i> - Sylvie GOBERT - [2d FW]	15	15	[+]	3
OCEA0011-2	<i>Coastal oceanography</i> - Salim DJENIDI - [3d FW]	20	10	[+]	5
OCEA0012-1	<i>Marine meteorology</i> - JeanMarie BECKERS	15	5	-	2
OCEA0015-1	<i>Principles of interdisciplinary study of sea systems</i> - Marilaure GRÉGOIRE	20	20	-	3
DROI0725-1	<i>Law of the sea and of sea environment</i> - Philippe VINCENT	20	-	-	2
OCEA0018-1	<i>Introduction to modelling ecosystems</i> - Marilaure GRÉGOIRE	15	15	-	3
GEOG2012-1	<i>Coastal geomorphology</i> - Aurelia HUBERT - [2d FW]	20	10	[+]	3
GEOG0620-1	<i>Economic geography of the sea</i> - Bernadette MERENNESCHOUMAKER	20	-	-	2
SSTA0001-1	<i>Integrated placement : preparation, fieldwork guidance, assistant writing up a report --</i> Aïda ALVERA AZCARATE, Sylvie GOBERT - [30h Mon. WS]	-	-	[+]	3

#### All year round

OCEA0019-1	<i>Biological and biochemical oceanology</i> - JeanMarie BOUQUEGNEAU, Gilles LEPOINT - [8d FW]	30	-	[+]	8
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## Second Year

### Compulsory courses

OCEA0020-1	<i>Current issues in oceanography</i> - Salim DJENIDI	15	15	-	2
	<i>Notice</i> : this course is given during the 2nd semester				
DOCU0450-1	<i>Documentation training applied to oceanography (bibliography and database)</i> - Aïda ALVERA AZCARATE, Ninfa GRECO	20	-	-	3
	<i>Notice</i> : this course is given during the 2nd semester				
SMEM0003-1	<i>Final thesis</i> - COLLÉGIALITÉ	-	-	-	25

### Professional focus (organized during the 1st semester)

#### Optional courses

*Choose one option from the following :*

#### Option Oceanography

Choose courses totalling 30 ECTS out of the following :

SSTG0032-1	<i>Practical professional internship in oceanography</i> - COLLÉGIALITÉ - [1w Internship]	-	-	[+]	4
BOTA0401-1	<i>Molecular approaches to the diversity of marine microorganisms</i> - Annick WILMOTTE	15	15	-	2
ZOOL0218-1	<i>Aquariology</i> - Christian MICHEL	15	15	-	3
BACT0001-1	<i>Marine bacteriology</i> - Mathieu POULICEK	15	30	-	3
OCEA0022-1	<i>Biodegradation of organic molecules in a sea environment</i> - Mathieu POULICEK	20	-	-	2

ZOOL0219-1	<i>Biology of benthos and necton animals, part I : vertebrates -</i> Pierre VANDEWALLE - [2d FW]	15	15	[+]	3
ZOOL0219-2	<i>Biology of benthos and necton animals, part II : invertebrates -</i> Patrick DAUBY, Mathieu POULICEK - [2d FW]	15	15	[+]	3
BOTA0402-1	<i>Marine plant biology -</i> Anne GOFFART - [3d FW]	15	15	[+]	4
OCEA0023-1	<i>Complement of ecological modelling -</i> Marilaure GRÉGOIRE	15	30	-	3
ZOOL0220-1	<i>Planctonology -</i> Anne GOFFART	15	30	-	3
OCEA0025-1	<i>Dynamics of nutrients in marine environment, part I : chemical and biochemical aspects -</i> Marc ELSKENS - [10h FW]	7,5	7,5	[+]	2
OCEA0025-2	<i>Dynamics of nutrients in marine environment, part II : ecological processes -</i> Anne GOFFART - [10h FW]	7,5	7,5	[+]	2
BIOC0701-3	<i>Biogeochemistry 1 -</i> Bruno DELILLE, Anne MOUCHET - [2d FW]	20	-	[+]	3
BIOC0702-1	<i>Biogeochemistry 2 -</i> Bruno DELILLE, Anne MOUCHET	20	-	-	2
OCEA0052-2	<i>Marine cryosphere -</i> Bruno DELILLE	20	-	-	2
OCEA0043-1	<i>Ecoethology of the marine animals -</i> Christian MICHEL - [3d FW]	15	-	[+]	3
OCEA0026-1	<i>Marine ecotoxicology -</i> Krishna DAS	15	15	-	3
OCEA0027-1	<i>Applications of stable isotopes in marine sciences -</i> Gilles LEPOINT	15	5	-	3
OCEA0028-1	<i>Impact study in a sea environment : theory and practice -</i> Pierre LEJEUNE	10	20	-	3
ZOOL0222-1	<i>Physiology and biochemistry of the marine animals -</i> Philippe COMPÈRE	15	15	-	3
OCEA0029-1	<i>Production techniques of marine fishes, molluscs and crustaceans -</i> Bruno FREDERICH	10	10	-	3
OCEA0030-1	<i>Sea Climatology and meteorology -</i> Michel ERPICUM	30	-	-	3
ESHY0070-1	<i>Dynamics of lower atmospherical layers and air-sea interactions -</i> Louis FRANÇOIS, François RONDAY	30	15	-	4
MECA0053-3	<i>Geophysical fluid dynamics -</i> JeanMarie BECKERS	30	30	-	6
MECA0055-1	<i>Numerical methods applied to the environment -</i> JeanMarie BECKERS	30	30	-	6
GEOLO256-1	<i>Geochemistry of sediments and interstitial water -</i> Nathalie FAGEL	15	15	-	3
GEOLO225-3	<i>Analytical Geochemistry -</i> Nathalie FAGEL	10	10	-	3
OCEA0042-1	<i>Introduction to marine Micropaleontology and palynology (marine microfossils) -</i> Emmanuelle JAVAUX	20	-	-	2
GEOLO257-1	<i>Marine sedimentology -</i> Frédéric BOULVAIN - [3d FW]	20	-	[+]	2
OCEA0041-2	<i>Biology of marine mammals</i> - <i>Part I : Ecology and Ecotoxicology -</i> Krishna DAS - <i>Part II : pathology and necropsies -</i> Freddy COIGNOUL, Thierry JAUNIAUX	15	-	-	4
OCEA0033-1	<i>Global changes and sea environment -</i> Anne MOUCHET	15	15	-	2
OCEA0034-1	<i>Study of the sea environment in a global perspective of sustainable development -</i> Jacques NIHOUL	10	20	-	2
ENVT0727-1	<i>Marine phanerogames ecology -</i> Sylvie GOBERT	15	10	-	3
ENVT0728-1	<i>Techniques of sampling in marine ecology -</i> Sylvie GOBERT	15	10	-	3
OCEA0035-1	<i>Data aquisition and analysis, complements -</i> Aïda ALVERA AZCARATE	15	10	-	2
OCEA0044-3	<i>Ecology of the coral reefs -</i> Mathieu POULICEK	30	-	-	3
OCEA0004-1	<i>Advanced satellite oceanography -</i> Yves CORNET	15	15	-	3

Exceptionally, and with the agreement of the council of studies in Oceanology, one or several courses can be chosen in another program( for instance, in relation with the student's final dissertation,...)

#### Option Modelling Marine Environments

OCEA0023-1	<i>Complement of ecological modelling -</i> Marilaure GRÉGOIRE	15	30	-	3
OCEA0036-1	<i>Structures and applications of marine hydrodynamic models -</i> Alexander BARTH	15	15	-	3
BIOC0701-1	<i>Biogeochemistry 1 -</i> Bruno DELILLE, Anne MOUCHET	20	-	-	3
MECA0055-4	<i>Numerical methods applied to the environment (Part I) -</i> JeanMarie BECKERS	15	15	-	3

Choose courses totalling 18 ECTS from the following :

SSTG0032-1	<i>Practical professional internship in oceanography -</i> COLLÉGIALITÉ - [1w Internship]	-	-	[+]	4
MECA0053-3	<i>Geophysical fluid dynamics -</i> JeanMarie BECKERS	30	30	-	6
OCEA0037-1	<i>Oceanic and atmospheric waves -</i> JeanMarie BECKERS	30	-	-	3
ESHY0070-1	<i>Dynamics of lower atmospherical layers and air-sea interactions -</i> Louis FRANÇOIS, François RONDAY	30	15	-	4
OCEA0030-1	<i>Sea Climatology and meteorology -</i> Michel ERPICUM	30	-	-	3
BIOC0702-1	<i>Biogeochemistry 2 -</i> Bruno DELILLE, Anne MOUCHET	20	-	-	2
ZOOL0220-1	<i>Planctonology -</i> Anne GOFFART	15	30	-	3

OCEA0026-1	<i>Marine ecotoxicology</i> - Krishna DAS	15	15	-	<b>3</b>
OCEA0028-1	<i>Impact study in a sea environment : theory and practice</i> - Pierre LEJEUNE	10	20	-	<b>3</b>
OCEA0034-1	<i>Study of the sea environment in a global perspective of sustainable development</i> - Jacques NIHOUL	10	20	-	<b>2</b>
OCEA0035-1	<i>Data acquisition and analysis, complements</i> - Aïda ALVERA AZCARATE	15	10	-	<b>2</b>
OCEA0033-1	<i>Global changes and sea environment</i> - Anne MOUCHET	15	15	-	<b>2</b>
OCEA0052-2	<i>Marine cryosphere</i> - Bruno DELILLE	20	-	-	<b>2</b>
MECA0055-5	<i>Numerical methods applied to the environment (Part II)</i> - JeanMarie BECKERS	15	15	-	<b>3</b>
OCEA0004-1	<i>Advanced satellite oceanography</i> - Yves CORNET	15	15	-	<b>3</b>

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