

## Cycle view of the study programme

		Bl	Or	Th	Pr	Au	Cr
<b>Compulsory courses (B1 : 60Cr, B2 : 30Cr)</b>							
OCEA0075-1	<i>Introduction to physical oceanography and marine meteorology</i> - JeanMarie BECKERS - [3d FW]	B1	Q1	30	15	[+]	6
OCEA0082-5	<i>Carbon, nutrient, greenhouse gases dynamics in marine ecosystems and geological oceanography, Carbon, nutrient, greenhouse gases dynamics in marine ecosystems</i> (english language) - Alberto BORGES - [2d FW]	B1	Q1	20	5	[+]	4
OCEA0014-1	<i>Mathematical analysis and modelling methods applied to the environment</i> - Eric DELHEZ	B1	Q1	20	20	-	4
OCEA0057-6	<i>Marine Ecology, Introduction to marine ecosystems modelling</i> (english language) - Marilaure GRÉGOIRE	B1	Q1	15	15	-	3
GCIV2040-2	<i>Swell and actions on marine structures</i> - Sébastien ERPICUM	B1	Q1	15	5	-	2
GEO11039-1	<i>geological oceanography</i> - Nathalie FAGEL - [3d FW]	B1	Q1	20	20	[+]	4
OCEA0057-4	<i>Marine Ecology, Marine ecology</i> (english language) - Sylvie GOBERT, Mathieu POULICEK - [4d FW]	B1	Q1	15	-	[+]	4
OCEA0059-2	<i>Remote Sensing of the Oceans, Introduction to satellite oceanography</i> (english language) - Yves CORNET	B1	Q1	15	15	-	3
OCEA0049-1	<i>Pelagic oceanography</i> - Sylvie GOBERT - [2d FW]	B1	Q2	15	15	[+]	3
OCEA0011-2	<i>Coastal oceanography</i> - Aïda ALVERA AZCARATE - [3d FW]	B1	Q2	20	10	[+]	5
OCEA0019-1	<i>Biological oceanology</i> - Sylvie GOBERT - [8d FW]	B1	Q2	30	-	[+]	8
OCEA0015-1	<i>Principles of interdisciplinary study of sea systems</i> - Marilaure GRÉGOIRE	B1	Q2	20	20	-	3
DROI0725-1	<i>Law of the sea and of sea environment</i> - Philippe VINCENT	B1	Q2	20	-	-	2
GEOG2012-1	<i>Coastal geomorphology</i> - Aurelia HUBERT - [2d FW]	B1	Q2	20	10	[+]	3
GEOG0620-1	<i>Economic geography of the sea</i> - Bernadette MERENNESCHOUAKER	B1	Q2	20	-	-	3
SSTA0001-1	<i>Integrated placement : preparation, fieldwork guidance, assistant writing up a report</i> - Aïda ALVERA AZCARATE, Sylvie GOBERT - [30h Mon. WS]	B1	Q2	-	-	[+]	3
DOCU0450-2	<i>Documentation training applied to oceanography (bibliography and database)</i> - Aïda ALVERA AZCARATE, Ninfa GRECO - [30h Mon. WS]	B2	Q1	-	-	[+]	5
SMEM0003-1	<i>Final thesis</i> - COLLÉGIALITÉ	B2	TA	-	-	-	25

### Optional courses (B2 : 30Cr)

#### Single focus (B2 : 30Cr)

##### Research Focus

Choose, in accordance with the Jury, 1 option among : (B2 : 1Nbr)

#### Option Oceanography (B2 : 30Nbr)

Choose courses, with the approval of the Jury, totalling 30 credits among : (B2 : 30Cr)

SSTG0032-1	<i>Practical professional internship in oceanography</i> - COLLÉGIALITÉ, Gilles LEPOINT - [1w Internship]	B2	TA	-	-	[+]	5
OCEA0020-1	<i>Current issues in oceanography</i> - Aïda ALVERA AZCARATE	B2	Q2	15	15	-	4
OCEA0064-4	<i>Functional and Molecular Marine Microbiology, Molecular approaches to the diversity of marine microorganisms</i> (english language) - Annick WILMOTTE	B2	Q1	15	15	-	3
ZOOL0218-4	<i>Aquariology</i> - Christian MICHEL	B2	Q1	30	-	-	3

# Study programmes 2015-2016

## Faculty of Sciences

### Master in oceanography (120 ECTS)

OCEA0064-3	<i>Functional and Molecular Marine Microbiology, Marine bacteriology</i> (english language) - Mathieu POULICEK	B2	Q1	15	30	-	3
OCEA0062-4	<i>Ecotoxicology and Biodegradation of Marine Pollutants, Biodegradation of organic molecules in a sea environment</i> (english language) - Mathieu POULICEK	B2	Q1	20	-	-	3
ZOOL0233-1	<i>Biology of benthos and necton animals : vertebrates</i> - Eric PARMENTIER	B2	Q1	15	10	-	3
OCEA0060-2	<i>Advanced Marine Zoology, Biology of benthos and necton animals : invertebrates</i> (english language) - Patrick DAUBY, Mathieu POULICEK - [2d FW]	B2	Q1	15	15	[+]	3
BOTA0402-1	<i>Marine plant biology</i> - Anne GOFFART - [3d FW]	B2	Q2	15	15	[+]	4
OCEA0023-1	<i>Complement of ecological modeling</i> - Marilaure GRÉGOIRE	B2	Q2	15	30	-	3
ZOOL0220-1	<i>Planctonology</i> - Anne GOFFART	B2	Q2	15	30	-	3
OCEA0025-1	<i>Dynamics of nutrients in marine environment, part I : chemical and biochemical aspects</i> - François FRIPIAT - [10h FW]	B2	Q2	7,5	7,5	[+]	3
OCEA0025-2	<i>Dynamics of nutrients in marine environment, part II : ecological processes</i> - Anne GOFFART - [10h FW]	B2	Q2	7,5	7,5	[+]	3
OCEA0219-1	<i>Biogeochemical Cycles in the Ocean</i> (english language) - Bruno DELILLE, Anne MOUCHET - [2d FW]	B2	Q1	20	-	[+]	3
OCEA0220-1	<i>Biogeochemical Cycles in the Polar Ocean and Sea Ice</i> (english language) - Bruno DELILLE, Anne MOUCHET	B2	Q1	20	-	-	3
OCEA0043-2	<i>Ecoethology of the marine animals</i> - Christian MICHEL	B2	Q1	30	-	-	3
OCEA0062-5	<i>Ecotoxicology and Biodegradation of Marine Pollutants, Marine ecotoxicology</i> (english language) - Krishna DAS	B2	Q1	15	15	-	4
OCEA0027-1	<i>Applications of stable isotopes in marine sciences</i> - Gilles LEPOINT	B2	Q1	15	15	-	4
OCEA0028-1	<i>Impact study in a sea environment : theory and practice</i> - Pierre LEJEUNE	B2	Q1	20	-	-	3
OCEA0080-2	<i>Biochemistry, Physiology and Aquariology, Physiology and biochemistry of the marine animals</i> (english language) - Philippe COMPÈRE	B2	Q1	15	15	-	3
OCEA0030-1	<i>Sea Climatology and meteorology</i> - Michel ERPICUM	B2	Q2	30	-	-	3
ESHY0070-1	<i>Dynamics of lower atmospherical layers and air-sea interactions</i> - Louis FRANÇOIS	B2	Q1	30	15	-	4
OCEA0071-1	<i>Geophysical fluid dynamics - part 1</i> (english language) - JeanMarie BECKERS	B2	Q2	30	15	-	5
OCEA0081-1	<i>Numerical Methods in Geophysics - Part 2</i> - JeanMarie BECKERS	B2	Q1	15	30	-	5
GEOL0256-1	<i>Geochemistry of sediments and interstitial water</i> - Nathalie FAGEL	B2	Q1	15	15	-	3
GEOL0225-3	<i>Analytical Geochemistry</i> - Nathalie FAGEL	B2	Q1	10	10	-	3
GEOL0006-2	<i>Rocks and sedimentary processes</i> - Frédéric BOULVAIN - [3d FW]	B2	Q1	20	-	[+]	3
OCEA0063-1	<i>Biology of Marine Mammals</i> (english language) - Part I : Ecology and Ecotoxicology - Krishna DAS - Part II : pathology and necropsies - Thierry JAUNIAUX	B2	Q1	15	-	-	4
OCEA0033-1	<i>Global changes and sea environment</i> - Anne MOUCHET	B2	Q2	15	15	-	3
OCEA0056-2	<i>Marine Plant Biology and Ecology, Marine phanerogames</i>	B2	Q1	15	10	-	3

# Study programmes 2015-2016

## Faculty of Sciences

### Master in oceanography (120 ECTS)

*ecology* (english language) - Sylvie GOBERT

OCEA0056-3	<i>Marine Plant Biology and Ecology, Techniques of sampling in marine ecology</i> (english language) - Sylvie GOBERT	B2	Q1	15	10	-	3
OCEA0035-1	<i>Data acquisition and analysis, complements</i> - Aïda ALVERA AZCARATE	B2	Q1	15	10	-	3
OCEA0144-1	<i>Ecology of the coral reefs</i> (english language) - Mathieu POULICEK	B2	Q1	30	-	-	3
OCEA0059-3	<i>Remote Sensing of the Oceans, Advanced satellite oceanography</i> (english language) - Yves CORNET	B2	Q1	15	15	-	3
OCEA0221-1	<i>Introduction to marine micropaleontology</i> - Emmanuelle JAVAUX	B2	Q1	20	-	-	3

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

#### Option Modelling Marine Environments (B2 : 30Cr)

OCEA0023-1	<i>Complement of ecological modeling</i> - Marilaure GRÉGOIRE	B2	Q2	15	30	-	3
OCEA0036-1	<i>Structures and applications of marine hydrodynamic models</i> - Alexander BARTH	B2	Q1	15	15	-	3
OCEA0219-1	<i>Biogeochemical Cycles in the Ocean</i> (english language) - Bruno DELILLE, Anne MOUCHET - [2d FW]	B2	Q1	20	-	[+]	3
OCEA0073-1	<i>Numerical methods in geophysics, Part 1</i> - JeanMarie BECKERS	B2	Q2	15	30	-	3

Choose courses, with the approval of the Jury, totalling 18 credits among : (B2 : 18Cr)

SSTG0032-1	<i>Practical professional internship in oceanography</i> - COLLÉGIALITÉ, Gilles LEPOINT - [1w Internship]	B2	TA	-	-	[+]	5
OCEA0020-1	<i>Current issues in oceanography</i> - Aïda ALVERA AZCARATE	B2	Q2	15	15	-	4
OCEA0071-1	<i>Geophysical fluid dynamics - part 1</i> (english language) - JeanMarie BECKERS	B2	Q2	30	15	-	5
OCEA0072-1	<i>Geophysical fluid dynamics - part 2</i> (english language) - JeanMarie BECKERS	B2	Q1	30	15	-	5
ESHY0070-1	<i>Dynamics of lower atmospherical layers and air-sea interactions</i> - Louis FRANÇOIS	B2	Q1	30	15	-	4
OCEA0030-1	<i>Sea Climatology and meteorology</i> - Michel ERPICUM	B2	Q2	30	-	-	3
OCEA0220-1	<i>Biogeochemical Cycles in the Polar Ocean and Sea Ice</i> (english language) - Bruno DELILLE, Anne MOUCHET	B2	Q1	20	-	-	3
ZOOL0220-1	<i>Planctonology</i> - Anne GOFFART	B2	Q2	15	30	-	3
OCEA0062-5	<i>Ecotoxicology and Biodegradation of Marine Pollutants, Marine ecotoxicology</i> (english language) - Krishna DAS	B2	Q1	15	15	-	4
OCEA0028-1	<i>Impact study in a sea environment : theory and practice</i> - Pierre LEJEUNE	B2	Q1	20	-	-	3
OCEA0035-1	<i>Data acquisition and analysis, complements</i> - Aïda ALVERA AZCARATE	B2	Q1	15	10	-	3
OCEA0033-1	<i>Global changes and sea environment</i> - Anne MOUCHET	B2	Q2	15	15	-	3
OCEA0081-1	<i>Numerical Methods in Geophysics - Part 2</i> - JeanMarie BECKERS	B2	Q1	15	30	-	5
OCEA0059-3	<i>Remote Sensing of the Oceans, Advanced satellite oceanography</i> (english language) - Yves CORNET	B2	Q1	15	15	-	3

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

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

## Programme transitoire à destination des étudiants ayant réussi leur master 1 de "Master en océanographie, à finalité approfondie" en 2014-2015

### Optional courses (B1 : 30Cr)

#### Follow-up to the focus chosen in first year (B1 : 30Cr)

#### Research Focus (B1 : 30Cr)

Choose, in accordance with the Jury, 1 option among : (B1 : 30Cr)

#### Option Oceanography (B1 : 30Cr)

Choose courses, with the approval of the Jury, totalling 30 credits among : (B1 : 30Cr)

SSTG0032-1	<i>Practical professional internship in oceanography</i> - COLLÉGIALITÉ, Gilles LEPOINT - [1w Internship]	B1	TA	-	-	[+]	5
OCEA0020-1	<i>Current issues in oceanography</i> - Aïda ALVERA AZCARATE	B1	Q2	15	15	-	4
OCEA0064-4	<i>Functional and Molecular Marine Microbiology, Molecular approaches to the diversity of marine microorganisms</i> (english language) - Annick WILMOTTE	B1	Q1	15	15	-	3
ZOOL0218-4	<i>Aquariology</i> - Christian MICHEL	B1	Q1	30	-	-	3
OCEA0064-3	<i>Functional and Molecular Marine Microbiology, Marine bacteriology</i> (english language) - Mathieu POULICEK	B1	Q1	15	30	-	3
OCEA0062-4	<i>Ecotoxicology and Biodegradation of Marine Pollutants, Biodegradation of organic molecules in a sea environment</i> (english language) - Mathieu POULICEK	B1	Q1	20	-	-	3
ZOOL0233-1	<i>Biology of benthos and necton animals : vertebrates</i> - Eric PARMENTIER	B1	Q1	15	10	-	3
OCEA0060-2	<i>Advanced Marine Zoology, Biology of benthos and necton animals : invertebrates</i> (english language) - Patrick DAUBY, Mathieu POULICEK - [2d FW]	B1	Q1	15	15	[+]	3
BOTA0402-1	<i>Marine plant biology</i> - Anne GOFFART - [3d FW]	B1	Q2	15	15	[+]	4
OCEA0023-1	<i>Complement of ecological modeling</i> - Marilaure GRÉGOIRE	B1	Q2	15	30	-	3
ZOOL0220-1	<i>Planctonology</i> - Anne GOFFART	B1	Q2	15	30	-	3
OCEA0025-1	<i>Dynamics of nutrients in marine environment, part I : chemical and biochemical aspects</i> - François FRIPIAT - [10h FW]	B1	Q2	7,5	7,5	[+]	3
OCEA0025-2	<i>Dynamics of nutrients in marine environment, part II : ecological processes</i> - Anne GOFFART - [10h FW]	B1	Q2	7,5	7,5	[+]	3
OCEA0219-1	<i>Biogeochemical Cycles in the Ocean</i> (english language) - Bruno DELILLE, Anne MOUCHET - [2d FW]	B1	Q1	20	-	[+]	3
OCEA0220-1	<i>Biogeochemical Cycles in the Polar Ocean and Sea Ice</i> (english language) - Bruno DELILLE, Anne MOUCHET	B1	Q1	20	-	-	3
OCEA0043-2	<i>Ecoethology of the marine animals</i> - Christian MICHEL	B1	Q1	30	-	-	3
OCEA0062-5	<i>Ecotoxicology and Biodegradation of Marine Pollutants, Marine ecotoxicology</i> (english language) - Krishna DAS	B1	Q1	15	15	-	4
OCEA0027-1	<i>Applications of stable isotopes in marine sciences</i> -	B1	Q1	15	15	-	4

# Study programmes 2015-2016

## Faculty of Sciences

### Master in oceanography (120 ECTS)

		EPOINT					
OCEA0028-1	<i>Impact study in a sea environment : theory and practice</i> - Pierre LEJEUNE	B1	Q1	20	-	-	3
OCEA0080-2	<i>Biochemistry, Physiology and Aquariology, Physiology and biochemistry of the marine animals</i> (english language) - Philippe COMPÈRE	B1	Q1	15	15	-	3
OCEA0030-1	<i>Sea Climatology and meteorology</i> - Michel ERPICUM	B1	Q2	30	-	-	3
ESHY0070-1	<i>Dynamics of lower atmospherical layers and air-sea interactions</i> - Louis FRANÇOIS	B1	Q1	30	15	-	4
OCEA0071-1	<i>Geophysical fluid dynamics - part 1</i> (english language) - JeanMarie BECKERS	B1	Q2	30	15	-	5
OCEA0081-1	<i>Numerical Methods in Geophysics - Part 2</i> - JeanMarie BECKERS	B1	Q1	15	30	-	5
GEOLO256-1	<i>Geochemistry of sediments and interstitial water</i> - Nathalie FAGEL	B1	Q1	15	15	-	3
GEOLO225-3	<i>Analytical Geochemistry</i> - Nathalie FAGEL	B1	Q1	10	10	-	3
GEOLO006-2	<i>Rocks and sedimentary processes</i> - Frédéric BOULVAIN - [3d FW]	B1	Q1	20	-	[+]	3
OCEA0063-1	<i>Biology of Marine Mammals</i> (english language) - Part I : Ecology and Ecotoxicology - Krishna DAS - Part II : pathology and necropsies - Thierry JAUNIAUX	B1	Q1	15	-	-	4
OCEA0033-1	<i>Global changes and sea environment</i> - Anne MOUCHET	B1	Q2	15	15	-	3
OCEA0056-2	<i>Marine Plant Biology and Ecology, Marine phanerogames ecology</i> (english language) - Sylvie GOBERT	B1	Q1	15	10	-	3
OCEA0056-3	<i>Marine Plant Biology and Ecology, Techniques of sampling in marine ecology</i> (english language) - Sylvie GOBERT	B1	Q1	15	10	-	3
OCEA0035-1	<i>Data acquisition and analysis, complements</i> - Aïda ALVERA AZCARATE	B1	Q1	15	10	-	3
OCEA0144-1	<i>Ecology of the coral reefs</i> (english language) - Mathieu POULICEK	B1	Q1	30	-	-	3
OCEA0059-3	<i>Remote Sensing of the Oceans, Advanced satellite oceanography</i> (english language) - Yves CORNET	B1	Q1	15	15	-	3

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

#### Option Modelling Marine Environments (B1 : 30Cr)

OCEA0023-1	<i>Complement of ecological modeling</i> - Marilaure GRÉGOIRE	B1	Q2	15	30	-	3
OCEA0036-1	<i>Structures and applications of marine hydrodynamic models</i> - Alexander BARTH	B1	Q1	15	15	-	3
OCEA0219-1	<i>Biogeochemical Cycles in the Ocean</i> (english language) - Bruno DELILLE, Anne MOUCHET - [2d FW]	B1	Q1	20	-	[+]	3
OCEA0073-1	<i>Numerical methods in geophysics, Part 1</i> - JeanMarie BECKERS	B1	Q2	15	30	-	3

With the agreement of the Jury, choose courses totalling 18 credits among : (B1 : 18Cr)

SSTG0032-1	<i>Practical professional internship in oceanography</i> - COLLÉGIALITÉ, Gilles LEPOINT - [1w Internship]	B1	TA	-	-	[+]	5
OCEA0020-1	<i>Current issues in oceanography</i> - Aïda ALVERA AZCARATE	B1	Q2	15	15	-	4
OCEA0071-1	<i>Geophysical fluid dynamics - part 1</i> (english language) - JeanMarie BECKERS	B1	Q2	30	15	-	5

# Study programmes 2015-2016

## Faculty of Sciences

### Master in oceanography (120 ECTS)

OCEA0072-1	<i>Geophysical fluid dynamics - part 2 (english language) - JeanMarie BECKERS</i>	B1	Q1	30	15	-	<b>5</b>
ESHY0070-1	<i>Dynamics of lower atmospheric layers and air-sea interactions - Louis FRANÇOIS</i>	B1	Q1	30	15	-	<b>4</b>
OCEA0030-1	<i>Sea Climatology and meteorology - Michel ERPICUM</i>	B1	Q2	30	-	-	<b>3</b>
OCEA0220-1	<i>Biogeochemical Cycles in the Polar Ocean and Sea Ice (english language) - Bruno DELILLE, Anne MOUCHET</i>	B1	Q1	20	-	-	<b>3</b>
ZOOL0220-1	<i>Planctonology - Anne GOFFART</i>	B1	Q2	15	30	-	<b>3</b>
OCEA0062-5	<i>Ecotoxicology and Biodegradation of Marine Pollutants, Marine ecotoxicology (english language) - Krishna DAS</i>	B1	Q1	15	15	-	<b>4</b>
OCEA0028-1	<i>Impact study in a sea environment : theory and practice - Pierre LEJEUNE</i>	B1	Q1	20	-	-	<b>3</b>
OCEA0035-1	<i>Data acquisition and analysis, complements - Aïda ALVERA AZCARATE</i>	B1	Q1	15	10	-	<b>3</b>
OCEA0033-1	<i>Global changes and sea environment - Anne MOUCHET</i>	B1	Q2	15	15	-	<b>3</b>
OCEA0081-1	<i>Numerical Methods in Geophysics - Part 2 - JeanMarie BECKERS</i>	B1	Q1	15	30	-	<b>5</b>
OCEA0059-3	<i>Remote Sensing of the Oceans, Advanced satellite oceanography (english language) - Yves CORNET</i>	B1	Q1	15	15	-	<b>3</b>

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

#### Compulsory courses (B1 : 30Cr)

DOCU0450-2	<i>Documentation training applied to oceanography (bibliography and database) - Aïda ALVERA AZCARATE, Ninfa GRECO - [30h Mon. WS]</i>	B1	Q1	-	-	[+]	<b>5</b>
SMEM0003-1	<i>Final thesis - COLLÉGIALITÉ</i>	B1	TA	-	-	-	<b>25</b>