

**Cycle view of the study programme**

|  |   | B1 | Or | Th | Pr  | Au  | Cr       |
|--|---|----|----|----|-----|-----|----------|
| <b>Core curriculum compulsory courses (B1 : 60Cr, B2 : 30Cr)</b> |   |    |    |    |     |     |          |
| OCEA0075-1   | <i>Physical oceanography and marine meteorology</i> (english language)<br>- <i>Theory and practice</i> - JeanMarie BECKERS<br>- <i>Fieldwork trip</i> - JeanMarie BECKERS - [3d FW] | B1 | Q1 |    |     |     | <b>6</b> |
|  |   |    | 30 | 15 | -   |     |          |
|  |   |    | -  | -  | [+] |     |          |
| OCEA0086-1   | <i>Chemical oceanography</i> (english language) - Alberto BORGES - [2d FW]  | B1 | TA | 20 | 5   | [+] | <b>4</b> |
| OCEA0087-1   | <i>Satellite oceanography</i> (english language) - Aida ALVERA AZCARATE   | B1 | Q1 | 15 | 15  | -   | <b>3</b> |
| GEOL1039-1   | <i>Geological oceanography</i><br>- <i>From theory to field work</i> - Nathalie FAGEL - [1d FW]<br>- <i>Additional field work</i> - Nathalie FAGEL - [2d FW]                        | B1 | Q1 |    |     |     | <b>5</b> |
|  |   |    | 20 | 20 | [+] |     |          |
|  |   |    | -  | -  | [+] |     |          |
| OCEA0088-1   | <i>Marine ecology</i> (english language) - Krishna DAS, Sylvie GOBERT - [5h Mon. WS, 4d FW]   | B1 | TA | 10 | -   | [+] | <b>4</b> |
| OCEA0089-1   | <i>Introduction to marine ecosystems modelling</i> (english language) - Marilaure GRÉGOIRE  | B1 | Q1 | 15 | 15  | -   | <b>3</b> |
| OCEA0014-1   | <i>Mathematical analysis and modelling methods applied to the environment</i> (english language) - Marilaure GRÉGOIRE   | B1 | Q1 | 20 | 20  | -   | <b>4</b> |
| OCEA0049-1   | <i>Pelagic oceanography</i> - Sylvie GOBERT - [20h Mon. WS, 2d FW]  | B1 | Q2 | 10 | -   | [+] | <b>4</b> |
| OCEA0011-2   | <i>Coastal oceanography</i> - Aida ALVERA AZCARATE, Alexander BARTH - [3d FW]   | B1 | Q2 | 20 | 10  | [+] | <b>5</b> |
| OCEA0019-1   | <i>Biological oceanology</i> - Sylvie GOBERT - [20h Mon. WS, 8d FW]   | B1 | Q2 | 10 | -   | [+] | <b>6</b> |
| OCEA0090-1   | <i>Dynamics of marine ecosystems</i> - Marilaure GRÉGOIRE   | B1 | Q2 | 20 | 20  | -   | <b>4</b> |
| DROI0725-1   | <i>Law of the sea and of sea environment</i> - Philippe VINCENT   | B1 | Q2 | 20 | -   | -   | <b>2</b> |
| GEOG0043-1   | <i>Developing marine resources</i> - Guénaël DEVILLET   | B1 | Q2 | 20 | -   | -   | <b>3</b> |
| GEOG2012-1   | <i>Coastal geomorphology, changing sea levels and the vulnerability of coastal regions</i> - Aurelia HUBERT - [3d FW]   | B1 | Q2 | 20 | 10  | [+] | <b>3</b> |
| OCEA0091-1   | <i>Methodological approach to oceanography practice</i> - Aida ALVERA AZCARATE, Sylvie GOBERT - [30h Mon. WS]   | B1 | Q2 | -  | -   | [+] | <b>4</b> |

*Notice* : A practical, two-week work placement (sampling on a boat, diving, dosages, plankton, benthos, data bases, etc.) is carried out at STARESO, the University's Station de Recherches Sous-Marines et Océanographiques (Calvi, France) at the end of the first block of the Masters in Oceanography, to carry out practical work associated with subjects covered during the year (physical, biological, geological, chemical oceanography, etc.).

|            |   |    |    |   |   |     |           |
|------------|---|----|----|---|---|-----|-----------|
| DOCU2461-1 | <i>Documentary training and research and scientific writing for the dissertation</i> - Michaël OVIDIO, Carole ROUGEOT - [30h Mon. WS] | B2 | Q1 | - | - | [+] | <b>3</b>  |
| SMEM0003-1 | <i>Final thesis</i> - Aida ALVERA AZCARATE, COLLÉGIALITÉ  | B2 | TA | - | - | -   | <b>27</b> |

**Focus compulsory courses (B2 : 10Cr)**

|            |   |    |    |    |    |     |          |
|------------|---|----|----|----|----|-----|----------|
| SSTG0032-1 | <i>Internship</i> - Aida ALVERA AZCARATE, Gilles LEPOINT - [1mois Internship]             | B2 | TA | -  | -  | [+] | <b>6</b> |
| OCEA0020-1 | <i>Current issues in oceanography</i> - Aida ALVERA AZCARATE, COLLÉGIALITÉ, Sylvie GOBERT | B2 | Q1 | 15 | 15 | -   | <b>4</b> |

**Focus optional courses (B2 : 20Cr)**

In agreement with the Jury, choose courses for a total of 20 credits, in at least two different fields, from : (B2 : 20Cr)

**Biogeochemistry and climate change**

|            |   |    |    |    |   |   |          |
|------------|---|----|----|----|---|---|----------|
| OCEA0219-1 | <i>Biogeochemical Cycles in the Ocean</i> (english language) - Odile CRABECK, Bruno DELILLE, Peter LANDSCHÜTZER | B2 | Q1 | 20 | - | - | <b>3</b> |
|------------|---|----|----|----|---|---|----------|

|   |  |    |    |    |    |     |   |  |
|---|--|----|----|----|----|-----|---|--|
| <b>Corequisite :</b>  |  |    |    |    |    |     |   |  |
| OCEA0220-1 - Biogeochemical Cycles in the Polar Ocean and Sea Ice |  |    |    |    |    |     |   |  |
| OCEA0220-1  | <i>Biogeochemical Cycles in the Polar Ocean and Sea Ice</i> (english language) - Odile CRABECK, Bruno DELILLE, Peter LANDSCHÜTZER  | B2 | Q1 | 20 | -  | -   | 3 |  |
| <b>Corequisite :</b>  |  |    |    |    |    |     |   |  |
| OCEA0219-1 - Biogeochemical Cycles in the Ocean                   |  |    |    |    |    |     |   |  |
| GEOL0256-1  | <i>Marine sediment geochemistry</i> (english language) - Nathalie FAGEL  | B2 | Q1 | 15 | 15 | -   | 4 |  |
| <b>Marine ecology and biodiversity</b>                            |  |    |    |    |    |     |   |  |
| BIOL0808-3  | <i>Functional morphology, Marine vertebrates</i> - Eric PARMENTIER   | B2 | Q1 | 15 | 10 | -   | 3 |  |
| OCEA0093-1  | <i>Molecular approaches to the diversity of marine microorganisms</i> (english language) - N...  | B2 | Q1 | 15 | 15 | -   | 3 |  |
| OCEA0094-1  | <i>Marine phanerogames ecology</i> (english language) - Sylvie GOBERT  | B2 | Q1 | 15 | 10 | -   | 3 |  |
| OCEA0063-1  | <i>Biology of Marine Mammals</i> (english language)<br>- Part I : <i>Ecology and Ecotoxicology</i> - Krishna DAS<br>- Part II : <i>pathology and necropsies</i> - Thierry JAUNIAUX | B2 | Q1 | 15 | -  | -   | 4 |  |
| OCEA0083-1  | <i>Physiology and biochemistry of the marine animals</i> (english language) - Philippe COMPÈRE   | B2 | Q1 | 15 | 15 | -   | 3 |  |
| OCEA0223-1  | <i>Biodiversity of tropical coastal regions: study and intercultural context</i> - Bruno FREDERICH, Gilles LEPOINT, Aliénor PIRLET, Richard RASOLOFONIRINA - [12d FW]              | B2 | Q2 | 10 | -  | [+] | 4 |  |
| OCEA0230-1  | <i>Marine invertebrate zoology</i> - Loïc MICHEL   | B2 | Q1 | 20 | 10 | -   | 3 |  |
| <b>Modeling and operational oceanography</b>                      |  |    |    |    |    |     |   |  |
| OCEA0096-1  | <i>Ecological and biogeochemical cycles modeling</i> - Marilaure GRÉGOIRE, Guy MUNHOVEN  | B2 | Q1 | 15 | 30 | -   | 3 |  |
| OCEA0036-1  | <i>Structures and applications of marine hydrodynamic models</i> (english language) - Alexander BARTH  | B2 | Q1 | 15 | 15 | -   | 3 |  |
| OCEA0073-1  | <i>Numerical methods in geophysics, Part 1</i> - JeanMarie BECKERS   | B2 | Q2 | 15 | 30 | -   | 3 |  |
| OCEA0097-1  | <i>Data assimilation and inverse methods</i> (english language) - Alexander BARTH  | B2 | Q1 | 30 | -  | -   | 3 |  |
| OCEA0071-1  | <i>Geophysical fluid dynamics - part 1</i> (english language) - JeanMarie BECKERS  | B2 | Q2 | 30 | 15 | -   | 5 |  |
| SPAT0024-2  | <i>Meteorology</i> (english language)<br>- Part 1 - Louis FRANÇOIS<br>- Part 2 - Louis FRANÇOIS  | B2 | Q1 | 20 | 10 | -   | 6 |  |
| <b>Exploitation of marine resources, anthropic pressures</b>      |  |    |    |    |    |     |   |  |
| OCEA0227-1  | <i>Tools for analysis and assistance for integrated management</i> - JeanFrançois DELIÈGE, Sylvie GOBERT - [5h Mon. WS]  | B2 | Q1 | 15 | 15 | [+] | 5 |  |
| OCEA0226-1  | <i>Introduction to aquaculture</i> - Carole ROUGEOT  | B2 | Q1 | 30 | -  | -   | 3 |  |
| OCEA0084-1  | <i>Marine ecotoxicology</i> (english language) - Krishna DAS - [15h Mon. WS]   | B2 | Q1 | 15 | -  | [+] | 4 |  |
| OCEA0144-1  | <i>Biology of coral reefs</i> (english language) - Stéphane ROBERTY  | B2 | Q1 | 30 | -  | -   | 3 |  |
| <b>Data acquisition and processing</b>                            |  |    |    |    |    |     |   |  |
| OCEA0159-1  | <i>Advanced satellite oceanography</i> (english language) - Aida ALVERA AZCARATE   | B2 | Q1 | 15 | 15 | -   | 3 |  |
| OCEA0224-1  | <i>Statistical analysis of oceanographic data</i> - Marilaure GRÉGOIRE, Patrick MEYER  | B2 | Q1 | 15 | 15 | -   | 3 |  |
| OCEA0027-1  | <i>The study of stable isotopes and application to environmental sciences</i> - Gilles LEPOINT, Loïc MICHEL  | B2 | Q1 | 15 | 15 | -   | 4 |  |

|            |  |    |    |    |    |     |   |
|------------|--|----|----|----|----|-----|---|
| GEOL0021-7 | <i>Geophysical prospecting</i> - Frédéric NGUYEN - [5d FW, 20h Proj.]  | B2 | Q2 | 26 | 20 | [+] | 5 |
| PHYS0999-1 | <i>Digital creation in sciences</i> - Roland BILLEN, Valentin FISCHER, JeanChristophe MONBALIU, Eric PARMENTIER, Michel RIGO, Nicolas VANDEWALLE - [30h Proj.] | B2 | TA | 10 | -  | [+] | 5 |

[...] Exceptionally, and in agreement with the Jury, one or several courses may be chosen from the courses' programmes of other field of education of the Faculty of Sciences, other faculties or other universities (for example, in connection with the final dissertation, etc.).

## **Bridging courses (max 15-60 credits) Master in oceanography (120 credits)**

### **Optional courses (B0 : 60Cr)**

The refresher programme, for a maximum of 60 credits, will be established by the jury of the Masters in Oceanography, depending on the student's prior training: this programme will enable the student to acquire the basic knowledge required in relevant fields (statistics, IT, biology, chemistry, physics, etc.). (B0 : 60Cr)

[...] Between 15 and 60 ECTS of courses