Examination Regulations (Rules) of the Faculty of Mathematics and Natural Sciences at Christian-Albrechts-Universität zu Kiel (Kiel University) for students of “Biological Oceanography", leading to a Master of Science Degree (M.Sc.)

(Biological Oceanography Examination Regulations (single subject))

of 27 November 2015


[Non-official publication]

Based on Section 52 (1) Sentence 1 of the Schleswig-Holstein Higher Education Act (HSG) in the version published on 28 February 2007 (GVOBl. Schleswig-Holstein, page 184), after a resolution was passed by the Convention of the Faculty of Mathematics and Natural Sciences of 24 June 2015 the following Rules were issued:

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Appendix: Optional modules in the Biological Oceanography Master of Science
§ 1
Scope of application

(1) These degree-specific examination regulations (FPO) in conjunction with the Examination Procedure Regulations of Christian-Albrechts-Universität zu Kiel for students of Bachelor's and Master's Degree Programmes (PVO) apply to the degree programme in Biological Oceanography at Kiel University.

(2) The degree-specific examination regulations of the respective faculties or departments apply for imported modules, in particular for admission to and performance of examinations.

§ 2
Objective of the degree programme, purpose of the examination

(1) Students should obtain a basic understanding of the structure and function of marine ecosystems, along with the human influences on these systems; a broad, interdisciplinary overview of the current state of knowledge and methods used in Biological Oceanography; as well as an advanced, scientific-methodical qualification for independently processing complex issues within this area of research.

(2) The Master's degree programme “Biological Oceanography” facilitates to obtain a more advanced degree qualifying for a professional career. The final examination ascertains whether the candidate has obtained an advanced scientific-methodological qualification for independent research in the field of Biological Oceanography.

§ 3
Academic title

The student is awarded the degree of Master of Science (M.Sc.) if he or she has obtained at least a final grade of 'sufficient'.

§ 4
Admission to the Master’s degree programme

(1) Prerequisites for admission to the Master's degree programme are:

1. Submission of a complete application for the aptitude test for the Master's degree programme within the deadlines set by Kiel University and announced on the Biological Oceanography programme’s website. Applicants with a degree other than a B.Sc. in Biology must include the Module Handbook or a comparable document for the underlying degree showing the scope in terms of time, teaching forms, contents and learning objectives of the individually completed modules with the application.

2. A passed Bachelor's examination or comparable qualification in Biology or a degree programme in Natural Sciences or Environmental Sciences, after a normal course of study of at least three years and with a scope of at least 180 ECTS credits at a higher education institute in the Federal Republic of Germany or an equivalent foreign higher education institute. If admission is granted on the basis of a degree programme in Natural Sciences or Environmental Sciences, at least 60 ECTS credits must have been obtained from the field of biology.

3. Evidence of special aptitude according to (2).

(2) Special aptitude can be proven by

1. A qualified university degree in accordance with (1) Number 2, with a minimum grade of 2.5.

2. A special motivation, evidenced by a motivational letter written in English which presents

   a. what sets the degree programme in Biological Oceanography apart
   b. which areas and content of Biological Oceanography correspond with the interests and abilities of the applicant, and
c. which subject areas and content are suitable for a Master's thesis.
Details regarding the scope and format of the motivational letter will be announced promptly and in an appropriate manner at the start of the application procedure and
3. Proof of a good knowledge of the English language in accordance with the study qualification rules (Studienqualifikationssatzung).

(3) The Recognition Rules apply for the decision regarding recognition of the degrees qualifying for a professional career and the recognition of coursework and examinations. The Examination Board of the Master’s degree programme is responsible for making other decisions based on this provision and for establishing whether or not a motivational letter was submitted. It can transfer decision-making powers to its individual members.

§ 5 Structure of curriculum
The standard period of study for the Master's degree programme is four semesters. The scope of the degree programme for the first three semesters (each) encompasses approximately 25 Semesterwochenstunden (SWS) (weekly 45-minute teaching units for the duration of one semester of about 12 weeks), for which the student must be present (contact hours), and approximately 600 hours of independent study. A total of 120 ECTS credits are to be obtained, including 30 ECTS credits for the Master's thesis.

§ 6 Academic year
(1) The academic year applies to this degree programme. Courses for both new students and returning students from odd-numbered semesters are only offered in a winter semester.
(2) Registrations for odd-numbered semesters are only possible for a winter semester. Registrations for even-numbered semesters are only possible for a summer semester.

§ 7 Teaching and examination language
Lectures and examinations will be held in English.

§ 8 Examination Board
Contrary to Section 3 (2) Sentence 1 of the Examination Procedure Regulations (PVO), the Examination Board consists of four members who are university lecturers, one member from the scientific personnel and one member from the student body.

§ 9 Module examinations and module grades
(3) The type and number of examinations required as part of the modules can be found in the annex.
(4) Examinations can be: written examinations, written reports, oral examinations, oral presentations, term papers, tests, multiple choice examinations, take-home-examinations, protocols, presentations, study group descriptions, reports on a practical or work experience, practical demonstrations, oral presentations with written reports, tutorials, essays, reports, summaries, draft practicals and portfolios. The individual details can be found in the annex.
(5) Prerequisites may be required for examinations. Examinations which require prerequisites are marked as such in the annex. Examination prerequisites can be: written reports, oral examinations, oral presentations, term papers, tests, multiple choice examinations, take-home-examinations, protocols, presentations, study group descriptions, reports on a
practical or work experience, practical demonstrations, oral presentations with written reports, tutorials, essays, reports, summaries, draft practicals and portfolios. Individual details will be suitably announced at the start of the respective course.

(6) A written examination lasts at least 30 minutes and no longer than five hours.

(7) If a module examination consists of several examinations, the module grade will be calculated using the weighted average of the individual grades obtained. The weighting is performed in relation to the ECTS credits allocated to the course within which the examination was taken.

(8) If an examination is jointly set by several examiners, they also jointly determine the grade. The Examination Board will decide in the event that no agreement is reached.

§ 10

Further prerequisites for admission to examinations

(1) If a module contains lab courses, practical exercises, field trips or one of the seminars listed in (2), admission to the examination requires regular attendance to these courses. A maximum of three course dates may be missed without giving reasons for the non-attendance. If students are absent from additional course dates due to illness (hereby a maximum of 40% of all dates, however), those parts of the course which were missed can be replaced by a written draft or an oral colloquium.

(2) MNF-bioc-231:
Attendance to the seminar in the MNF-bioc-231 module is mandatory. Presentations are made by scientists who have been invited to speak on current research topics. The aim is to teach students to critically evaluate current research, participate in scientific discussions and come into contact with new research topics and methods. They also experience the importance of an interdisciplinary approach within Marine Sciences. Attendance is therefore crucial.

MNF-bioc-232:
In the seminar for MNF-bioc-232 - Current Topics Marine Ecology, every student must produce a written critical review on a current publication from this field for analysis. The short group presentations and the critical discussions during lectures that take place as part of the seminar are an important requirement for producing a justified, critical approach for giving opinions on scientific publications. Students will only achieve this by regularly participating in the seminars.

MNF-bioc-233:
The seminar in the MNF-bioc-233 module goes far beyond the usual requirements of a seminar in its structure. It requires oral seminar papers to be completed by the students, the joint reading, analysis and interpretation of sources, as well as holding, structuring and leading scientific discussions between the students themselves and with lecturers. The seminar is not only designed for the lecturers to pass on the specialist scientific knowledge, instead the main goal is for the students to develop analytical and rhetorical skills, apply presentation techniques, develop teamwork skills and develop appropriate issues in the sense of scientific discourse, etc. In addition, it is also designed to prepare the field trip, including the necessary safety instructions and rules on what to do when working in the laboratory for the stays on sea-based experimental platforms and ships during the field trip.

MNF-bioc-331:
In the seminar for the MNF-bioc-331 module - Current Topics- every student (approx. 12 to 14 participants) must speak about or present a research proposal on a biogeochemical topic. In doing so, the students should practise critically analysing the presented research topics and evaluating their contents and form. Open discussion about the presented topics is crucial for this (see the module description). This course is therefore not primarily designed for the lecturers to pass on the specialist scientific knowledge, but to independently prepare and present logical and well-founded scientific seminar papers, as well as to hold discussions with fellow students and lecturers where the students represent their own theses in a sound, substantiated manner. The students can therefore not achieve
the qualification objective without regular, active participation. Acquisition of the skills depends on attendance by the other participants.

**MNF-bioc-334:**
The Current Topics seminar in the MNF-bioc-334 module is a literature seminar embedded in the context of three lectures. A core task is for the students to conduct oral presentations. These should serve as joint reading, analysis and interpretation of original scientific literature. The students should also learn how to hold, structure and lead scientific discussions amongst themselves and with lecturers. This is simply not possible if the group is not present. This course is therefore not only designed for the lecturers to pass on the specialist scientific knowledge, instead the main goal is for the students to develop analytical and rhetorical skills, apply presentation techniques, develop teamwork skills and develop appropriate issues in the sense of scientific discourse.

**MNF-bioc-266:**
The seminar in the MNF-bioc-266 module is an accompanying literature seminar which contains oral presentations to be completed by the students, requiring joint analyses and source interpretation. It should also pass on the skills students need in order to hold a scientific discussion among themselves and with lecturers. The seminar is therefore not only designed for the lecturers to pass on the specialist scientific knowledge, instead the main goal is for the students to develop analytical and rhetorical skills, apply presentation techniques, develop teamwork skills and develop appropriate issues in the sense of scientific discourse, etc. In addition, the seminar also includes a preliminary discussion about the field trip to the Alfred Wegener Institute, Helmholtz centre for polar and marine research in Bremerhaven, involving the safety regulations when entering technical rooms and the research ice breaker, the Polarstern.

(3) Individual details will be suitably announced at the start of the respective course.

**§ 11 Master’s thesis**

Students who have obtained at least 70 ECTS credits from module examinations in compulsory and compulsory elective modules may be admitted to the Master’s thesis.

When applying for admission to the Master’s thesis, the examination candidate may propose examiners and a topic for the thesis, without this giving rise to any claims.

The period from when the topic is issued until the Master’s thesis is submitted is six months. The Examination Procedure Regulations (Rules) regulate extensions to the deadline.

The topic of the Master’s thesis may be handed back only once and only within the first month of the preparation period.

The results of the Master’s thesis must be defended orally as part of a scientific presentation and discussion. This part of the examination must be graded by the examiners in a joint vote.

The written Master’s thesis will be graded by both examiners within six weeks of submission.

The grade for the Master’s thesis is calculated as follows: 75% comes from the grade for the written thesis and 25% comes from the grade for the oral presentation of its content.

The Master’s thesis is to be written in English. An application can be made to the Examination Committee for the Master’s thesis to be written in German.

The Master’s thesis is to be submitted to the responsible Examination Office in the form of two hard copies and additionally one copy saved in a medium suitable for electronic data processing.
§ 12
Calculation of the overall grade

When calculating the overall grade, the module grades (marked in the attached Programme Schedule) are weighted by ECTS credits.

The grade for the Master's thesis is weighted double.

§ 13a
Transitional provisions of the revised version dated 27 November 2015

The Examination Board decides regarding special cases of hardship for which the student is not responsible.

§ 13b
Transitional provisions of the amended regulations dated 4 February 2016

1. Module examinations which have been completed and passed in full by the date these Rules enter into force will remain valid.

2. If a student has completed and passed independent parts of a module examination, these will be recognised. The Examination Board determines which additional examinations are necessary to complete the module, under consideration of the module’s learning targets and the purpose of the examination.

3. Examinations failed before these Rules entered into force will be set off against the number of attempts allowed under the new examination regulations, provided the structure of the new module examination permits recognition.

4. Upon application, the Examination Board decides regarding special cases of hardship for which the student is not responsible.

§ 13c
Transitional provisions of the amended regulations dated 24 November 2016

1. Module examinations which have been completed and passed in full by the date these Rules enter into force will remain valid.

2. If a student has completed and passed independent parts of a module examination, these will be recognised. The Examination Board determines which additional examinations are necessary to complete the module, under consideration of the module’s learning targets and the purpose of the examination.

3. If an examination has been taken and passed at the time these Rules enter into force, and this examination is ungraded in accordance with the new stipulations, the grade will not be included. Upon the student’s request, the Examination Board decides whether a grade will be included on the basis of the old examination regulations. An application for inclusion must be filed by 31 March 2017.

4. Examinations failed before these Rules entered into force will be set off against the number of attempts allowed under the new examination regulations, provided the structure of the new module examination permits recognition.

5. Upon application, the Examination Board decides regarding special cases of hardship for which the student is not responsible.

§ 13d
Transitional provisions of the amended regulations dated 10 January 2018

1. Module examinations which have been completed and passed in full by the date these Rules enter into force will remain valid.

2. If students have already passed one of the examinations in a module, then they complete this module according to the valid regulations which apply until these amended
examination regulations come into force. This also applies if one of the examinations is failed or deemed failed.

(3) Upon application, the Examination Board decides regarding special cases of hardship for which the student is not responsible.

§ 13e

Transitional provisions of the amended regulations dated 13 June 2019

(1) Module examinations which have been completed and passed in full by the date these Rules enter into force will remain valid.

(2) If a student has completed and passed independent parts of a module examination, these will be recognised. The Examination Board determines which additional examinations are necessary to complete the module, under consideration of the module’s learning targets and the purpose of the examination.

(3) Examinations failed before these Rules entered into force will be set off against the number of attempts allowed under the new examination regulations, provided the structure of the new module examination permits recognition.

(4) Upon application, the Examination Board decides regarding special cases of hardship for which the student is not responsible.

§ 13f

Transitional provisions for the amended regulations dated 20 July 2020

Module examinations which have been completed and passed in full by the date these Rules enter into force will remain valid. Examinations that have already been started in modules will be finished according to the old examination regulations.

§ 13

Entry into force, expiry

(1) These Examination Regulations enter into force on 31. March 2016.

(2) At the same time the Examination Regulations (Rules) of the Faculty of Mathematics and Natural Sciences at Christian-Albrechts-Universität zu Kiel (Kiel University) for students of “Biological Oceanography”, leading to a Master of Science Degree (M.Sc.) (Biological Oceanography Examination Regulations (single subject)) of 29 November 2007 cease to be in force.

(3) The Examination Board decides regarding special cases of hardship for which the student is not responsible.

The University Board at Christian-Albrechts-Universität zu Kiel granted its approval in accordance with Article 1 § 52 (1) Clause 1 in conjunction with Article 2 § 1 (4) of the Schleswig - Holstein Higher Education Act in its letter dated 28 November 2007.

Kiel, 27 November 2015

Prof. Dr. Wolfgang J. Duschl
Dean of the Faculty of Mathematics and Natural Sciences
Christian-Albrechts-Universität zu Kiel
Article 2 of the amendment of 4. February 2016:
These rules enter into force on 31 March 2016.

Article 2 of the amendment of 19 May 2016:
These rules enter into force the day after they are published.

Artikel 2 der Änderungssatzung vom 16. Juni 2016:
These rules enter into force the day after they are published.

Artikel 3 der Änderungssatzung vom 24. November 2016:
These rules enter into force the day after they are published.

Artikel 2 der Änderungssatzung vom 2. Februar 2017:
These rules enter into force the day after they are published.

Artikel 2 Absatz 1 der Änderungssatzung vom 10. Januar 2018:
These rules enter into force on 1 October 2018.

Artikel 2 der Änderungssatzung vom 21. November 2018:
These rules enter into force the day after they are published.

Artikel 2 Absatz 1 der Änderungssatzung vom 13. Juni 2019:
These rules enter into force on 1 October 2019.

Artikel 2 der Änderungssatzung vom 20. Juli 2020:
These rules enter into force on 1 October 2019.

Artikel 2 der Änderungssatzung vom 12. Januar 2022:
These rules enter into force the day after they are published.
### Annex

**Biological Oceanography**

**Order of courses for the Master of Science in „Biological Oceanography“**

<table>
<thead>
<tr>
<th>Module</th>
<th>Name</th>
<th>Teaching method</th>
<th>SWS</th>
<th>C/ O</th>
<th>Requirement</th>
<th>Exam</th>
<th>ECTS</th>
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</thead>
<tbody>
<tr>
<td><strong>First Semester</strong></td>
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</tr>
<tr>
<td>MNF-bioc-101</td>
<td>Introduction to Biological Oceanography</td>
<td>L</td>
<td>3</td>
<td>C</td>
<td>WE 100%</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>MNF-bioc-102</td>
<td>Practical Courses in Biological Oceanography</td>
<td>P/E</td>
<td>12/1</td>
<td>C</td>
<td>WE 100%</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>MNF-bioc-103-01</td>
<td>Introduction to Chemical Oceanography</td>
<td>L/E</td>
<td>3/1</td>
<td>C</td>
<td>WE 100%*</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>bioc-110-02a</td>
<td>Doing Science</td>
<td>L/pE</td>
<td>1/2</td>
<td>C</td>
<td>OP*</td>
<td>6</td>
<td></td>
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<tr>
<td>Bioc104-01a</td>
<td>Introduction to Marine Geology</td>
<td>L</td>
<td>2</td>
<td>C</td>
<td>WE 100%</td>
<td>3</td>
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<td><strong>∑ 30</strong></td>
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<tr>
<td><strong>Second Semester</strong></td>
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<tr>
<td>MNF-bioc-201-01</td>
<td>Advanced Studies in Biological Oceanography</td>
<td>L</td>
<td>3</td>
<td>C</td>
<td>WE (100%)</td>
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<tr>
<td>MNF-bioc-202</td>
<td>Advanced Practical Course in Biological Oceanography</td>
<td>P/E</td>
<td>6/2</td>
<td>C</td>
<td>P or OP (100%)</td>
<td>5</td>
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<tr>
<td>MNF-bioc-220-01a</td>
<td>Biological Modelling and Biostatistics</td>
<td>2 (L/pE)</td>
<td>4 (2x(1/1))</td>
<td>C</td>
<td>(P+WE)*</td>
<td>5</td>
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<tr>
<td>pherIPon f-01a</td>
<td>Introduction to Physical Oceanography for Minors</td>
<td>L</td>
<td>2</td>
<td>C</td>
<td>WE 100%</td>
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<tr>
<td></td>
<td>Choose 1 of the following 231–233</td>
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<tr>
<td>MNF-bioc-231</td>
<td>Current Topics in Marine Biogeochemistry I (1)</td>
<td>L/S(a)</td>
<td>2/1</td>
<td>O</td>
<td>WE 100%</td>
<td>(5)</td>
<td></td>
</tr>
<tr>
<td>MNF-bioc-232</td>
<td>Current Topics in Marine Ecology I (1)</td>
<td>L/S(a)</td>
<td>2/2</td>
<td>O</td>
<td>OP 100%</td>
<td>(5)</td>
<td></td>
</tr>
<tr>
<td>MNF-bioc-233</td>
<td>Current Topics in Fish Ecology and Aquaculture (1)</td>
<td>Ex/E/S(a)</td>
<td>3/3/2</td>
<td>O</td>
<td>P 100%</td>
<td>(5)</td>
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<tr>
<td></td>
<td>Choose 5 ECTS from any other subject</td>
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<td><strong>∑ 20-26+x</strong></td>
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<td><strong>∑ 30</strong></td>
<td><strong>∑ 60</strong></td>
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<td><strong>Third Semester</strong></td>
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<tr>
<td>MNF-bioc-301</td>
<td>Multidisciplinary Oceanographic Research</td>
<td>P/S/Ex/E</td>
<td>4/1</td>
<td>C</td>
<td>All compulsory MNF-biocourses of 1. and 2. semester written thesis proposal* 100%</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>MNF-bioc-310</td>
<td>Summer School or Internship</td>
<td>P or Int</td>
<td>7</td>
<td>C</td>
<td>P 100%</td>
<td>5</td>
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<tr>
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<td>Choose 2 of the following:</td>
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<tr>
<td>MNF-bioc-331</td>
<td>Current Topics in Marine Biogeochemistry II (2)</td>
<td>L/S(a)</td>
<td>3/2</td>
<td>CE</td>
<td>OP 100%</td>
<td>(5)</td>
<td></td>
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<tr>
<td>MNF-bioc-332</td>
<td>Current Topics in Marine Ecology II (2)</td>
<td>L/S</td>
<td>3/2</td>
<td>CE</td>
<td>OP 100%</td>
<td>(5)</td>
<td></td>
</tr>
<tr>
<td>bioc-334-02a</td>
<td>Current Topics in Fish Ecology (2)</td>
<td>L/S(a)</td>
<td>2/2</td>
<td>CE</td>
<td>(WE + OP)*</td>
<td>(5)</td>
<td></td>
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<tr>
<td>MNF-bioc-335-01a</td>
<td>Fundamentals and Current Topics in Biogeochemical Modelling (2)</td>
<td>L/S</td>
<td>2/2</td>
<td>CE</td>
<td>OP 100%</td>
<td>(5)</td>
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<td></td>
<td>Choose 5 ECTS from any other subject</td>
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<td><strong>∑ 23+x</strong></td>
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</tbody>
</table>

*Written thesis proposal must be approved by the examination board.*
For information purposes only, the German original is binding.

<table>
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<td>30</td>
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</table>

### Explanations:
- **Module:** Module number
- **Name:** Module name
- **Form:** Teaching form: L: Lectures, P: Practical, E: Exercises, pE: practical Exercises (compulsory attendance), S: Seminar, S(a): Seminar (compulsory attendance), Ex: Excursion, C: Colloquia, T: Tutorial, Int: Internship
- **C / CE:** Status of the course (C: Compulsory, CE: Compulsory elective)
- **SWS:** Weeks per semester
- **Prerequisite:** Conditions for entry
- **Exam:** Form of exam and grading
  - Ma: Manuscript, E: Exercises, H: Homework, T: Tutorial
- **X% = graded exam with X% of module mark, (p/f) = pass/fail**
- **CP:** Credit Points

The weighing is accordingly to the credit points.

* Passing the exam prerequisite (details will be provided at the beginning of the respective course) is required to take part in the module exam.

# Composed exam
Optional modules in the Biological Oceanography Master of Science (this list is not exhaustive).

Other modules from the entire range at Kiel University can be used in the optional module section.

Not every optional module is offered each semester; The selection can vary from semester to semester (we recommend speaking to the Examination Board and the lecturers).

Examples of shifting optional courses for the Master of Science in “Biological Oceanography”

<table>
<thead>
<tr>
<th>Module</th>
<th>Name</th>
<th>Form</th>
<th>SWS</th>
<th>Prerequisite</th>
<th>Exam</th>
<th>CP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Summer Semester</strong></td>
<td></td>
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<td></td>
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<tr>
<td>MNF-bioc-250</td>
<td>Element cycles in the ocean</td>
<td>L</td>
<td>2</td>
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<td>OE 100%</td>
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<td>MNF-bioc-251</td>
<td>Biogeochemistry of Marine Sediments I</td>
<td>L</td>
<td>2</td>
<td>Ma 100%</td>
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<td>MNF-bioc-255</td>
<td>Mechanisms of biomineralization</td>
<td>S</td>
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<td>MNF-bioc-260</td>
<td>Marine discovery and biotechnology</td>
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<td>MNF-bioc-263</td>
<td>Trophodynamic Interactions</td>
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<td>Ma 100%</td>
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<td>MNF-bioc-266</td>
<td>Sea Bird Ecology</td>
<td>P</td>
<td>4</td>
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<td>MNF-bioc-266</td>
<td>Advanced course in Polar Ecology</td>
<td>L/S(a)/Ex</td>
<td>2/1/1</td>
<td>WE 50%</td>
<td>OP 50%</td>
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<td>MNF-bioc-267</td>
<td>Identification and taxonomy of marine invertebrates</td>
<td>L/pE/Ex</td>
<td>1/3/1</td>
<td>P 100%</td>
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<td>MNF-bioc-271</td>
<td>New aspects of meteorology and oceanography: Carbon cycling in a changing climate</td>
<td>L/S/E</td>
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<td>MNF-bioc-274</td>
<td>New Developments in Marine Microbiology I</td>
<td>S</td>
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<td>MNF-bioc-274</td>
<td>New Trends in Marine Biodiscovery</td>
<td>S</td>
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<td>OP 100%</td>
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<td>MNF-bioc-275</td>
<td>Invasion Ecology</td>
<td>L/S</td>
<td>1/1</td>
<td>OP 100%</td>
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<tr>
<td>MNF-bioc-276</td>
<td>Marine Food Webs – Research Reports II</td>
<td>S</td>
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<td>MNF-bioc-277</td>
<td>Air-Sea-Exchange</td>
<td>L/S</td>
<td>2/1</td>
<td>OP pass/fail</td>
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<td>MNF-bioc-279-01b</td>
<td>Geomicrobiology: accessing the hidden uncultured microbial majority in seafloor habitats</td>
<td>L/S/pE</td>
<td>1/1/2</td>
<td>OP 100%</td>
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<tr>
<td>bloc280-01e</td>
<td>Coastal Fish Ecology</td>
<td>L/S/P</td>
<td>1/1/3</td>
<td>(P 70% Op 30%)*</td>
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<td>bloc281-01e</td>
<td>Marine Evolutionary Genomics</td>
<td>L/E/S</td>
<td>1/1/1</td>
<td>(Ma 45% E 35% Op 20%)*</td>
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<tr>
<td>bloc283-01e</td>
<td>Scientific computing: data analytics in marine research – python introduction and beyond</td>
<td>L/E</td>
<td>1</td>
<td>WE 100%</td>
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# Module Overview

<table>
<thead>
<tr>
<th>Module</th>
<th>Name</th>
<th>Form</th>
<th>SWS</th>
<th>Prerequisite</th>
<th>Exam</th>
<th>CP</th>
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<td>Winter</td>
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<td>Semester</td>
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<td>bioc341-01a</td>
<td>Advanced Biological Modelling</td>
<td>L/E</td>
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<td>MNF-bioc-342</td>
<td>Current Topics in Biogeochemical Modelling</td>
<td>S/L</td>
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<td>OP 100%</td>
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<td>MNF-bioc-343-01</td>
<td>Current Topics in Benthic Ecology</td>
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<td>OP pass/fail</td>
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<tr>
<td>MNF-bioc-348</td>
<td>Introduction to Metabolomics</td>
<td>Ex/ E/S</td>
<td>2 weeks</td>
<td>P 100%</td>
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<tr>
<td>MNF-bioc-350</td>
<td>Climate-relevant trace gases in the ocean</td>
<td>L</td>
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<tr>
<td>bioc353-01a</td>
<td>Scientific Writing - How to Write and Publish a</td>
<td>S</td>
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<td>H pass/fail</td>
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<td>Scientific Paper</td>
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<td>MNF-bioc-355</td>
<td>Biogeochemistry of Marine Sediments II</td>
<td>L</td>
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<td>WE 100%</td>
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<tr>
<td>MNF-bioc-357</td>
<td>How to make and keep a habitable planet - biogeochemistry - climate feedbacks and astrobiology</td>
<td>L/E</td>
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<tr>
<td>bioc360-01a</td>
<td>Marine biodiscovery and biotechnology</td>
<td>P</td>
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<td>OP 100%</td>
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<tr>
<td>MNF-bioc-361</td>
<td>Marine Animal Physiology and Functional Morphology</td>
<td>L/S/P</td>
<td>2/1/3</td>
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<td>WE 50% OP 50%</td>
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<tr>
<td>MNF-bioc-365</td>
<td>Mechanisms of biomineralization II</td>
<td>S</td>
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<td>OP 100%</td>
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<tr>
<td>bioc368-01a</td>
<td>Marine Ecological Exchange Lab</td>
<td>S/Ex/E</td>
<td>2 weeks</td>
<td>(H 50%, OP 50%)</td>
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<tr>
<td>MNF-bioc-372</td>
<td>New Developments in Marine Microbiology II</td>
<td>S</td>
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<td>MNF-bioc-374</td>
<td>New Trends in Marine Biotechnology</td>
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<td>MNF-bioc-376</td>
<td>Marine Food Webs – Research Reports I</td>
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<td>bioc378-01a</td>
<td>Microbial ecology and genomics</td>
<td>L/E/S</td>
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<td>H 100%</td>
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<td>MNF-bioc-379-01b</td>
<td>Geomicrobiology: from sediments to bacteria: turnover rates, enzyme activities and genetics</td>
<td>L/S/pE</td>
<td>1/1/2</td>
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<td>bioc380-02a</td>
<td>Sustainable Ocean Food Production and Security</td>
<td>L/S</td>
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<td>(WE, OP)#</td>
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<td>bioc382-01a</td>
<td>Tropical Marine Ecology</td>
<td>L/Ex</td>
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<td>bioc385-01a</td>
<td>Metal Contaminants – Metals in the Ocean</td>
<td>L/S</td>
<td>2/1</td>
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<td>OP 100%</td>
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<tr>
<td>pherPhysO-za-01a</td>
<td>Regional Oceanography</td>
<td>L/E</td>
<td>2/2</td>
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<td>M* 100%</td>
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</table>

**Explanations:**
- **Module:** Module number
- **Name:** Module name
- **Form:** Teaching form: L: Lectures, P: Practical, E: Exercises, pE: practical Exercises (compulsory attendance), S: Seminar, S(a): Seminar (compulsory attendance), Ex: Excursion, C: Colloquia, T: Tutorial, Int: Internship
- **C / CE:** Status of the course (C: Compulsory, CE: Compulsory elective)
- **SWS:** Weeks per semester
- **Prerequisite:** Conditions for entry
- **Exam:** Form of exam and grading
  - Ma: Manuscript, E: Exercises, H: Homework
- **X% = graded exam with X% of module mark, (p/f) = pass/fail**

**Date:** 04.05.2023 **Page:** 12 / 13
CP: Credit Points
The weighing is accordingly to the credit points.
* Passing the exam prerequisite (details will be provided at the beginning of the respective course) is required to take part in the module exam.
# Composed exam