

## OFFICIAL TRANSLATION OF

### **“Fachspezifische Bestimmungen für den Masterstudiengang Polar and Marine Sciences – POMOR Vom 4. Juli 2012”**

**(Amtlicher Anzeiger Nr. 93 vom 27. Dezember 2012)**

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GERMAN VERSION SHALL BE LEGALLY VALID AND  
ENFORCEABLE!**

### **Subject-Specific Provisions for the Master of Science in Polar and Marine Sciences—POMOR**

**dated 4 July 2012**

On 6 August 2012 in accordance with Section 108 subsection 1 of the Hamburg higher education act (Hamburgisches Hochschulgesetz, HmbHG) the Executive University Board of Universität Hamburg ratified the Subject-Specific Provisions that were adopted by the Faculty Council from the Faculty of Mathematics, Informatics and Natural Sciences on 4 July 2012 in accordance with Section 91 subsection 2 no. 1 HmbHG dated 18 July 2001 (HmbGVBl. p. 171) as amended on 20 December 2011 (HmbGVBl. p. 550) for the master’s degree program in polar and marine sciences as a subject of a degree program with the designation Master of Science (MSc).

#### **Preamble**

These Subject-Specific Provisions supplement the provisions of the Faculty of Mathematics, Informatics and Natural Sciences’ Examination Regulations dated 26 October 2005 as amended governing Master of Science (MSc) degree programs and provide a description of the modules for the degree program in polar and marine sciences.

## **I. Supplementary provisions to PO MSc**

### **Section 1**

#### **Program and examination objectives, academic degree, and implementation of the degree program**

##### **Section 1 subsection 1:**

(1) The Master of Science in Polar and Marine Sciences—POMOR (MSc) is a consecutive, interdisciplinary, research-based, and career-oriented degree program taught in English.

(2) The Master of Science in POMOR follows the general program goals set out in Section 1 subsection 1 of the Faculty of Mathematics, Informatics and Natural Sciences' Examination Regulations (PO) governing Master of Science (MSc) degree programs and the master's degree program accredited by the Russian Federation's Ministry of Education and Science for the discipline 020800—Ecology and Land Use.

The goals of the degree program include helping students learn to think contextually and gain analytical skills with respect to extreme habitats (e.g., marine and terrestrial as well as arctic and antarctic ecosystems) especially in light of the susceptibility of polar regions to environmental and climate changes and how to use them in a sustainable manner. POMOR graduates will be capable of conducting and evaluating scientific studies, applying current findings, independently undertaking planning, and carrying out assessments of expedition and laboratory work. They will work analytically, draft academic texts, use databases and relevant computer programs, and acquire international and intercultural skills. Graduates will gain knowledge about marine and terrestrial geosciences, physical and quantifiable oceanography, marine and terrestrial ecosystems in polar regions, natural resources, glacial and periglacial systems, and coastal regions in the Arctic and Antarctica.

Moreover, the program will provide students with specialist knowledge from the fields of meteorology, oceanography, marine biology, geography, soil science, and marine geosciences. Combining these natural science disciplines with engineering and business aspects, students are specifically prepared for careers in research, administration, and industry in polar-related fields—especially for the international labor market located in the polar regions. The program will teach the following skills for evaluating components of the arctic earth system: (a) Independent application and expansion of scientific knowledge, methods, and skills in polar and marine sciences, (b) the provision of knowledge about arctic systems in training and continuing education programs, and (c) the implementation of environmental and climate-system-related knowledge for responsible actions in sensitive polar regions based on good scientific practice.

(3) In addition to professional specialization and advanced study of the natural sciences in lectures, seminars, and practical courses, students will participate in a career-related, research-focused internship as part of Core Module 2 after the second subject semester in which students as part of a work or research group will learn specifically about work practices in current polar and marine research. The first and second subject semesters will be at Saint Petersburg State University and the third subject semester in Germany at Universität Hamburg or at one of the participating German partner universities (University of Bremen, Kiel University, or University of Potsdam). In the fourth semester, students will write their master's thesis on a polar and marine science research issue (within no more than 22 weeks), which shall be supervised by a Russian and a German university teacher.

**Section 1 subsection 3:**

After the successful completion of studies within the context of the POMOR double degree program, students will receive the following:

- in Russia: the academic degree Master of Science in Ecology and Land Use from Saint Petersburg State University in the discipline ecology and land use for the master's degree program in polar and marine research
- in Germany: the academic degree Master of Science (MSc) from Universität Hamburg for the master's degree program in polar and marine sciences (POMOR)

**Section 1 subsection 4:**

The Master of Science in POMOR is offered and spearheaded by Universität Hamburg and Saint Petersburg State University in cooperation with Kiel University, University of Bremen, and University of Potsdam as well as the research institutes GEOMAR Helmholtz Centre for Ocean Research in Kiel, the Alfred Wegener Institute for Polar and Marine Research, the Leibniz Institute for Baltic Sea Research in Warnemünde, the Arctic and Antarctic Research Institute of the Russian Federal Service for Hydrometeorology and Environmental Monitoring, and the Otto Schmidt Laboratory for Polar and Marine Research.

The Faculty of Mathematics, Informatics and Natural Sciences at Universität Hamburg and the Faculty of Geography and Geoecology at Saint Petersburg State University in Russia shall be responsible for the coordination and implementation of the degree program. Moreover there are cooperations with Kiel University, University of Bremen, University of Potsdam as well as the research institutes GEOMAR Helmholtz Centre for Ocean Research in Kiel (GEOMAR), the Alfred Wegener Institute for Polar and Marine Research (AWI), the Leibniz Institute for Baltic Sea Research in Warnemünde (IOW), the Otto Schmidt Laboratory for Polar and Marine Research (OSL), and the Arctic and Antarctic Research Institute of the Russian Federal Service for Hydrometeorology

and Environmental Protection Agency (AARI), both in St. Petersburg. The POMOR Offices in St. Petersburg and in Kiel and the Academic Office of the Department of Earth Sciences shall provide administrative support for the degree program.

#### **Section 4** **Program and exam organization, modules, and ECTS credits**

##### **Section 4 subsections 2 and 3:**

(1) The Master of Science in POMOR encompasses:

a) In the first and second semesters (each 30 ECTS credits per semester):

- Module 1: Ocean Basins, Sediments and Climate Change—courses at Saint Petersburg State University—first semester and 9 ECTS credits
- Module 2: High Seas and Coastal Water Oceanography—courses at Saint Petersburg State University—first semester and 9 ECTS credits
- Module 3: Polar and Marine Ecosystems: Polar and Marine Ecosystems: Structure, Functioning and Vulnerability—courses at Saint Petersburg State University—first semester and 9 ECTS credits
- Module 4: Natural Resources—courses at Saint Petersburg State University—second semester and 9 ECTS credits
- Module 5: Processes in Coastal Zones and Environmental Management—courses at Saint Petersburg State University—second semester and 9 ECTS credits
- Module 6: Periglacial Environment—courses at Saint Petersburg State University—second semester and 9 ECTS credits
- Core Modules 1 and 2 (key skills)—courses at Saint Petersburg State University—first and second semesters and 6 ECTS credits

All modules shall be offered as a joint teaching engagement by Russian and German lecturers.

b) After the second semester, students will participate in practical field work as part of Core Module 2 and work in an international research project.

c) Students shall attend a participating German partner university in the third semester, which shall be contingent on the specialization in either geosciences, biosciences, climate sciences, or environmental sciences (30 ECTS credits). Universität Hamburg shall assume the academic responsibility for the third semester in Germany. Universität Hamburg shall give credit for student academic performance at the participating German partner universities in Bremen, Kiel, and Potsdam and forward this information on to the university in St. Petersburg.

d) In the fourth semester, students will write their master's thesis at a Russian and/or German partner university or research institute (30 ECTS credits).

(2) Detailed descriptions of all modules can be found in part II of these Subject-Specific Provisions. The module descriptions are listed in a synoptic table containing the names of the individual modules, their classifications (e.g., required), the type of courses (e.g., lecture, practical course, and seminar), and workload expected for each module expressed as ECTS credits.

(3) Moreover, students may voluntarily complete modules in excess of the 120 ECTS credits. Upon submission of a request to the Examinations Board, the additional examination grades may be reflected in the academic transcript for the master's degree program. They will, however, not be used to calculate the overall final grade.

## **Section 5 Types of courses**

### **Section 5 sentence 2:**

All course types pursuant to Section 5 of the Examination Regulations for Master of Science degree programs may be implemented.

### **Section 5 sentence 3:**

Courses will be held in English.

## **Section 6 Limiting attendance for specific courses**

The maximum number of students who may register for a module or individual courses is set at 25, because of limited capacities in Russia. At the time of admission, the Examinations Board shall take this limitation into consideration.

## **Section 13 Completed coursework and module examinations**

### **Section 13 subsection 5:**

Examinations shall be held in English.

## **Section 14 Master's thesis**

### **Section 14 subsection 1:**

A component part of the master's thesis is a presentation within the framework of an academic seminar. The presentation shall comprise 1/5 of the grade for the master's thesis. The presentation must be given no later than six weeks after submission of the thesis.

### **Section 14 subsection 2:**

Students who have earned at least 60 ECTS credits in total may be allowed to commence work on the master's thesis.

### **Section 14 subsection 5:**

The topic, date of topic release, names of both supervisors (one German and one Russian) shall be recorded in the student's academic file.

### **Section 14 subsection 6:**

The master's thesis must be written in English.

### **Section 14 subsection 7 sentence 1:**

The workload for the master's thesis amounts to 30 ECTS credits, which must be completed within no more than 22 weeks.

## **Section 15 Evaluation of examinations**

### **Section 15 subsection 3 sentence 5:**

If a module examination is comprised of several course examinations, then the (overall) grade shall be calculated by averaging the grades from each course examination weighted according to the ECTS credits assigned to each part.

### **Section 15 subsection 3 sentence 9:**

The overall final grade for the master's degree program shall be calculated by averaging the grades from all modules weighted according to the ECTS credits assigned to each, whereby the master's thesis shall have twice the weight. The grades for Core Modules 1 and 2 shall not be used to calculate the overall final grade.

**Section 15 subsection 4:**

The overall final grade “pass with distinction” shall be awarded if a grade of 1.0 is earned for the master’s thesis, the average overall grade is less than or equal to 1.3, and none of the module examinations were passed with grades worse than 2.3.

## II. Overview of modules and recommended module plan

The following table contains an overview of modules. The abbreviations denote: CP = ECTS credits, Cr. hrs. = credit hours per week, Req. = required, RE = required elective, E = elective module, L = lecture, PC = practical course, S = seminar, I = internship, FT = field trip

No.	Semester, Module Type, and Methods of Instruction	Workload	Cr. Hrs.	CP
Required (Req.), Required elective (RE), Elective module (E), Lecture (L), Practical course (PC), Seminar (S), Internship (I), Field Trip (FT)				
<b>First semester (winter semester), Saint Petersburg State University, Russia; Russian and German lecturers</b>				
1.	Ocean Basins, Sediments and Climate Change Req.: L, S, PC, FT	270	6	9
2.	High Seas and Coastal Water Oceanography Req.: L, S, PC	270	6	9
3.	Polar and Marine Ecosystems: Structure, Functioning, and Vulnerability	270	6	9
Core 1	Key Skills 1 Req.: L, S, PC	90	2	3
	<b>Total</b>	<b>900</b>	<b>2</b>	
<b>Second semester (summer semester), Saint Petersburg State University, Russia; Russian and German lecturers</b>				
4.	Natural Resources Req.: L, PC, S	270	6	9
5.	Processes in Coastal Zones and Environmental Management	270	6	9
6.	Periglacial Environment Req.: L, S	270	6	9
Core 2	Key Skills 2 Req.: L, S, PC incl. practical field work (Req.)	90	2	3
	<b>Total</b>	<b>900</b>	<b>2</b>	
<b>Third semester (winter semester), Germany</b>				
	Semester abroad in Germany at one of the participating partner universities, RE Universität Hamburg, MSc in Integrated Climate System Sciences (ICSS) University of Bremen, MSc in Marine Biology Kiel University, MSc in Marine Geosciences University of Potsdam, MSc in Geosciences and	900	20	30
	<b>Total</b>	<b>900</b>	<b>20</b>	<b>30</b>
<b>Fourth semester (summer semester), Russia and Germany</b>				
	Master's thesis in polar and marine sciences and defense (Req.)	900	20	30
	<b>Total</b>	<b>900</b>	<b>20</b>	<b>30</b>
	<b>Total for the MSc in Polar and Marine Sciences</b>	<b>3600</b>	<b>80</b>	<b>120</b>



### III. Brief description of modules

The module numbers correspond to the consecutive numbers down the left side of the module plan table for the MSc in Polar and Marine Sciences.

#### 1. Semester

Module no.	1
Module ID	OCEAN BASINS, SEDIMENTS AND CLIMATE CHANGE
Module title	Ocean Basins, Sediments and Climate Change
Module type	Required
Intended learning objectives	Students will acquire knowledge about polar regions with respect to formation of ocean basins, sediment stratigraphy, and climate changes. Students will learn how to map ocean floors, take sediment samples, and use marine geotechnology.
Curriculum	1.1. Marine Sediments and Polar Sedimentation Processes: L, FT 1.2. Marine Geoscience Methods: L, PC, S, FT 1.3. Ocean Floor Mapping Methods: L, PC 1.4. Ocean Basins: Morphology, Tectonic Structure, and Dynamics: L 1.5 Marine Geotechnology: L, FT
Methods of instruction	L, S, PC, FT
Language(s) of instruction	English
Prerequisites	None
Applicability	First semester of the MSc in POMOR
Type, requirements, and language of examinations	Requirements: active participation in courses and field trips Examination type: two written examinations and one oral examination
ECTS credits	9 ECTS credits
Group size	
Course frequency	Every second year in the winter semester
Duration	While lectures are held during the semester and/or as a block

Abbreviations: Lecture L, Practical Course PC, Seminar S, Field Trip FT.

Module no.	2
Module ID	OCEANOGRAPHY
Module title	High Seas and Coastal Water Oceanography
Module type	Required
Intended learning objectives	Students will acquire knowledge about methods for exploring the arctic ocean and coastal waters and learn about fundamental theories.
Curriculum	2.1 Oceanographic Measurement Methods and Data Analyses. Ocean Climate and Long-Term Fluctuations: L, S 2.2 Physics of the Boundary Layers of Air and Water: L, S, PC 2.3 Ocean Currents: L, PC 2.4 Fundamentals of Physical Oceanography: L, S, PC 2.5 Oceanic Tides: L, S 2.6 Coastal Water Dynamics: L, S, I
Methods of instruction	L, PC, S
Language(s) of instruction	English
Prerequisites	None
Applicability	First semester of POMOR
Type, requirements, and language of examinations	Requirements: active participation in courses Examination type: a written examination Examination language: English
ECTS credits	9 ECTS credits
Group size	
Course frequency	Every second year in the winter semester
Duration	While lectures are held during the semester and/or as a block

Abbreviations: Lecture L, Practical Course PC, Seminar S, Field Trip FT.

Module no.	3
Module ID	POLMARECO
Module title	Polar and Marine Ecosystems: Structure, Functioning and Vulnerability
Module type	Required
Intended learning objectives	Students who complete the module will have acquired knowledge about the structure, function, and susceptibility of polar and marine ecosystems and can use this knowledge to assess sensitive ecosystems.
Curriculum	3.1 Biological Oceanography of the Pelagic Ecosystem, Principles, Examples, and Future Scenarios: L, S 3.2 Biology and Ecology of the Seabed Fauna (Benthos) in Arctic Waters: L, FT 3.3 Introduction to Polar Ecology: L, S 3.4 Environmental Impacts on Ecosystems: L, S, PC 3.5 Biology and Geoecology of Polar Regions: L, S 3.6 Introduction to Ecosystem Modeling: L, S 3.7 Geoecology of the Arctic Sea Shelf and Use of Natural Marine Resources in Polar Regions: L, S
Methods of instruction	L, S, PC, FT
Language(s) of instruction	English
Prerequisites	None
Applicability	First semester of the MSc in
Type, requirements, and language of examinations	Requirements: active participation in courses Examination type: a written examination
ECTS credits	9 ECTS credits
Group size	
Course frequency	Every second year in the winter
Duration	While lectures are held during the semester and/or as a block

Abbreviations: Lecture L, Practical Course PC, Seminar S, Field Trip FT.

## Second semester

Module no.	4
Module ID	NARES
Module title	Natural Resources
Module type	Required
Intended learning objectives	Students will have acquired basic knowledge of nonliving resources with special consideration of soils and minerals. They will be able to analyze the interactions of the actors involved (e.g., in geology, geophysics, geochemistry, petrology, and drilling engineering) and have the ability to assess the impact on living terrestrial and marine resources.
Curriculum	4.1 Living Resources in the Marine Arctic Space and Their Use: L, S 4.2 Living Terrestrial Resources of the Arctic and Their Use: L, S 4.3 Reservoir Engineering: L, S 4.4 Land Surveying and Leasing: L, PC, S 4.5 Economic Feasibility and Risk Assessment: L, S 4.6 Borehole Site Methods: L, S 4.7 Geophysical Borehole Measurements: L, S 4.8 Geological Methods: L, S 4.9 Geophysical Methods: L, PC, S 4.10 Production and Engineering: L, FT 4.11 Evaluation and Processing of Geophysical Data: L, PC, S
Methods of instruction	L, PC, S, FT
Language(s) of instruction	English
Prerequisites	None
Applicability	Second semester of the MSc in POMOR
Type, requirements, and language of examinations	Requirements: active participation in courses Examination type: a written examination Examination language: English
ECTS credits	9 ECTS credits
Group size	
Course frequency	Every second year in the summer semester
Duration	While lectures are held during the semester and/or as a block course

Abbreviations: Lecture L, Practical Course PC, Seminar S, Field Trip FT.

Module no.	5
Module ID	Coastal and Coastal Water Management
Module title	Processes in Coastal Zones and Environmental Management
Module type	Required
Intended learning objectives	Students will have gained considerable knowledge about the issues, methods, and results of the processes in polar coastal zones as well as environmental management in the Arctic.
Curriculum	5.1 Applied Geostatistics: L, PC 5.2 Eutrophication, Monitoring, Evaluation, and Management of Coastal Zones: L, S 5.3 Marine Environmental Legislation: L, S 5.4 Numerical Modeling of Coastal Processes: L, S 5.5 Cultures and Communities—The Indigenous Inhabitants of Coastal Zones Focusing on Arctic Regions: L, PC 5.6 Strategy for the Sustainable Development of the Yamalo-Nenets Autonomous Okrug: L, PC 5.7 Integrated Coastal Zone Management of the Arctic and Subarctic Regions: L 5.8 Decision Guidance and Predictions: L
Methods of instruction	L, S, PC
Language(s) of instruction	English
Prerequisites	None
Applicability	Second semester of the MSc in POMOR
Type, requirements, and language of examinations	Requirements: active participation in courses Examination type: written examination Examination language: English
ECTS credits	9 ECTS credits
Group size	
Course frequency	Every second year in the summer semester
Duration	While lectures are held during the semester and/or as a block

Abbreviations: Lecture L, Practical Course PC, Seminar S, Field Trip, FT.

Module no.	6
Module ID	PERIGLAC
Module title	Periglacial Environment
Module type	Required
Intended learning objectives	Students will have acquired in-depth knowledge about the structure of periglacial environmental systems and the effects of basic cryogenic processes.
Curriculum	6.1 Periglacial Environmental Systems: L, S 6.2 Thaw Zone and Permafrost Soils: L, PC 6.3 Microbiology, Hydrochemical and Biochemical Processes in an Arctic Environment: L, S 6.4 Glaciers and Ice Caps: L, S 6.5 Methods for the Observation of Water Masses in the Permafrost Zone: L, S, PC 6.6 River Systems, Lakes, and Marshes in the Periglacial Environment: L 6.7 Types of Anthropogenic Influence on Water Masses in Polar Regions: L 6.8 Arctic River Estuaries: L 6.9 Ice Conditions of Rivers, Ice Dams, and Ice Jams: L 6.10 Periglacial Water Masses: L
Methods of instruction	L, S, PC
Language(s) of instruction	English
Prerequisites	None
Applicability	Second semester of the MSc in POMOR
Type, requirements, and language of examinations	Requirements: active participation in courses Examination type: an oral examination and a written examination Examination language: English
ECTS credits	9 ECTS credits
Group size	
Course frequency	Every second year in the summer semester
Duration	While lectures are held during the semester and/or as a block

Abbreviations: Lecture L, Practical Course PC, Seminar S, Field Trip, FT.

Module no.	CM 2
Module ID	CORE 2 including practical field work
Module title	Key Skills 2 including practical field work
Module type	Required
Intended learning objectives	Students will have acquired knowledge about the issues, methods, and application possibilities in polar and marine research as well as gained practical skills while conducting field work.
Curriculum	CM4. Soft Skills: S, PC CM5. Academic Management: L, S CM6. Introduction to GIS and the Use of Online Academic Databases: L, S, PC
Methods of instruction	L, S, PC
Language(s) of instruction	English
Prerequisites	None
Applicability	Second semester of the MSc in POMOR
Type, requirements, and language of examinations	Requirements: active participation in courses Examination type: lectures and presentations on selected topics Examination language: English
ECTS credits	3 ECTS credits
Group size	
Course frequency	Every second year in the summer semester
Duration	While lectures are held during the semester and/or as a block course

Abbreviations: Lecture L, Practical Course PC, Seminar S, Field Trip, FT.

### Third semester

Module no.	DS 3.0
Module ID	Semester in Germany DS—Overview
Module title	Semester abroad at a partner university in Germany
Module type	Required elective
Intended learning objectives	Students will have gained in-depth knowledge about the issues, methods, and evaluation procedures in polar and marine geosciences (meteorology, marine geochemistry, marine biology, geology, and soil science) and how to independently apply them.
Curriculum	Students will complete a semester abroad in Germany at one of the participating partner universities within the respective MSc degree program: <ul style="list-style-type: none"> <li>• Universität Hamburg, MSc in Integrated Climate System Sciences</li> <li>• University of Bremen, MSc in Marine Biology</li> <li>• Kiel University, MSc in Marine Geosciences</li> <li>• University of Potsdam, MSc in Geosciences and Geology</li> </ul> The respective curriculum can be found in the module course catalog for the MSc in POMOR.
Methods of instruction	In accordance with the module descriptions of the German partner universities L, S, I, PC, FT
Language(s) of instruction	English
Formal module requisites	Successful completion of 60 ECTS credits for the MSc in POMOR
Type, requirements, and language of examinations	In accordance with the module descriptions of the German partner universities
ECTS credits (CP)	30 ECTS credits
Module frequency	Every second year in the winter semester
Duration	One semester

Abbreviations: Lecture L, Practical Course PC, Seminar S, Field Trip, FT, Practical Course, PC.



The table below lists the modules for the third semester of the Master of Science in Integrated Climate System Sciences at Universität Hamburg that students completing their third semester at Universität Hamburg must complete and within the framework of which the recognition of the modules from the other German partner universities shall occur.

### Module DS 3.1 Climate System Sciences Seminar

Module code	CLISEM	
Title	Climate System Sciences Seminar	
Intended learning objectives	The students who have completed the module will have presented important aspects of a suitable thesis topic for discussion as well as acquired an overview of current topics and research projects of all climate sciences.	
Formal module prerequisites for	None	
Module examination guidelines (incl. course examinations, as appropriate)	Examination type:	Presentation and report
	Examination registration	None
	Examination language:	English
	Duration/Length:	10- to 20-minute presentation, report of 3 to 5 pages (1000 to 1500 words)
	As appropriate, course grades will be weighted for the calculation of the module grade:	Grade point average for the presentation (75%) and report (25%)
ECTS credits (LP)	3 ECTS credits	
Module type	Required module	
Recommended semester or reference semester	Reference semester 3	
Module frequency	Annually in the winter semester and in the summer semester	
Duration	One semester	

Abbreviations: Lecture L, Practical Course PC, Seminar S, Field Trip FT.

### Module DS 3.2 Climate Study Project

Module code	CLISTUDY	
Title	Climate Study Project	
Intended learning objectives	Students who have completed the module will have acquired sufficient knowledge in the methodological and technical areas of their respective fields of specialization in order to begin their	
Formal module prerequisites for attendance	None	
Module examination guidelines (incl. course examinations, as appropriate)	Examination type:	The specific type of examination will be announced during registration or at the beginning of the course.
	Examination registration prerequisites:	None
	Examination language:	English
	Duration/Length:	Course specific
	As appropriate, course grades will be weighted for the calculation of the module grade:	
ECTS credits (CP)	18 ECTS credits	
Module type	Required elective module	
Recommended semester or reference semester	Semester 3	
Module frequency	Once each winter semester	
Duration	One semester or block course	

Abbreviations: Lecture L, Practical Course PC, Seminar S, Field Trip FT. Module DS 3.3 Climate Science Additional

Module code	CLIADD	
Title	Climate Science Additional	
Intended learning objectives	Students who have completed the module will have gained additional in-depth knowledge in their area of specialization.	
Didactic concept	Students may choose from a variety of courses listed for their area of specialization in the module—9 ECTS credits.	
Formal module prerequisites for attendance	None	
Module examination guidelines (incl. course examinations, as appropriate)	Examination type:	Course examinations. The specific type of examination will be announced during registration or at the beginning of the course.
	Examination registration prerequisites:	None
	Examination language:	English
	Duration/Length:	Course specific
	As appropriate, course grades will be weighted for the calculation of the module grade:	Weighted average grade (based on the number of ECTS credits) of up to three course examinations.
ECTS credits (LP)	9 ECTS credits	
Module type	Required elective module	
Recommended semester or reference semester	Semester 3	
Module frequency	Once each winter semester	
Duration	One semester or block course	

Abbreviations: Lecture L, Practical Course PC, Seminar S, Field Trip FT.

#### Fourth semester

Module no.	MSc thesis
Module ID	MSc thesis
Module title	MSc Thesis in Polar and Marine Sciences and Defense
Module type	Required
Intended learning objectives	Students will have the competence to independently draft an innovative master's thesis in a specific field of polar and marine research and be able to present the results of the master's thesis to a knowledgeable audience in a comprehensible manner.
Curriculum	Students shall write an in-depth thesis on a topic of their choosing from the field of polar and marine sciences under the joint supervision of an employee and a researcher from the POMOR network in Russia and in Germany. The thesis must treat the topic and/or research critically, demonstrate the significance of the selected topic from the field of polar and marine sciences, and lead toward an extended dissertation.
Methods of instruction	
Language(s) of instruction	English
Prerequisites	Completion of 60 ECTS credits for the MSc in POMOR
Applicability	Fourth semester of the MSc in POMOR
Type, requirements, and language of examinations	MSc thesis (80%), oral presentation and defense in English (20%)
ECTS credits	30 ECTS credits
Group size	
Course frequency	Every second year in the summer semester
Duration	Max. 22 weeks

Abbreviations: Lecture L, Practical Course PC, Seminar S, Field Trip FT.

**Section 23**  
**Effective date**

These Subject-Specific Provisions shall become effective on the day after they are ratified by the Executive University Board of the University. They shall first apply to students commencing their studies in the Winter Semester 2011/12.

Hamburg, 6 August 2012  
**Universität Hamburg**