Discipline-Specific Regulations for Study and Examinations for the Master's Program in Ecology, Evolution, and Conservation at the University of Potsdam

Dated February 13, 2019

The Faculty Committee of the Faculty of Science at the University of Potsdam has approved on February 13, 2019 the following degree and examination regulations on the basis of Section 19 subsection 1 and Section 22 subsection 1-2 in combination with Section 72 subsection 2 no. 1 of the Brandenburg Higher Education Act (BbgHG) of April 28, 2014 (Law and Ordinance Gazette [GVBl.] I/14, [no. 18]), last amended by Section 2 of the Act of September 20, 2018 (Law and Ordinance Gazette [GVBl.] I/18 [no. 21], p. 2) in combination with the Ordinance on the Design of Examination Regulations to Guarantee the Equivalency of Studies, Examinations, and Degrees (University Examination Ordinance - HSPV) of March 4, 2015 (GVBl. II/15 [no. 12]), and with Section 21 subsection 2 no. 1 of the Basic Constitution of the University of Potsdam (GrundO) dated December 17, 2009 (Bulletin UP no. 4/2010 p. 60) in the FifthAmended Version of the Basic Constitution of the University of Potsdam (GrundO) of August 24, 2018 (Bulletin UP no. 11/2018 p. 634) and Section 1 subsection 2 of the new version of the General Regulations for Study and Examinations for Bachelor's and Master's Degrees at the University of Potsdam Not For Teachers In Training dated January 30, 2013 (BAMA-O) (Bulletin UP no. 3/2013, p. 35), last amended on April 18, 2018 (Bulletin UP 6/2018, p. 370):[1]

§ 1 Applicability

(1) These regulations apply to the Master's program in Ecology, Evolution, and Conservation at the University of Potsdam. These discipline-specific regulations supplement the new version of the General Regulations for Study and Examinations for Bachelor's and Master's Degrees (not for teachers in training) at the University of Potsdam (BAMA-O).

(2) In the event that these regulations contradict the BAMA-O, then the provisions in the BAMA-O supersede these regulations.

§ 2 Degree

The Faculty of Science at the University of Potsdam awards the degree of "Master of Science" (abbreviated as "MSc") to students who have completed the necessary credit points and graduation requirements.

§ 3 Objectives of Master's Program

(1) The Ecology, Evolution, and Conservation Master's program builds upon and substantially extends the knowledge, skills, abilities, and methods acquired during the Bachelor's degree course. The focus of the program's content and methods is on basic research.

(2) The students will:
- Acquire the theoretical, methodical, and practical skills for self-sufficient scientific and interdisciplinary work in ecology, evolutionary research, and conservation biology.
- Possess detailed knowledge of the state of research and current research approaches and methods in these fields.
- Be able to conduct research efficiently in the original literature and compile scientific material from their own and others' work in English, either for an expert audience or in terms understandable to the general public
- Be able to carry out activities and tasks in research departments of universities or extramural institutions, in national and international authorities, in conservation organizations (such as EU-level bodies and NGOs), or in teaching and education.
- Possess personal and social skills in areas such as teamwork, conflict resolution, presenting, scientific statistical analysis, and scientific writing.

§ 4 Duration and Organization of Master's Studies

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[1] Approved by the President of the University of Potsdam on March 26, 2019.

(1) The Master's program in Ecology, Evolution, and Conservation is offered at the University of Potsdam as a single-discipline program with a standard completion time (full-time study) of four semesters and 120 credit points (CP).

(2) The Master's program is subdivided as follows:

Mandatory Modules	12 CPs
Elective modules	66 CPs
Advanced module	12 CPs
Master's thesis	30 CPs
Total	120 CPs

§ 5 Modules and Course of Study

(1) The Master's program in Ecology, Evolution, and Conservation is comprised of the following components:

Module Abbreviation	Name of Module	CPs
I Mandatory modules (*12 CP*)		
BIO-O-KM1	State of the Art in Ecology, Evolution and Conservation	6
BIO-O-KM2	Experimental Design and Data Analysis	6
II Elective modules, group A (36 CPs) Students must select 6 of the following modules:		
BIO-O-WM1	Organismic Ecology	6
BIO-O-WM2	Basics of Ecology	6
BIO-O-WM3	Concepts of Ecology	6
BIO-O-WM4	Applied Ecology	6
BIO-O-WM5	Data Acquisition and Analysis	6
BIO-O-WM6	Experimental Ecology	6
BIO-O-WM7	Biodiversity Research	6
BIO-O-WM8	Ecology of Specific Habitats I	6
BIO-O-WM9	Ecology of Specific Habitats II	6
BIO-O-WM10	Aquatic Environmental Ecology	6
BIO-O-WM11	Conservation Biology	6
BIO-O-WM12	Applications of Nature Conservation	6
BIO-O-WM13	Biology of Plants and Fungi	6
BIO-O-WM14	Ecology of Mammals	6
BIO-O-WM15	Theoretical Ecology and Ecological Modeling I	6
BIO-O-WM16	Theoretical Ecology and Ecological Modeling II	6
BIO-O-WM17	Interactions Ecology, Evolution, and Genetics	6
BIO-O-WM18	The Central Role of Evolu-	6

	tionary Biology in Biosciences	
BIO-O-WM19	Microevolution/Conserving the Evolutionary Process	6
III Elective modules, group B (30 CPs) In addition to the 6 modules completed from A, the student must select 5 additional modules either from group A or from group B.		
BIO-B-WM10	Genome Research and Systems Biology B	6
BIO-B-WM11	Molecular Biology B	6
BIO-MBIP01	Algorithmic and Mathematical Bioinformatics	6
BIO-MBIP02	Statistical Bioinformatics	6
BIO-MBIP03	Bioinformatics of Biological Sequences (Evolutionary Genomics)	6
BIO-MBIP04	Analysis of Cellular Networks	6
BIO-B-KM1	State of the Art in Biochemistry and Molecular Biology	6
MAT-MBIP05	Introduction to Theoretical Systems Biology	6
BIO-MBIP06	Constraint-Based Modeling of Cellular Networks	6
BIO-MBIW01	Data Integration in Cellular Networks	6
BIO-MBIW02	Advanced Methods for Analysis of Biochemical Networks	6
BIO-MBIW07	Integration of Cellular Layers and Systems	6
BIO-MBIB01	Introduction to Databases and Practical Programming	6
BIO-MBIB03	Programming Expertise	6
BIO-BRM17a	Current Problems and Modern Methods in Plant Genetics and Epigenetics	6
GEW-B-WP01	Advanced Module Geology I	6
GEW-B-WP05	Advanced Module Geophysics I	6
GEW-RCM03	Data Analysis and Statistics	6
GEE-TV3	Global Change: The Earth as a System	6
GEE-KL	Climatology	6
GEE-GV03	Ecosystem Services	6
GEE-GV09	Numerics and Simulation	6
GEW-GIS1	Foundations of Geoinformation Systems	6
GEW-RCM01	Remote Sensing of the Environment	6
GEW-RCM02	Earth System Science	6
INF-1010	Foundations of Programming	6
MAT-VMD834a	Stochastic Processes	6

MAT-M3	Advanced Problems in Mathematics for the Earth Sciences	6
PHY_131d	Simulation and Modeling	6
PHY_541c_a	Advanced Module in Statistical and Nonlinear Physics	6
MABMD130	Basic Module in Programming	6
IV Elective modules, advanced group (*12 CP*) Students must select 1 of the following modules.		
BIO-O-VM1	Plankton Ecology	12
BIO-O-VM2	Animal Ecology	12
BIO-O-VM3	Human Biology	12
BIO-O-VM4	Ecological Microbiology	12
BIO-O-VM5	Microbial Ecology	12
BIO-O-VM6	Biodiversity of Land Plants and Fungi	12
BIO-O-VM7	Geobotany	12
BIO-O-VM8	Methods in Conservation Biology	12
BIO-O-VM9	Modeling in Plant Ecology and Nature Conservation	12
BIO-O-VM10	Arid-Zone Research	12
BIO-O-VM11	Data Analysis, Modeling, and Theory in Community Ecology	12
BIO-O-VM12	Evolutionary Biology	12
Total CPs for mandatory and elective modules to be completed: 90 CP		

(2) Further details of the module descriptions for the modules listed in subsection 1 are governed by Appendix 1 of these regulations.

(3) The language of instruction in the Ecology, Evolution, and Conservation Master's program is English. Elective modules may be offered in either English or German. Notification of the language of instruction will be given by the beginning of the lecture period at the latest. It is possible to complete the program without any German-language instruction.

(4) Sample courses of study for the Master's program are provided in Appendix 2 of these regulations.

§ 6 Master's Thesis

(1) As soon as the student has completed 75 percent of the total credit points to be earned in the degree program, excluding the credit points for the thesis (72 points), he or she must immediately propose a topic for his/her Master's thesis.

(2) The Master's thesis, including the oral defense, is equivalent to 30 credit points.

§ 7 Passes

In the Master's program in Ecology, Evolution, and Conservation, students have two passes (non-binding exams).

§ 8 Application, Expiration, and Transitional Provisions

(1) These regulations take effect on the day after their publication in the Official Public Notices of the University of Potsdam.

(2) These regulations apply to all students who enroll in the Master's program in Ecology, Evolution, and Conservation at the University of Potsdam after these regulations are published officially.

Appendix 1: Module Catalog

The descriptions of the program's modules listed in Section 5 subsection 1 and the tables below are governed by the statutes of the module catalog of the Faculty of Science as a supplement to the Bachelor's and Master's programs at the University of Potsdam (MK MNF). Supplementary regulations and/or deviations from the MK MNF are indicated in the tables that follow.

Module number:	Module Name	CPs	Mand./ Elec.	Prerequisites
BIO-BRM17a	Current Problems and Modern Methods in Plant Genetics and Epigenetics	6	Elec.	see the Faculty of Science Module Catalog
BIO-B-WM10	Genome Research and Systems Biology B	6	Elec.	see the Faculty of Science Module Catalog
BIO-B-WM11	Molecular Biology B	6	Elec.	see the Faculty of Science Module Catalog
BIO-MBIB01	Introduction to Databases and Practical Programming	6	Elec.	see the Faculty of Science Module Catalog
BIO-MBIB03	Programming Expertise	6	Elec.	see the Faculty of Science Module Catalog
BIO-MBIP01	Algorithmic and Mathematical Bioinformatics	6	Elec.	see the Faculty of Science Module Catalog
BIO-MBIP02	Statistical Bioinformatics	6	Elec.	see the Faculty of Science Module Catalog
BIO-MBIP03	Bioinformatics of Biological Sequences (Evolutionary Genomics)	6	Elec.	see the Faculty of Science Module Catalog
BIO-MBIP04	Analysis of Cellular Networks	6	Elec.	see the Faculty of Science Module Catalog
BIO-B-KM1	State of the Art in Biochemistry and Molecular Biology	6	Elec.	see the Faculty of Science Module Catalog
BIO-MBIP06	Constraint-Based Modeling of Cellular Networks	6	Elec.	see the Faculty of Science Module Catalog
BIO-MBIW01	Data Integration in Cellular Networks	6	Elec.	see the Faculty of Science Module Catalog
BIO-MBIW02	Advanced Methods for Analysis of Biochemical Networks	6	Elec.	see the Faculty of Science Module Catalog
BIO-MBIW07	Integration of Cellular Layers and Systems	6	Elec.	see the Faculty of Science Module Catalog
BIO-O-KM1	State of the Art in Ecology, Evolution and Conservation	6	Mand.	see the Faculty of Science Module Catalog
BIO-O-KM2	Experimental Design and Data Analysis	6	Mand.	see the Faculty of Science Module Catalog
BIO-O-VM1	Plankton Ecology	12	Elec.	see the Faculty of Science Module Catalog
BIO-O-VM10	Arid-Zone Research	12	Elec.	see the Faculty of Science Module Catalog
BIO-O-VM11	Data Analysis, Modeling, and Theory in Community Ecology	12	Elec.	see the Faculty of Science Module Catalog
BIO-O-VM12	Evolutionary Biology	12	Elec.	see the Faculty of Science Module Catalog
BIO-O-VM2	Animal Ecology	12	Elec.	see the Faculty of Science Module Catalog
BIO-O-VM3	Human Biology	12	Elec.	see the Faculty of Science Module Catalog
BIO-O-VM4	Ecological Microbiology	12	Elec.	see the Faculty of Science Module Catalog
BIO-O-VM5	Microbial Ecology	12	Elec.	see the Faculty of Science Module Catalog
BIO-O-VM6	Biodiversity of Land Plants and	12	Elec.	see the Faculty of Science

	Fungi			Module Catalog
BIO-O-VM7	Geobotany	12	Elec.	see the Faculty of Science Module Catalog
BIO-O-VM8	Methods in Conservation Biology	12	Elec.	see the Faculty of Science Module Catalog
BIO-O-VM9	Modeling in Plant Ecology and Nature Conservation	12	Elec.	see the Faculty of Science Module Catalog
BIO-O-WM1	Organismic Ecology	6	Elec.	see the Faculty of Science Module Catalog
BIO-O-WM10	Aquatic Environmental Ecology	6	Elec.	see the Faculty of Science Module Catalog
BIO-O-WM11	Conservation Biology	6	Elec.	see the Faculty of Science Module Catalog
BIO-O-WM12	Applications of Nature Conservation	6	Elec.	see the Faculty of Science Module Catalog
BIO-O-WM13	Biology of Plants and Fungi	6	Elec.	see the Faculty of Science Module Catalog
BIO-O-WM14	Ecology of Mammals	6	Elec.	see the Faculty of Science Module Catalog
BIO-O-WM15	Theoretical Ecology and Ecological Modeling I	6	Elec.	see the Faculty of Science Module Catalog
BIO-O-WM16	Theoretical Ecology and Ecological Modeling II	6	Elec.	see the Faculty of Science Module Catalog
BIO-O-WM17	Interactions Ecology, Evolution, and Genetics	6	Elec.	see the Faculty of Science Module Catalog
BIO-O-WM18	The Central Role of Evolutionary Biology in Biosciences	6	Elec.	see the Faculty of Science Module Catalog
BIO-O-WM19	Microevolution/Conserving the Evolutionary Process	6	Elec.	see the Faculty of Science Module Catalog
BIO-O-WM2	Basics of Ecology	6	Elec.	see the Faculty of Science Module Catalog
BIO-O-WM3	Concepts of Ecology	6	Elec.	see the Faculty of Science Module Catalog
BIO-O-WM4	Applied Ecology	6	Elec.	see the Faculty of Science Module Catalog
BIO-O-WM5	Data Acquisition and Analysis	6	Elec.	see the Faculty of Science Module Catalog
BIO-O-WM6	Experimental Ecology	6	Elec.	see the Faculty of Science Module Catalog
BIO-O-WM7	Biodiversity Research	6	Elec.	see the Faculty of Science Module Catalog
BIO-O-WM8	Ecology of Specific Habitats I	6	Elec.	see the Faculty of Science Module Catalog
BIO-O-WM9	Ecology of Specific Habitats II	6	Elec.	see the Faculty of Science Module Catalog
GEE-GV03	Ecosystem Services	6	Elec.	see the Faculty of Science Module Catalog
GEE-GV09	Numerics and Simulation	6	Elec.	see the Faculty of Science Module Catalog
GEE-KL	Climatology	6	Elec.	see the Faculty of Science Module Catalog
GEE-TV3	Global Change: The Earth as a System	6	Elec.	see the Faculty of Science Module Catalog
GEW-B-WP01	Advanced Module Geology I	6	Elec.	see the Faculty of Science Module Catalog
GEW-B-WP05	Advanced Module Geophysics I	6	Elec.	see the Faculty of Science Module Catalog
GEW-GIS1	Foundations of Geoinformation Systems	6	Elec.	see the Faculty of Science Module Catalog
GEW-RCM01	Remote Sensing of the Environment	6	Elec.	see the Faculty of Science Module Catalog

GEW-RCM02	Earth System Science	6	Elec.	see the Faculty of Science Module Catalog
GEW-RCM03	Data Analysis and Statistics	6	Elec.	see the Faculty of Science Module Catalog
INF-1010	Foundations of Programming	6	Elec.	see the Faculty of Science Module Catalog
MATBMD130	Basic Module in Programming	6	Elec.	see the Faculty of Science Module Catalog
MAT-MBIP05	Introduction to Theoretical Systems Biology	6	Elec.	see the Faculty of Science Module Catalog
MATVMD834a	Stochastic Processes	6	Elec.	see the Faculty of Science Module Catalog
MAT-M3	Advanced Problems in Mathematics for the Earth Sciences	6	Elec.	see the Faculty of Science Module Catalog
PHY_131d	Simulation and Modeling	6	Elec.	see the Faculty of Science Module Catalog
PHY_541c_a	Advanced Module in Statistical and Nonlinear Physics	6	Elec.	see the Faculty of Science Module Catalog

Appendix 2: Sample Courses of Study

Master's degree program in Ecology, Evolution, and Conservation, beginning in the Winter Semester

Semester	Modules	CP
1. (Winter) 31 CPs	Mandatory module BIO-O-KM1: State of the Art in Ecology, Evolution, and Con-servation (lecture on evolution) Mandatory module BIO-O-KM2: Experimental Design and Data Analysis (lecture + tutorial on data analysis and statistics) 4 elective modules from group A,	1 6 24
2. (Summer) 29 CPs	Mandatory module BIO-O-KM1 (lecture on ecology and conservation + excursion) 2 elective modules from A, 2 elective modules from A or B,	5 12 12
3. (WS) 30 CPs	1 advanced module, e.g. BIO-O-VM2: Animal Ecology 3 elective modules from A or B	12 18
4. (Summer Semester) 30 CPs	Master's thesis	30
		Total CPs 120

Master □s degree program in Ecology, Ev

Semester	Modules	CPs
1. (Summer Semester) 29 CPs	Mandatory module BIO-O-KM1 (lecture on ecology and conservation + excursion) 4 elective modules from A,	5 24
2. (Winter Semester) 31 CPs	Mandatory module BIO-O-KM1: State of the Art in Ecology, Evolution, and Con-servation (lecture on evolution) Mandatory module BIO-O-KM2: Experimental design and data analysis (lecture + tutorial on data analysis and statistics) 1 elective module from group A, 3 elective modules from A or B	1 6 6 18
3. (Summer Semester) 30 CPs	1 advanced module, 3 elective modules from A or B	12 18
4. (Winter Semester) 30 CPs	Master's thesis	30
		Total CPs 120