

Study plan for the Master's degree course Biodiversität/Biodiversity

Module	CP per Module	Courses	CP per course	Obligatory courses	Elective courses	Type of course	Category	Admission requirements	Examinations relevant for grading	Number of examinations
1st Semester										
Biodiv-M-1 Basic course Biodiversity	10	Introduction to Phylogeny und Diversity	2	X		Lecture (L)	Basics	none	Oral exam	1
		Introduction to Phylogeny und Diversity	3	X		Seminar (S)	Basics	none		
		The Basics of Evolution und Ecology	2	X		lecture	Basics	none		
		The Basics of Evolution und Ecology	3	X		Seminar	Basics	none		
Biodiv-M-2 Methods of Biodiversity research	7	Methods of Biodiversity research	2	X		lecture	Basics	none	Written exam	1
		Methods of Biodiversity research	5	X		Übung (Ü)	Basics	none		
Biodiv-M-3 Biodiversity in research and practice	6	Lecture series Biodiversity	2	X		lecture	Elective Courses for BA students – OptionalbereichOP tB)/ Ergänzungsbereich (EB)	none	Term paper and presentation	2
		Science Slam	4	X		Seminar	Elective Courses for BA students – OptB/EB	none		
Biodiv-M-4 Scientific writing and presentation	7	Scientific writing	2	X		lecture	Elective Courses for BA students - OptB/EB	none	Poster	1
		Scientific writing	3	X		Seminar	Elective Courses for BA students - OptB/EB	none		
		Data presentation	2	X		Seminar	Elective Courses for BA students - OptB/EB	none		
Module	CP per Module	Courses	CP per course	Obligatory course	Elective course (WP)	Type of course	Category	Admission requirements	Examinations relevant for grading	Number of examinations

2nd Semester										
Biodiv-M-5 Basic module „Phylogeny, Systematics, Taxonomy“	9	Courses WP 5 (elective courses 5)	9		X	L & S or T	Specialisation WP	Modules 1 & 2	Protocol/written minutes or presentation and oral exam	2
Biodiv-M-6 Complementary module „Phylogeny, Systematics, Taxonomy“	6	Courses WP 6 (elective courses 6)	6		X	L & S or T	Specialisation WP	Modules 1 & 2	Protocol/written minutes or presentation	1
Biodiv-M-7 Basic module „Functional Diversity and Diversity of Natural Systems“	9	Courses WP 7 (elective courses 7)	9		X	L & S or T	Specialisation WP	Modules 1 & 2	Protocol/written minutes or presentation and oral exam	2
Biodiv-M-8 Complementary module „Functional Diversity and Diversity of Natural Systems“	6	Courses WP 8 (elective courses 8)	6		X	L & S or T	Specialisation WP	Modules 1 & 2	Protocol/written minutes or presentation	1
3rd Semester										
Biodiv-M-9 Internship (Theory and Practice of Scientific Work, Research Internships Abroad)	27	Internship	27	X		Internship (I)	Specialisation	Modules 1 & 2	Protocol/written minutes	1
	3	Internet colloquium	3	X		S	Elective Courses for BA students - Optionalbereich/ Ergänzungsbereich	Modules 1 & 2		
4th Semester										
Biodiv-M-10 Master project	28	Master thesis	28	X			Specialisation	Modules 1-9	Master thesis	1
	2	Master colloquium	2				Specialisation	Modules 1-9	Oral exam	1

* If the Science Slam takes place at another location, the examination will take place there.

Elective courses in the 2nd semester

All modules of the second semester are assigned to the elective course area. The module Biodiversity M-5 (basic module) and the module Biodiversity M-6 (supplementary module) can be selected from the specialisation area "Phylogeny, Systematics and Taxonomy". In this case each module can be a basic or a supplementary module. To complete a basic module, an oral exam must be passed in addition to the actual exam. This oral examination has a learning expenditure of 90 hours, therefore it is credited with 3 credit points.

The specialisation area "Phylogeny, Systematics and Taxonomy" includes the following elective modules:

- Application of Next Generation Sequencing (NGS)
- Diversity of Fungi
- Diversity of Plants
- Ecology, Evolution and Biodiversity of Invertebrates I
- Ecology, Evolution and Biodiversity of Invertebrates II
- Population Genetics and Phylogeny I
- Population Genetics and Phylogeny II

The module Biodiversity M-7 (basic module) and the module Biodiversity M-8 (add-on module) can be selected from the specialisation area "Functional Diversity and Diversity of Natural Systems". In this case each module can be a basic or a supplementary module. In order to complete a basic module, an oral exam must be passed in addition to the actual exam. This oral examination has a learning expenditure of 90 hours, therefore it is credited with 3 credit points.

The specialisation area "Functional Diversity and Diversity of Natural Systems" includes the following elective modules:

- Parasitology
- Freshwater Ecology (Limnology)
- Terrestrial Ecology
- Comparative Sensory Ecology and Ethoendocrinology
- Flora and vegetation of Central Europe
- Behavioral Physiology
- Behavioral Ecology and Sociobiology
- Ecology of coral reefs I
- Ecology of coral reefs / Sinai, Egypt

In addition, modules from the cross-sectional area can also be accredited as complementary modules in the specialisation areas "Functional Diversity and Diversity of Natural Systems" and "Phylogeny, Systematics, Taxonomy"

The cross-sectional area includes the following elective course modules:

- Mathematical models in biology
- Biodiversity communicate

The learning objectives, contents, admission requirements and respective examination modalities are described in the module handbook in the respective current version.

Description of the study and educational objectives of the individual modules

Module	Higher study objectives	Qualification objectives in terms of learning outcomes
Biodiv-M-1 Basic course Biodiversity	<p>Research-oriented specialisation in the areas of "Phylogeny, Systematics, Taxonomy" und "Functional Diversity and Diversity of Natural Systems"</p> <p>Ability to systematically present complex biological connections and classify into the context of existing research results and questions relevant to society.</p>	<p>Graduates of the module:</p> <ul style="list-style-type: none"> • possess in-depth knowledge of molecular, organismic and ecosystematic subareas of biology • have an overview of the current state of research in specific subareas of biodiversity and can critically interpret its results • systematically present complex connections between different organisational levels of biodiversity • can understand contributions to scientific discussions of questions relevant to society, can objectively and ethically evaluate them and can support the individual and societal relevance with reason • place research results in the historical context and while doing so gain knowledge about principles and mechanisms of biodiversity • present results addressee-oriented in oral and written form
Biodiv-M-2 Methods of Biodiversity research	<p>Research-oriented specialisation in the areas of "Phylogeny, Systematics, Taxonomy" und "Functional Diversity and Diversity of Natural Systems"</p> <p>Ability to systematically present complex biological connections and classify into the context of existing research results and questions relevant to society.</p> <p>Knowledge and implementation of modern methods and state-of-the-art techniques in field- and laboratory-work.</p>	<p>Graduates of the module:</p> <ul style="list-style-type: none"> • possess in-depth knowledge of molecular, organismic and ecosystematic subareas of biology • have an overview of the current state of research in specific subareas of biodiversity and can critically interpret its results • place research results in the historical context and while doing so gain knowledge about principles and mechanisms of biodiversity • present results addressee-oriented in oral and written form • know various modern methods and specific work techniques of biodiversity research • can critically and objectively assess and evaluate the pros and cons of these methods with regard to the question supposed to be answered
Biodiv-M-3 Biodiversity in Research and Practice	<p>Research-oriented specialisation in the areas of "Phylogeny, Systematics, Taxonomy" und "Functional Diversity and Diversity of Natural Systems"</p> <p>Ability to systematically present complex biological connections and classify into the context of existing research results and questions relevant to society.</p> <p>Independent carrying out of scientific work and qualification for doctoral studies or qualification for a leading position in a company, a public authority or a NGO (non-government organisation)</p>	<p>Graduates of the module:</p> <ul style="list-style-type: none"> • possess in-depth knowledge of molecular, organismic and ecosystematic subareas of biology • have an overview of the current state of research in specific subareas of biodiversity and can critically interpret its results • systematically present complex connections between different organisational levels of biodiversity • can understand contributions to scientific discussions of questions relevant to society, can objectively and ethically evaluate them and can support the individual and societal relevance with reason

		<ul style="list-style-type: none"> place research results in the historical context and while doing so gain knowledge about principles and mechanisms of biodiversity present results addressee-oriented in oral and written form independently develop questions and hypotheses plan research projects time- and resource-oriented
Biodiv-M-4 Scientific writing and presentation	Ability to systematically present complex biological connections and classify into the context of existing research results and questions relevant to society.	<p>Graduates of the module:</p> <ul style="list-style-type: none"> systematically present complex connections between different organisational levels of biodiversity can understand contributions to scientific discussions of questions relevant to society, can objectively and ethically evaluate them and can support the individual and societal relevance with reason place research results in the historical context and while doing so gain knowledge about principles and mechanisms of biodiversity present results addressee-oriented in oral and written form
Biodiv-M-5 Basic module „Phylogeny, Systematics, Taxonomy“	<p>Research-oriented specialisation in the areas of "Phylogeny, Systematics, Taxonomy" und "Functional Diversity and Diversity of Natural Systems"</p> <p>Ability to systematically present complex biological connections and classify into the context of existing research results and questions relevant to society.</p> <p>Knowledge and implementation of modern methods and state-of-the-art techniques in field- and laboratory-work.</p> <p>Independent carrying out of scientific work and qualification for doctoral studies or qualification for a leading position in a company, a public authority or a NGO (non-government organisation)</p>	<p>Graduates of the module:</p> <ul style="list-style-type: none"> possess in-depth knowledge of molecular, organismic and ecosystematic subareas of biology have an overview of the current state of research in specific subareas of biodiversity and can critically interpret its results place complex connections in the context of existing research results place research results in the historical context and while doing so gain knowledge about principles and mechanisms of biodiversity present results addressee-oriented in oral and written form know various modern methods and specific work techniques of biodiversity research can critically and objectively assess and evaluate the pros and cons of these methods with regard to the question supposed to be answered independently apply modern methods and work techniques of biology in laboratory and field-work independently develop questions and hypotheses plan research projects time- and resource-oriented
Biodiv-M-6 Complementary module „Phylogeny, Systematics, Taxonomy“	<p>Research-oriented specialisation in the areas of "Phylogeny, Systematics, Taxonomy" und "Functional Diversity and Diversity of Natural Systems"</p> <p>Ability to systematically present complex biological connections and classify into the context of existing research results and questions relevant to society.</p> <p>Knowledge and implementation of modern methods and state-of-the-art techniques in field- and laboratory-work.</p>	<p>Graduates of the module:</p> <ul style="list-style-type: none"> possess in-depth knowledge of molecular, organismic and ecosystematic subareas of biology have an overview of the current state of research in specific subareas of biodiversity and can critically interpret its results place complex connections in the context of existing research results place research results in the historical context and while doing so gain knowledge about

	<p>Independent carrying out of scientific work and qualification for doctoral studies or qualification for a leading position in a company, a public authority or a NGO (non-government organisation)</p>	<p>principles and mechanisms of biodiversity</p> <ul style="list-style-type: none"> • present results addressee-oriented in oral and written form • know various modern methods and specific work techniques of biodiversity research • can critically and objectively assess and evaluate the pros and cons of these methods with regard to the question supposed to be answered • independently apply modern methods and work techniques of biology in laboratory and field-work • independently develop questions and hypotheses • plan research projects time- and resource-oriented
<p>Biodiv-M-7 Basic module „Functional Diversity and Diversity of Natural Systems“</p>	<p>Research-oriented specialisation in the areas of "Phylogeny, Systematics, Taxonomy" und "Functional Diversity and Diversity of Natural Systems"</p> <p>Ability to systematically present complex biological connections and classify into the context of existing research results and questions relevant to society.</p> <p>Knowledge and implementation of modern methods and state-of-the-art techniques in field- and laboratory-work.</p> <p>Independent carrying out of scientific work and qualification for doctoral studies or qualification for a leading position in a company, a public authority or a NGO (non-government organisation)</p>	<p>Graduates of the module:</p> <ul style="list-style-type: none"> • possess in-depth knowledge of molecular, organismic and ecosystematic subareas of biology • have an overview of the current state of research in specific subareas of biodiversity and can critically interpret its results • place complex connections in the context of existing research results • place research results in the historical context and while doing so gain knowledge about principles and mechanisms of biodiversity • present results addressee-oriented in oral and written form • know various modern methods and specific work techniques of biodiversity research • can critically and objectively assess and evaluate the pros and cons of these methods with regard to the question supposed to be answered • independently apply modern methods and work techniques of biology in laboratory and field-work • independently develop questions and hypotheses • plan research projects time- and resource-oriented
<p>Biodiv-M-8 Complementary module „Functional Diversity and Diversity of Natural Systems“</p>	<p>Research-oriented specialisation in the areas of "Phylogeny, Systematics, Taxonomy" und "Functional Diversity and Diversity of Natural Systems"</p> <p>Ability to systematically present complex biological connections and classify into the context of existing research results and questions relevant to society.</p> <p>Knowledge and implementation of modern methods and state-of-the-art techniques in field- and laboratory-work.</p> <p>Independent carrying out of scientific work and qualification for doctoral studies or qualification for a leading position in a company, a public authority or a NGO (non-government organisation)</p>	<p>Graduates of the module:</p> <ul style="list-style-type: none"> • possess in-depth knowledge of molecular, organismic and ecosystematic subareas of biology • have an overview of the current state of research in specific subareas of biodiversity and can critically interpret its results • place complex connections in the context of existing research results • place research results in the historical context and while doing so gain knowledge about principles and mechanisms of biodiversity • present results addressee-oriented in oral and written form • know various modern methods and specific work techniques of biodiversity research • can critically and objectively assess and evaluate the pros and cons of these methods with regard to the question supposed to be answered • independently apply modern methods and work techniques of biology in laboratory and

		<p>field-work</p> <ul style="list-style-type: none"> independently develop questions and hypotheses plan research projects time- and resource-oriented
<p>Biodiv-M-9 Internship (Theory and Practice of Scientific Work, Research Internships Abroad)</p>	<p>Knowledge and implementation of modern methods and state-of-the-art techniques in field- and laboratory-work.</p> <p>Independent carrying out of scientific work and qualification for doctoral studies or qualification for a leading position in a company, a public authority or a NGO (non-government organisation)</p>	<p>Graduates of the module:</p> <ul style="list-style-type: none"> can understand contributions to scientific discussions of questions relevant to society, can objectively and ethically evaluate them and can support the individual and societal relevance with reason present results addressee-oriented in oral and written form know various modern methods and specific work techniques of biodiversity research can critically and objectively assess and evaluate the pros and cons of these methods with regard to the question supposed to be answered independently apply modern methods and work techniques of biology in laboratory and field-work independently develop questions and hypotheses plan research projects time- and resource-oriented independently carry out research projects with appropriate methods and work techniques analyse results, critically and objectively interpret outcomes, place results in a scientific and social context
<p>Biodiv-M-10 Master project</p>	<p>Knowledge and implementation of modern methods and state-of-the-art techniques in field- and laboratory-work.</p> <p>Independent carrying out of scientific work and qualification for doctoral studies or qualification for a leading position in a company, a public authority or a NGO (non-government organisation)</p>	<p>Graduates of the module:</p> <ul style="list-style-type: none"> can understand contributions to scientific discussions of questions relevant to society, can objectively and ethically evaluate them and can support the individual and societal relevance with reason present results addressee-oriented in oral and written form know various modern methods and specific work techniques of biodiversity research can critically and objectively assess and evaluate the pros and cons of these methods with regard to the question supposed to be answered independently apply modern methods and work techniques of biology in laboratory and field-work independently develop questions and hypotheses plan research projects time- and resource-oriented independently carry out research projects with appropriate methods and work techniques analyse results, critically and objectively interpret outcomes, place results in a scientific and social context