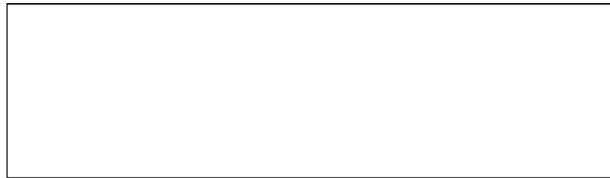




LUDWIG-  
MAXIMILIANS-  
UNIVERSITÄT  
MÜNCHEN



## **Program Catalog**

### **Master's degree: Biology (Master of Science, M.Sc.)**

**(120 ECTS points)**

**Based on the Examination Regulations from September 21, 2012**

**88/026/---/M0/H/2012**

**Version: May 2, 2013**

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## Abbreviations and Explanations

ECTS	European Credit Transfer and Accumulation System
h	hours
SS	summer semester
SWS	hours per week per semester/credit hours
WS	winter semester
WP	elective course ( <i>Wahlpflicht</i> )
P	mandatory course ( <i>Pflicht</i> )

- 1. Instructions for the program catalog:** The program catalog is a list of formal requirements for the elective courses and modules that are described generically according to subject, and for the mandatory final module. An **Elective Course Catalog** (in Appendix) lists individual courses offered in the master's program, including course instructors, detailed descriptions of course contents and qualification goals. Courses are grouped according to subject, according to lectures, practical courses and seminars (in that order). Practical research courses (lab rotations) are not listed individually since the topics vary according to current topics in faculty research groups.
- 2. Designated ECTS points.** In the program catalog assigned ECTS points are designated as follows: ECTS points that are not listed in parentheses are awarded upon successful completion of the respective graded exam. ECTS points listed in parentheses are for calculation purposes only; these courses do not entail a graded exam.
- 3. Levels of courses** can be either binding or can be considered as a recommendation, according to the stipulations stated in Appendix 2 in the examination regulations, and are indicated in the catalog either by "designated semester" or "recommended semester", respectively.
- 4. Applicability to other degree programs:** Modules are custom-designed to the Master of Science Biology program and are not transferable as entire modules into other degree programs. Some individual, broadly relevant courses may also be applied to teaching degree or bachelor's degree programs. Individual courses as modular elements are exchangeable with those of other master's programs within the boundaries of respective program regulations.
- 5. Please note:** The program catalog is intended to serve as an orientation for the master's program, both in structure and content. For detailed regulations, please see the official examination regulations under [www.biologie.uni-muenchen.de/studium/studiengaenge/master\\_bio](http://www.biologie.uni-muenchen.de/studium/studiengaenge/master_bio) .

## Contact

Master's program coordinator: Dr. Michael Bögle, [master@bio.lmu.de](mailto:master@bio.lmu.de)

Application: [http://www.en.biologie.uni-muenchen.de/forstudents/studiengaenge/master\\_bio11/index.html](http://www.en.biologie.uni-muenchen.de/forstudents/studiengaenge/master_bio11/index.html) - Application

## Master of Science, Biology

### Program structure

The Master of Science Biology program allows students to build on their bachelor's degree and further deepen their knowledge through a variety of specialized courses taught by the highly qualified staff in the Faculty of Biology. The advantage of the master's program is its flexibility; the goal of the program is to allow as much freedom as possible in the choice of subjects and the organization of courses. The curriculum is kept as research-oriented as possible by offering a broad spectrum of practical courses, research courses and requiring a 2-semester final research project with a written master's thesis.

Students compose their own curriculum (with few restrictions) according to their interest and course availability. The curriculum is based on elective modules (defined credit-point units composed of subject-related courses) that are offered in Anthropology, Cell Biology, Genetics, Human Biology, Microbiology, Plant Sciences, Systematic Botany and Zoology.

### Module structure

The master's program extends over four semesters during which time a total of 120 ECTS points are acquired. In semesters 1-3, students select courses/modules to acquire 30 ECTS per semester. Modules in various subjects are available with 9, 15, or 21 ECTS (see Figure 1). Interdisciplinary modules worth 3 or 6 ECTS are also offered. During the 4th semester, students complete a 30 ECTS master's final module that includes a 26 ECTS master's thesis. The master's thesis must be completed in a field of study in which at least one research course was completed.

Modules may contain only one lecture. 9-point modules generally include a lecture (3 points), a practical course (3 points), and a seminar (3 points) or include a lecture and a long practical course (6 points). 15-point modules may include two long practical courses and a lecture or a practical research course (12 points) and a lecture in the respective field of study. 21-point modules provide a combination of a practical research course with a 9-point module. For a general overview of module structure, please see Figure 1. Depending on the semester during which modules are completed, modules are designated as **basic** (first semester), **advanced** (second semester) or **specialized** (third semester).

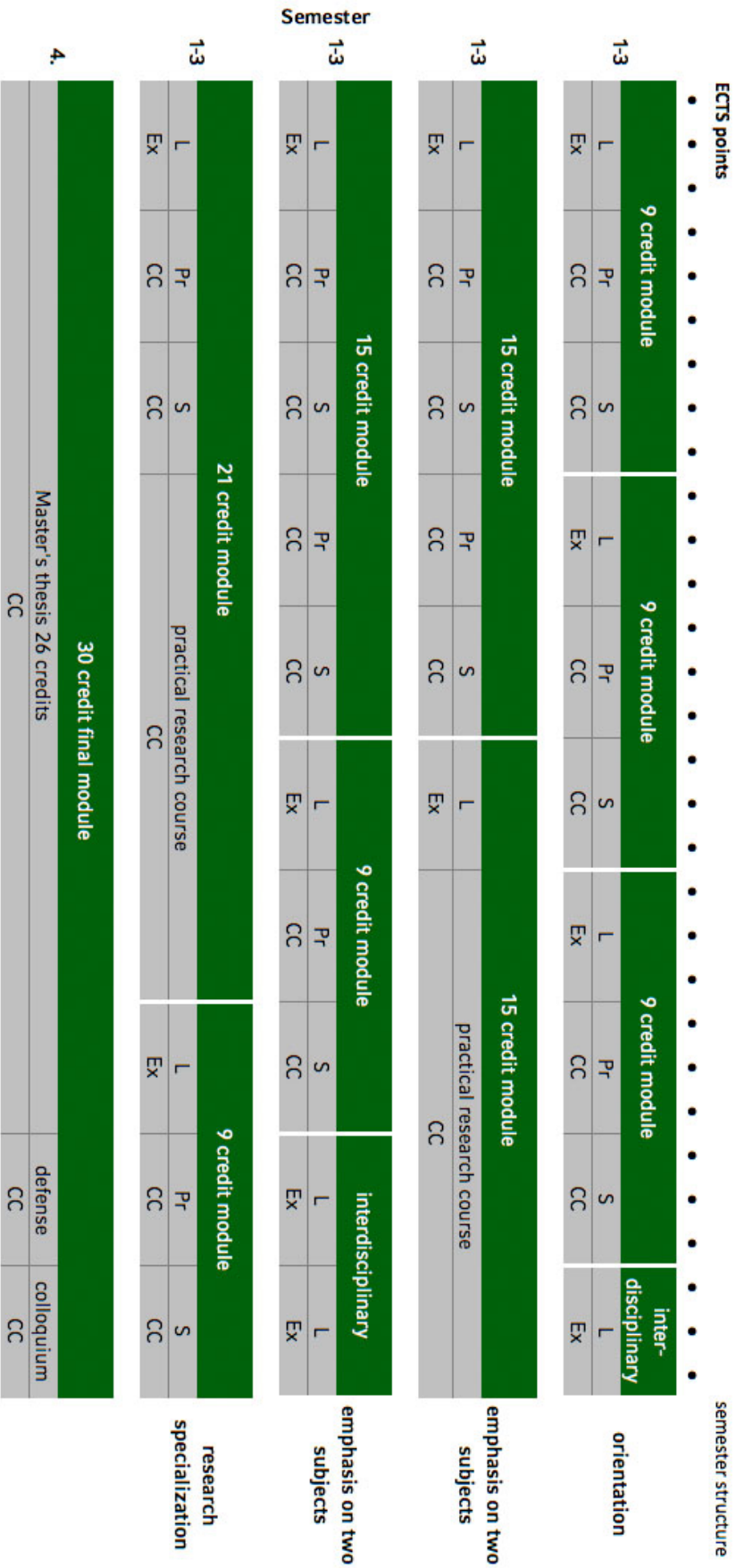
### Module assessment

Modules are assessed according to the successful completion of their individual component courses; there are no module exams per se. In an attempt to reduce the number of exams and the student workload toward the end of the semester, different forms of assessment have been implemented (here a general summary):

Course type	Assessment form
Lecture	Graded exam
Seminar	Oral presentation
Practical course	Lab report

For a detailed regimen of different forms of assessment, please see examination regulations.

Figure 1: Schematic representation of recommended modules in the 4-semester Master of Science Biology program



L: Lecture; Pr: Practical course; S: Seminar; CC: Course Completion assessment; Ex: Exam; •: 1 ECTS point

## Module: WP 1 Plant Sciences 1

**Program** Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 1.1 Lecture: Basics in Plant Sciences	WS	30 h (2 SWS)	60 h	3
Practical course	WP 1.2 Practical course: Basics in Plant Sciences	WS	45 h (3 SWS)	45 h	(3)
Seminar	WP 1.3 Seminar: Basics in Plant Sciences	WS	30 h (2 SWS)	60 h	(3)

This module is comprised of 9 ECTS points. Class attendance is 7 SWS; total time, including preparation time, is 270 h.

**Type of module** Elective module with required courses.

**Elective guidelines** The module is composed of thematically related course elements (in general lecture, practical course and seminar, see elective course catalog). The sum of ECTS points is oriented to 30 ECTS per semester.

**Entry requirements** See individual course descriptions.

**Level** Recommended semester: 1

**Duration** The module spans 1 semester.

**Content and qualification goals** The 9 point module for first semester students includes a lecture, seminar and an instructed practical course in Plant Sciences. This basic module aims at providing students with theoretical knowledge, training in researching, presenting and critically discussing a topic, as well as practical experience in application and interpretation of methods and concepts. Teamwork, learning strategies, organizational and communication skills are required, and serve as the basis for advanced courses.

The module is intended to serve first semester students as an introduction to Plant Sciences, allowing flexibility to incorporate modules/courses in additional subject areas.

**Grading** The module is graded according to lecture grade.

**Pass/fail conditions for ECTS** ECTS points are awarded for individual courses according to successful completion; module completion is dependent on



<b>points</b>	successful completion of individual elements.
<b>Responsible persons</b>	Prof. Dr. Dario Leister, Prof. Dr. Jürgen Soll (Chairs, Plant Sciences division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 2 Plant Sciences 2

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 2.1 Lecture: Basics in Plant Sciences	WS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 2.2.1 Practical course: Basics in Plant Sciences	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 2.2.2 Seminar: Basics in Plant Sciences	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 2.2.3 Practical course in Molecular Plant Sciences	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 2.2.4 Seminar: Molecular Plant Sciences	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 2.2.5 Practical research course in Plant Sciences	WS	180 h (12 SWS)	180 h	12
Practical course	WP 2.2.6 Practical course in Molecular Biology of Plants	WS	90 h (6 SWS)	90 h	6

\* May only be chosen with accompanying practical course.

In this module a total of 15 ECTS points must be accrued, 12 ECTS points of which are elective courses. Class attendance is 12-14 SWS; total time, including preparation time, is approx. 450 h.

<b>Type of module</b>	Mandatory modules (see introduction, 9 ECTS, 15 ECTS and 21 ECTS modules) with elective courses, chosen by students.
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<b>Elective guidelines</b>	The module is composed of thematically related course elements (in general lecture, practical course and seminar, see elective course catalog). The sum of ECTS points is oriented to 30 ECTS per semester.
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<b>Entry requirements</b>	See individual course descriptions.
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<b>Level</b>	Recommended semester: 1
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<b>Duration</b>	The module spans 1 semester.
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<b>Content and qualification goals</b>	The 15 point module for first semester students includes one lecture and a combination of basic and molecular topics of
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Plant Science-related seminar(s) and/or instructed practical courses or an independent practical research course. The module aims to provide students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Plant Science, and training in presentation and communication skills. The module is intended to serve first semester students interested in acquiring broad exposure to topics in Plant Science in research-oriented courses. This module can serve as a basis for advanced or specialized courses, as well as the prerequisite for the master's thesis.

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**Grading**

The module is graded according to lecture grade.

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**Pass/fail conditions for ECTS points**

ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.

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**Responsible person**

Prof. Dr. Dario Leister, Prof. Dr. Jürgen Soll (Chairs, Plant Sciences division). Teaching responsibilities for individual courses are listed in elective course catalog.

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**Language**

In general, courses in the Master of Science Biology program are offered in English, with exception of courses also offered for teaching and bachelor's degrees.

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**Other information**

## Module: WP 3 Plant Sciences 3

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 3.1 Lecture: Basics in Plant Sciences	WS	30 h (2 SWS)	60 h	3

Course type	Elective course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 3.2.1 Practical course: Basics in Plant Sciences	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 3.2.2 Seminar: Basics in Plant Sciences	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 3.2.3 Practical course in Molecular Plant Sciences	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 3.2.4 Seminar: Molecular Plant Sciences	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 3.2.5 Practical research course in Plant Sciences	WS	180 h (12 SWS)	180 h	12
Practical course	WP 3.2.6 Practical course in Molecular Biology of Plants	WS	90 h (6 SWS)	90 h	6
Practical course	WP 3.2.7 Practical course: Plant Biology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 3.2.8 Seminar: Plant Biology	WS	30 h (2 SWS)	60 h	(3)

\* Courses can only be chosen in combination.

In this module a total of 21 ECTS points must be accrued, 18 ECTS points of which are elective courses. Class attendance is 17-20 SWS; total time, including preparation time, is approx. 630 h.

### Type of module

Elective module with mandatory and elective courses.

### Elective guidelines

The module is composed of thematically related course elements (in general lecture, practical course and seminar, see elective course catalog). The sum of ECTS points is oriented to 30 ECTS per semester.

For elective courses in WP 3 modules the following applies: elective courses totaling 18 ECTS points are to be chosen

	from Plant Sciences listings in the elective course catalog.
<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 1
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 21 point module for first semester students includes one lecture and a combination of basic, molecular, and Plant Science-related seminar(s) and/or instructed practical courses or an independent practical research course. The module aims to provide students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Plant Science, and training in presentation and communication skills.</p> <p>The module is intended to serve first semester students interested in concentrating on Plant Science in research-oriented courses. This module can serve as a basis for advanced or specialized courses, as well as the prerequisite for the master's thesis.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible persons</b>	Prof. Dr. Dario Leister, Prof. Dr. Jürgen Soll (Chairs, Plant Sciences division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 4 Genetics 1

**Program**

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 4.1 Lecture: Basics in Genetics	WS	30 h (2 SWS)	60 h	3
Practical course	WP 4.2 Practical course: Basics in Genetics	WS	45 h (3 SWS)	45 h	(3)
Seminar	WP 4.3 Seminar: Basics in Genetics	WS	30 h (2 SWS)	60 h	(3)

This module is comprised of 9 ECTS points. Class attendance is 7 SWS; total time, including preparation time, is 270 h.

### Type of module

Optional module with required courses.

### Elective guidelines

The module is composed of thematically related course elements (in general lecture, practical course and seminar, see elective course catalog). The sum of ECTS points is oriented to 30 ECTS per semester.

### Entry requirements

See individual course descriptions.

### Level

Recommended semester: 1

### Duration

The module spans 1 semester.

### Content and qualification goals

The 9 point module for first semester students includes a lecture, seminar and an instructed practical course in Genetics. This basic module aims at providing students with theoretical knowledge, training in researching, presenting and critically discussing a topic, as well as practical experience in application and interpretation of methods and concepts. Teamwork, learning strategies, organizational and communication skills are required, and serve as the basis for advanced courses.

The module is intended to serve first semester students as an introduction to Genetics, allowing flexibility to incorporate modules/courses in additional subject areas.

### Grading

The module is graded according to lecture grade.

### Pass/fail conditions for ECTS

ECTS points are awarded for individual courses according to

<b>points</b>	successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Martin Parniske (Chair, Genetics division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 5 Genetics 2

**Program** Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 5.1 Lecture: Basics in Genetics	WS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 5.2.1 Practical course: Basics in Genetics	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 5.2.2 Seminar: Basics in Genetics	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 5.2.3 Practical course in Molecular Genetics	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 5.2.4 Seminar: Molecular Genetics	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 5.2.5 Practical research course in Genetics	WS	180 h (12 SWS)	180 h	12
Practical course	WP 5.2.6 Practical course in Molecular Biology	WS	90 h (6 SWS)	90 h	6

\* May only be chosen with accompanying practical course.

In this module a total of 15 ECTS points must be accrued, 12 ECTS points of which are elective courses. Class attendance is 12-14 SWS; total time, including preparation time, is approx. 450 h.

**Type of module** Elective module with mandatory and elective courses.

### Applicability in other degree programs

#### Elective guidelines

The module is composed of thematically related course elements (in general lecture, practical course and seminar, see elective course catalog). The sum of ECTS points is oriented to 30 ECTS per semester.

For elective courses in WP 5 modules the following applies: elective courses totaling 12 ECTS points are to be chosen from Genetics listings in the elective course catalog.

**Entry requirements** See individual course descriptions.



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<b>Level</b>	Recommended semester: 1
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 15 point module first semester students includes one lecture and an combination of basic and molecular topics of Genetics-related seminar(s) and/or instructed practical courses or an independent practical research course. The module aims to provide students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Genetics, and training in presentation and communication skills.</p> <p>The module is intended to serve first semester students interested in acquiring broad exposure to topics in Genetics in research-oriented courses. This module can serve as a basis for advanced or specialized courses, as well as the prerequisite for the master's thesis.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Martin Parniske (Chair, Genetics division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

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## Module: WP 6 Genetics 3

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 6.1 Lecture: Basics in Genetics	WS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 6.2.1 Practical course: Basics in Genetics	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 6.2.2 Seminar: Basics in Genetics	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 6.2.3 Practical course in Molecular Genetics	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 6.2.4 Molecular Genetics Seminar	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 6.2.5 Practical research course in Genetics	WS	180 h (12 SWS)	180 h	12
Practical course	WP 6.2.6 Practical course in Molecular Biology	WS	90 h (6 SWS)	90 h	6
Practical course	WP 6.2.7 Practical course: Genetics	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 6.2.8 Seminar: Genetics	WS	30 h (2 SWS)	60 h	(3)

\* May only be chosen with accompanying practical course.

In this module a total of 21 ECTS points must be accrued, 18 ECTS points of which are elective courses. Class attendance is 17-20 SWS; total time, including preparation time, is approx. 630 h.

<b>Type of module</b>	Elective module with mandatory and elective courses.
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<b>Elective guidelines</b>	<p>The module is composed of thematically related course elements (in general lecture, practical course and seminar, see elective course catalog). The sum of ECTS points is oriented to 30 ECTS per semester.</p> <p>For elective courses in WP 6 modules the following applies: elective courses totaling 18 ECTS points are to be chosen from Genetics listings in the elective course catalog.</p>
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<b>Entry requirements</b>	See individual course descriptions.
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<b>Level</b>	Recommended semester: 1
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 21 point module first semester students includes one lecture and a combination of basic, molecular, and Genetics-related seminar(s) and/or instructed practical courses or an independent practical research course.</p> <p>The module aims to provide students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Genetics, and training in presentation and communication skills.</p> <p>The module is intended to serve first semester students interested in concentrating on Genetics in research-oriented courses. This module can serve as a basis for advanced or specialized courses, as well as the prerequisite for the master's thesis.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Martin Parniske (Chair, Genetics division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

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## Module: WP 7 Human Biology 1

**Program**

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 7.1 Lecture: Basics in Human Biology	WS	30 h (2 SWS)	60 h	3
Practical course	WP 7.2 Practical course: Basics in Human Biology	WS	45 h (3 SWS)	45 h	(3)
Seminar	WP 7.3 Seminar: Basics in Human Biology	WS	30 h (2 SWS)	60 h	(3)

This module is comprised of 9 ECTS points. Class attendance is 7 SWS; total time, including preparation time, is 270 h.

### Type of module

Optional module with required courses.

### Elective guidelines

The module is composed of thematically related course elements (in general lecture, practical course and seminar, see elective course catalog). The sum of ECTS points is oriented to 30 ECTS per semester.

### Entry requirements

See individual course descriptions.

### Level

Recommended semester: 1

### Duration

The module spans 1 semester.

### Content and qualification goals

The 9 point module for first semester students includes a lecture, seminar and an instructed practical course in Human Biology. This basic module aims at providing students with theoretical knowledge, training in researching, presenting and critically discussing a topic, as well as practical experience in application and interpretation of methods and concepts. Teamwork, learning strategies, organizational and communication skills are required, and serve as the basis for advanced courses.

The module is intended to serve first semester students as an introduction to Human Biology, allowing flexibility to incorporate modules/courses in additional subject areas.

### Grading

The module is graded according to lecture grade.

### Pass/fail conditions for ECTS

ECTS points are awarded for individual courses according to

**points**

successful completion; module completion is awarded  
granted successful completion of individual elements.

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**Responsible person**

Prof. Dr. Heinrich Leonhardt (Chair, Human Biology  
division). Teaching responsibilities for individual courses are  
listed in elective course catalog.

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**Language**

English, with exception of courses also offered for teaching  
and bachelor's degrees.

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**Other information**

## Module: WP 8 Human Biology 2

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 8.1 Lecture: Basics in Human Biology	WS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 8.2.1 Practical course: Basics in Human Biology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 8.2.2 Seminar: Basics in Human Biology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 8.2.3 Practical course in Molecular Human Biology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 8.2.4 Seminar: Molecular Human Biology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 8.2.5 Practical research course in Human Biology	WS	180 h (12 SWS)	180 h	12
Practical course	WP 8.2.6 Practical course: Human Biology	WS	90 h (6 SWS)	90 h	6

\* May only be chosen with accompanying practical course.

In this module a total of 15 ECTS points must be accrued, 12 ECTS points of which are elective courses. Class attendance is 12-14 SWS; total time, including preparation time, is approx. 450 h.

<b>Type of module</b>	Elective module with mandatory and elective courses.
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<b>Elective guidelines</b>	<p>The module is composed of thematically related course elements (in general lecture, practical course and seminar, see elective course catalog). The sum of ECTS points is oriented to 30 ECTS per semester.</p> <p>For elective courses in WP 8 modules the following applies: elective courses totaling 12 ECTS points are to be chosen from Human Biology listings in the elective course catalog.</p>
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<b>Entry requirements</b>	See individual course descriptions.
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<b>Level</b>	Recommended semester: 1
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<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 15 point module first semester students includes one lecture and an combination of basic and molecular topics of Human Biology-related seminar(s) and/or instructed practical courses or an independent practical research course.</p> <p>The module aims to provide students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Human Biology, and training in presentation and communication skills.</p> <p>The module is intended to serve first semester students interested in acquiring broad exposure to topics in Human Biology in research-oriented courses. This module can serve as a basis for advanced or specialized courses, as well as the prerequisite for the master's thesis.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Heinrich Leonhardt (Chair, Human Biology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 9 Human Biology 3

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 9.1 Lecture: Basics in Human Biology	WS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 9.2.1 Practical course: Basics in Human Biology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 9.2.2 Seminar: Basics in Human Biology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 9.2.3 Practical course in Molecular Human Biology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 9.2.4 Seminar: Molecular Human Biology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 9.2.5 Practical research course in Human Biology	WS	180 h (12 SWS)	180 h	12
Practical course	WP 9.2.6 Practical course: Human Biology	WS	90 h (6 SWS)	90 h	6
Practical course	WP 9.2.7 Practical course: Human Biology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 9.2.8 Seminar: Human Biology	WS	30 h (2 SWS)	60 h	(3)

\* May only be chosen with accompanying practical course.

In this module a total of 21 ECTS points must be accrued, 18 ECTS points of which are elective courses. Class attendance is 17-20 SWS; total time, including preparation time, is approx. 630 h.

<b>Type of module</b>	Elective module with mandatory and elective courses.
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### Elective guidelines

The module is composed of thematically related course elements (in general lecture, practical course and seminar, see elective course catalog). The sum of ECTS points is oriented to 30 ECTS per semester.

For elective courses in WP 9 modules the following applies: elective courses totaling 18 ECTS points are to be chosen from Human Biology listings in the elective course catalog.



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<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 1
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 21 point module first semester students includes one lecture and a combination of basic, molecular, and Human Biology-related seminar(s) and/or instructed practical courses or an independent practical research course. The module aims to provide students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Human Biology, and training in presentation and communication skills. The module is intended to serve first semester students interested in concentrating on Human Biology in research-oriented courses. This module can serve as a basis for advanced or specialized courses, as well as the prerequisite for the master's thesis.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Heinrich Leonhardt (Chair, Human Biology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 10 Microbiology 1

**Program**

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 10.1 Lecture: Basics in Microbiology	WS	30 h (2 SWS)	60 h	3
Practical course	WP 10.2 Practical course: Basics in Microbiology	WS	45 h (3 SWS)	45 h	(3)
Seminar	WP 10.3 Seminar: Basics in Microbiology	WS	30 h (2 SWS)	60 h	(3)

This module is comprised of 9 ECTS points. Class attendance is 7 SWS; total time, including preparation time, is 270 h.

### Type of module

Optional module with required courses.

### Elective guidelines

The module is composed of thematically related course elements (in general lecture, practical course and seminar, see elective course catalog). The sum of ECTS points is oriented to 30 ECTS per semester.

### Entry requirements

See individual course descriptions.

### Level

Recommended semester: 1

### Duration

The module spans 1 semester.

### Content and qualification goals

The 9 point module for first semester students includes a lecture, seminar and an instructed practical course in Microbiology. This basic module aims at providing students with theoretical knowledge, training in researching, presenting and critically discussing a topic, as well as practical experience in application and interpretation of methods and concepts. Teamwork, learning strategies, organizational and communication skills are required, and serve as the basis for advanced courses.

The module is intended to serve first semester students as an introduction to Microbiology, allowing flexibility to incorporate modules/courses in additional subject areas.

### Grading

The module is graded according to lecture grade.

### Pass/fail conditions for ECTS

ECTS points are awarded for individual courses according to

**points**

successful completion; module completion is awarded  
granted successful completion of individual elements.

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**Responsible person**

Prof. Dr. Kirsten Jung (Chair, Microbiology division).  
Teaching responsibilities for individual courses are listed in  
elective course catalog.

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**Language**

English, with exception of courses also offered for teaching  
and bachelor's degrees.

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**Other information**

## Module: WP 11 Microbiology 2

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 11.1 Lecture: Basics in Microbiology	WS	30 h (2 SWS)	60 h	3
Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 11.2.1 Practical course: Basics in Microbiology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 11.2.2 Seminar: Basics in Microbiology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 11.2.3 Practical course in Molecular Microbiology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 11.2.4 Seminar: Molecular Microbiology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 11.2.5 Practical research course in Microbiology	WS	180 h (12 SWS)	180 h	12
Practical course	WP 11.2.6 Practical course: Microbiology	WS	90 h (6 SWS)	90 h	6

\* May only be chosen with accompanying practical course.

In this module a total of 15 ECTS points must be accrued, 12 ECTS points of which are elective courses. Class attendance is 12-14 SWS; total time, including preparation time, is approx. 450 h.

**Type of module** Elective module with mandatory and elective courses.

**Elective guidelines** The module is composed of thematically related course elements (in general lecture, practical course and seminar, see elective course catalog). The sum of ECTS points is oriented to 30 ECTS per semester.

For elective courses in WP 11 modules the following applies: elective courses totaling 12 ECTS points are to be chosen from Microbiology listings in the elective course catalog.

**Entry requirements** See individual course descriptions.

**Level** Recommended semester: 1

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<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 15 point module first semester students includes one lecture and a combination of basic and molecular topics of Microbiology-related seminar(s) and/or instructed practical courses or an independent practical research course.</p> <p>The module aims to provide students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Microbiology, and training in presentation and communication skills.</p> <p>The module is intended to serve first semester students interested in acquiring broad exposure to topics in Microbiology in research-oriented courses. This module can serve as a basis for advanced or specialized courses, as well as the prerequisite for the master's thesis.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Kirsten Jung (Chair, Microbiology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

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## Module: WP 12 Microbiology 3

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 12.1 Lecture: Basics in Microbiology	WS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 12.2.1 Practical course: Basics in Microbiology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 12.2.2 Seminar: Basics in Microbiology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 12.2.3 Practical course in Molecular Microbiology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 12.2.4 Seminar: Molecular Microbiology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 12.2.5 Practical research course in Microbiology	WS	180 h (12 SWS)	180 h	12
Practical course	WP 12.2.6 Practical course: Microbiology	WS	90 h (6 SWS)	90 h	6
Practical course	WP 12.2.7 Practical course: Microbiology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 12.2.8 Seminar: Microbiology	WS	30 h (2 SWS)	60 h	(3)

\* May only be chosen with accompanying practical course.

In this module a total of 21 ECTS points must be accrued, 18 ECTS points of which are elective courses. Class attendance is 17-20 SWS; total time, including preparation time, is approx. 630 h.

<b>Type of module</b>	Elective module with mandatory and elective courses.
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### Elective guidelines

The module is composed of thematically related course elements (in general lecture, practical course and seminar, see elective course catalog). The sum of ECTS points is oriented to 30 ECTS per semester.

For elective courses in WP 12 modules the following applies: elective courses totaling 18 ECTS points are to be chosen from Microbiology listings in the elective course catalog.

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<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 1
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 21 point module for first semester students includes one lecture and a combination of basic, molecular, and Microbiology-related seminar(s) and/or instructed practical courses or an independent practical research course. The module aims to provide students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Microbiology, and training in presentation and communication skills. The module is intended to serve first semester students interested in concentrating on Microbiology in research-oriented courses. This module can serve as a basis for advanced or specialized courses, as well as the prerequisite for the master's thesis.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Kirsten Jung (Chair, Microbiology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 13 Cell Biology 1

**Program**

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 13.1 Lecture: Basics in Cell Biology	WS	30 h (2 SWS)	60 h	3
Practical course	WP 13.2 Practical course: Basics in Cell Biology	WS	45 h (3 SWS)	45 h	(3)
Seminar	WP 13.3 Seminar: Basics in Cell Biology	WS	30 h (2 SWS)	60 h	(3)

This module is comprised of 9 ECTS points. Class attendance is 7 SWS; total time, including preparation time, is 270 h.

### Type of module

Optional module with required courses.

### Elective guidelines

The module is composed of thematically related course elements (in general lecture, practical course and seminar, see elective course catalog). The sum of ECTS points is oriented to 30 ECTS per semester.

### Entry requirements

See individual course descriptions.

### Level

Recommended semester: 1

### Duration

The module spans 1 semester.

### Content and qualification goals

The 9 point module for first semester students includes a lecture, seminar and an instructed practical course in Cell Biology. This basic module aims at providing students with theoretical knowledge, training in researching, presenting and critically discussing a topic, as well as practical experience in application and interpretation of methods and concepts. Teamwork, learning strategies, organizational and communication skills are required, and serve as the basis for advanced courses.

The module is intended to serve first semester students as an introduction to Cell Biology, allowing flexibility to incorporate modules/courses in additional subject areas.

### Grading

The module is graded according to lecture grade.

### Pass/fail conditions for ECTS

ECTS points are awarded for individual courses according to



**points**

successful completion; module completion is awarded  
granted successful completion of individual elements.

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**Responsible person**

Prof. Dr. Barbara Conradt (Chair, Cell and Developmental  
Biology division). Teaching responsibilities for individual  
courses are listed in elective course catalog.

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**Language**

English, with exception of courses also offered for teaching  
and bachelor's degrees.

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**Other information**

## Module: WP 14 Cell Biology 2

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 14.1 Lecture: Basics in Cell Biology	WS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 14.2.1 Practical course: Basics in Cell Biology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 14.2.2 Seminar: Basics in Cell Biology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 14.2.3 Practical course in Molecular Cell Biology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 14.2.4 Seminar: Molecular Cell Biology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 14.2.5 Practical research course in Cell Biology	WS	180 h (12 SWS)	180 h	12
Practical course	WP 14.2.6 Practical course: Cell Biology	WS	90 h (6 SWS)	90 h	6

\* May only be chosen with accompanying practical course.

In this module a total of 15 ECTS points must be accrued, 12 ECTS points of which are elective courses. Class attendance is 12-14 SWS; total time, including preparation time, is approx. 450 h.

<b>Type of module</b>	Elective module with mandatory and elective courses.
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<b>Elective guidelines</b>	<p>The module is composed of thematically related course elements (in general lecture, practical course and seminar, see elective course catalog). The sum of ECTS points is oriented to 30 ECTS per semester.</p> <p>For elective courses in WP 14 modules the following applies: elective courses totaling 12 ECTS points are to be chosen from Cell Biology listings in the elective course catalog.</p>
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<b>Entry requirements</b>	See individual course descriptions.
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<b>Level</b>	Recommended semester: 1
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<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 15 point module for first semester students includes one lecture and a combination of basic and molecular topics of Cell Biology-related seminar(s) and/or instructed practical courses or an independent practical research course.</p> <p>The module aims to provide students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Cell Biology, and training in presentation and communication skills.</p> <p>The module is intended to serve first semester students interested in acquiring broad exposure to topics in Cell Biology in research-oriented courses. This module can serve as a basis for advanced or specialized courses, as well as the prerequisite for the master's thesis.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Barbara Conradt (Chair, Cell and Developmental Biology division). Teaching responsibilities for individual courses are listed in elective course catalog
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

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## Module: WP 15 Cell Biology 3

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 15.1 Lecture: Basics in Cell Biology	WS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 15.2.1 Practical course: Basics in Cell Biology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 15.2.2 Seminar: Basics in Cell Biology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 15.2.3 Practical course in Molecular Cell Biology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 15.2.4 Seminar: Molecular Cell Biology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 15.2.5 Practical research course in Cell Biology	WS	180 h (12 SWS)	180 h	12
Practical course	WP 15.2.6 Practical course: Cell Biology	WS	90 h (6 SWS)	90 h	6
Practical course	WP 15.2.7 Practical course: Cell Biology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 15.2.8 Seminar: Cell Biology	WS	30 h (2 SWS)	60 h	(3)

\* May only be chosen with accompanying practical course.

In this module a total of 21 ECTS points must be accrued, 18 ECTS points of which are elective courses. Class attendance is 17-20 SWS; total time, including preparation time, is approx. 630 h.

<b>Type of module</b>	Elective module with mandatory and elective courses.
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### Elective guidelines

The module is composed of thematically related course elements (in general lecture, practical course and seminar, see elective course catalog). The sum of ECTS points is oriented to 30 ECTS per semester.

For elective courses in WP 15 modules the following applies: elective courses totaling 18 ECTS points are to be chosen from Cell Biology listings in the elective course catalog.

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<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 1
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 21 point module for first semester students includes one lecture and a combination of basic, molecular, and Cell Biology-related seminar(s) and/or instructed practical courses or an independent practical research course. The module aims to provide students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Cell Biology, and training in presentation and communication skills. The module is intended to serve first semester students interested in concentrating on Cell Biology in research-oriented courses. This module can serve as a basis for advanced or specialized courses, as well as the prerequisite for the master's thesis.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Barbara Conradt (Chair, Cell and Developmental Biology division). Teaching responsibilities for individual courses are listed in elective course catalog
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 16 Zoology 1

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 16.1 Lecture: Basics in Zoology	WS	30 h (2 SWS)	60 h	3
Practical course	WP 16.2 Practical course: Basics in Zoology	WS	45 h (3 SWS)	45 h	(3)
Seminar	WP 16.3 Seminar: Basics in Zoology	WS	30 h (2 SWS)	60 h	(3)

This module is comprised of 9 ECTS points. Class attendance is 7 SWS; total time, including preparation time, is 270 h.

### Type of module

Optional module with required courses.

### Elective guidelines

The module is composed of thematically related course elements (in general lecture, practical course and seminar, see elective course catalog). The sum of ECTS points is oriented to 30 ECTS per semester.

### Entry requirements

See individual course descriptions.

### Level

Recommended semester: 1

### Duration

The module spans 1 semester.

### Content and qualification goals

The 9 point module for first semester students includes a lecture, seminar and an instructed practical course in Zoology. This basic module aims at providing students with theoretical knowledge, training in researching, presenting and critically discussing a topic, as well as practical experience in application and interpretation of methods and concepts. Teamwork, learning strategies, organizational and communication skills are required, and serve as the basis for advanced courses.

The module is intended to serve first semester students as an introduction to Zoology, allowing flexibility to incorporate modules/courses in additional subject areas.

### Grading

The module is graded according to lecture grade.

### Pass/fail conditions for ECTS

ECTS points are awarded for individual courses according to

**points**

successful completion; module completion is awarded  
granted successful completion of individual elements.

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**Responsible person**

Prof. Dr. Gerhard Haszprunar, Prof. Dr. Matthias Starck  
(Chairs, Zoology division). Teaching responsibilities for  
individual courses are listed in elective course catalog.

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**Language**

English, with exception of courses also offered for teaching  
and bachelor's degrees.

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**Other information**

## Module: WP 17 Zoology 2

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 17.1 Lecture: Basics in Zoology	WS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 17.2.1 Practical course: Basics in Zoology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 17.2.2 Seminar: Basics in Zoology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 17.2.3 Practical course: Zoology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 17.2.4 Seminar: Zoology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 17.2.5 Practical research course in Zoology	WS	180 h (12 SWS)	180 h	12
Practical course	WP 17.2.6 Practical course: Zoology	WS	90 h (6 SWS)	90 h	6
Excursion	WP 17.2.7 Zoological excursion	WS	90 h (6 SWS)	90 h	6

\* May only be chosen with accompanying practical course.

In this module a total of 15 ECTS points must be accrued, 12 ECTS points of which are elective courses. Class attendance is 12-14 SWS; total time, including preparation time, is approx. 450 h.

<b>Type of module</b>	Elective module with mandatory and elective courses.
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<b>Elective guidelines</b>	<p>The module is composed of thematically related course elements (in general lecture, practical course and seminar, see elective course catalog). The sum of ECTS points is oriented to 30 ECTS per semester.</p> <p>For elective courses in WP 17 modules the following applies: elective courses totaling 12 ECTS points are to be chosen from Zoology listings in the elective course catalog.</p>
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<b>Entry requirements</b>	See individual course descriptions.
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<b>Level</b>	Recommended semester: 1
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<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 15 point module for first semester students includes one lecture and a combination of basic and molecular topics of Zoology-related seminar(s) and/or instructed practical courses or an independent practical research course.</p> <p>The module aims to provide students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Zoology, and training in presentation and communication skills.</p> <p>The module is intended to serve first semester students interested in acquiring broad exposure to topics in Zoology in research-oriented courses. This module can serve as a basis for advanced or specialized courses, as well as the prerequisite for the master's thesis.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Gerhard Haszprunar, Prof. Dr. Matthias Starck (Chairs, Zoology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

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## Module: WP 18 Zoology 3

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 18.1 Lecture: Basics in Zoology	WS	30 h (2 SWS)	60 h	3
Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 18.2.1 Practical course: Basics in Zoology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 18.2.2 Seminar: Basics in Zoology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 18.2.3 Practical course: Zoology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 18.2.4 Seminar: Zoology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 18.2.5 Practical research course in Zoology	WS	180 h (12 SWS)	180 h	12
Practical course	WP 18.2.6 Practical course: Zoology	WS	90 h (6 SWS)	90 h	6
Excursion	WP 18.2.7 Zoological excursion	WS	90 h (6 SWS)	90 h	6
Excursion	WP 18.2.8 Zoological excursion	WS	180 h (12 SWS)	180 h	12

\* May only be chosen with accompanying practical course.

In this module a total of 21 ECTS points must be accrued, 18 ECTS points of which are elective courses. Class attendance is 18-20 SWS; total time, including preparation time, is approx. 630 h.

### Type of module

Elective module with mandatory and elective courses.

### Elective guidelines

The module is composed of thematically related course elements (in general lecture, practical course and seminar, see elective course catalog). The sum of ECTS points is oriented to 30 ECTS per semester.

For elective courses in WP 18 modules the following applies: elective courses totaling 18 ECTS points are to be chosen from Zoology listings in the elective course catalog.

### Entry requirements

See individual course descriptions.

<b>Level</b>	Recommended semester: 1
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 21 point module for first semester students includes one lecture and a combination of basic, molecular, and Zoology-related seminar(s) and/or instructed practical courses or an independent practical research course.</p> <p>The module aims to provide students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Zoology, and training in presentation and communication skills.</p> <p>The module is intended to serve first semester students interested in concentrating on Zoology in research-oriented courses. This module can serve as a basis for advanced or specialized courses, as well as the prerequisite for the master's thesis.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Gerhard Haszprunar, Prof. Dr. Matthias Starck (Chairs, Zoology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 19 Anthropology 1

**Program**

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 19.1 Lecture: Basics in Anthropology	WS	30 h (2 SWS)	60 h	3
Practical course	WP 19.2 Practical course: Basics in Anthropology	WS	45 h (3 SWS)	45 h	(3)
Seminar	WP 19.3 Seminar: Basics in Anthropology	WS	30 h (2 SWS)	60 h	(3)

This module is comprised of 9 ECTS points. Class attendance is 7 SWS; total time, including preparation time, is 270 h.

### Type of module

Optional module with required courses.

### Elective guidelines

The module is composed of thematically related course elements (in general lecture, practical course and seminar, see elective course catalog). The sum of ECTS points is oriented to 30 ECTS per semester.

### Entry requirements

See individual course descriptions.

### Level

Recommended semester: 1

### Duration

The module spans 1 semester.

### Content and qualification goals

The 9 point module for first semester students includes a lecture, seminar and an instructed practical course in Anthropology. This basic module aims at providing students with theoretical knowledge, training in researching, presenting and critically discussing a topic, as well as practical experience in application and interpretation of methods and concepts. Teamwork, learning strategies, organizational and communication skills are required, and serve as the basis for advanced courses.

The module is intended to serve first semester students as an introduction to Anthropology, allowing flexibility to incorporate modules/courses in additional subject areas.

### Grading

The module is graded according to lecture grade.

### Pass/fail conditions for ECTS

ECTS points are awarded for individual courses according to

**points** successful completion; module completion is awarded granted successful completion of individual elements.

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**Responsible person** Prof. Dr. Gisela Grupe (acting Chair, Anthropology division). Teaching responsibilities for individual courses are listed in elective course catalog.

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**Language** English, with exception of courses also offered for teaching and bachelor's degrees.

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**Other information**

## Module: WP 20 Anthropology 2

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 20.1 Lecture: Basics in Anthropology	WS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 20.2.1 Practical course: Basics in Anthropology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 20.2.2 Seminar: Basics in Anthropology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 20.2.3 Practical course: Anthropology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 20.2.4 Seminar: Anthropology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 20.2.5 Practical research course in Anthropology	WS	180 h (12 SWS)	180 h	12
Practical course:	WP 20.2.6 Practical course: Anthropology	WS	90 h (6 SWS)	90 h	6
Excursion	WP 20.2.7 Anthropological excavation/excursion	WS	90 h (6 SWS)	90 h	6

\* May only be chosen with accompanying practical course.

In this module a total of 15 ECTS points must be accrued, 12 ECTS points of which are elective courses. Class attendance is 12-14 SWS; total time, including preparation time, is approx. 450 h.

<b>Type of module</b>	Elective module with mandatory and elective courses.
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<b>Elective guidelines</b>	<p>The module is composed of thematically related course elements (in general lecture, practical course and seminar, see elective course catalog). The sum of ECTS points is oriented to 30 ECTS per semester.</p> <p>For elective courses in WP 20 modules the following applies: elective courses totaling 12 ECTS points are to be chosen from Anthropology listings in the elective course catalog.</p>
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<b>Entry requirements</b>	See individual course descriptions.
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<b>Level</b>	Recommended semester: 1
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 15 point module for first semester students includes one lecture and a combination of basic and molecular topics of Anthropology-related seminar(s) and/or instructed practical courses or an independent practical research course.</p> <p>The module aims to provide students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Anthropology, and training in presentation and communication skills.</p> <p>The module is intended to serve first semester students interested in acquiring broad exposure to topics in Anthropology in research-oriented courses. This module can serve as a basis for advanced or specialized courses, as well as the prerequisite for the master's thesis.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Gisela Grupe (acting Chair, Anthropology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 21 Anthropology 3

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 21.1 Lecture: Basics in Anthropology	WS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 21.2.1 Practical course: Basics in Anthropology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 21.2.2 Seminar: Basics in Anthropology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 21.2.3 Practical course: Anthropology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 21.2.4 Seminar: Anthropology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 21.2.5 Practical research course in Anthropology	WS	180 h (12 SWS)	180 h	12
Practical course	WP 21.2.6 Practical course: Anthropology	WS	90 h (6 SWS)	90 h	6
Excursion	WP 21.2.7 Anthropological excavation/excursion	WS	90 h (6 SWS)	90 h	6
Excursion	WP 21.2.8 Anthropological excavation/excursion	WS	180 h (12 SWS)	180 h	12

\* May only be chosen with accompanying practical course.

In this module a total of 21 ECTS points must be accrued, 18 ECTS points of which are elective courses. Class attendance is 18-20 SWS; total time, including preparation time, is approx. 630 h.

<b>Type of module</b>	Elective module with mandatory and elective courses.
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### Elective guidelines

The module is composed of thematically related course elements (in general lecture, practical course and seminar, see elective course catalog). The sum of ECTS points is oriented to 30 ECTS per semester.

For elective courses in WP 21 modules the following applies: elective courses totaling 18 ECTS points are to be chosen from Anthropology listings in the elective course catalog.



<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 1
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 21 point module for first semester students includes one lecture and a combination of basic, molecular, and Anthropology-related seminar(s) and/or instructed practical courses or an independent practical research course. The module aims to provide students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Anthropology, and training in presentation and communication skills. The module is intended to serve first semester students interested in concentrating on Anthropology in research-oriented courses. This module can serve as a basis for advanced or specialized courses, as well as the prerequisite for the master's thesis.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Gisela Grupe (acting Chair, Anthropology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 22 Systematic Botany 1

**Program**

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 22.1 Lecture: Basics in Systematic Botany	WS	30 h (2 SWS)	60 h	3
Practical course	WP 22.2 Practical course: Basics in Systematic Botany	WS	45 h (3 SWS)	45 h	(3)
Seminar	WP 22.3 Seminar: Basics in Systematic Botany	WS	30 h (2 SWS)	60 h	(3)

This module is comprised of 9 ECTS points. Class attendance is 7 SWS; total time, including preparation time, is 270 h.

### Type of module

Optional module with required courses.

### Elective guidelines

The module is composed of thematically related course elements (in general lecture, practical course and seminar, see elective course catalog). The sum of ECTS points is oriented to 30 ECTS per semester.

### Entry requirements

See individual course descriptions.

### Level

Recommended semester: 1

### Duration

The module spans 1 semester.

### Content and qualification goals

The 9 point module for first semester students includes a lecture, seminar and an instructed practical course in Systematic Botany. This basic module aims at providing students with theoretical knowledge, training in researching, presenting and critically discussing a topic, as well as practical experience in application and interpretation of methods and concepts. Teamwork, learning strategies, organizational and communication skills are required, and serve as the basis for advanced courses.

The module is intended to serve first semester students as an introduction to Systematic Botany, allowing flexibility to incorporate modules/courses in additional subject areas.

### Grading

The module is graded according to lecture grade.

### Pass/fail conditions for ECTS

ECTS points are awarded for individual courses according to

**points**

successful completion; module completion is awarded  
granted successful completion of individual elements.

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**Responsible person**

Prof. Dr. Susanne Renner (Chair, Systematic Botany and  
Mycology division). Teaching responsibilities for individual  
courses are listed in elective course catalog.

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**Language**

English, with exception of courses also offered for teaching  
and bachelor's degrees.

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**Other information**

## Module: WP 23 Systematic Botany 2

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 23.1 Lecture: Basics in Systematic Botany	WS	30 h (2 SWS)	60 h	3
Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 23.2.1 Practical course: Basics in Systematic Botany	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 23.2.2 Seminar: Basics in Systematic Botany	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 23.2.3 Practical course: Systematic Botany	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 23.2.4 Seminar: Systematic Botany	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 23.2.5 Practical research course in Systematic Botany	WS	180 h (12 SWS)	180 h	12
Practical course	WP 23.2.6 Systematic Botany	WS	90 h (6 SWS)	90 h	6
Excursion	WP 23.2.7 Systematic-botanical excursion	WS	90 h (6 SWS)	90 h	6

\* May only be chosen with accompanying practical course.

In this module a total of 15 ECTS points must be accrued, 12 ECTS points of which are elective courses. Class attendance is 12-14 SWS; total time, including preparation time, is approx. 450 h.

**Type of module** Elective module with mandatory and elective courses.

**Elective guidelines** The module is composed of thematically related course elements (in general lecture, practical course and seminar, see elective course catalog). The sum of ECTS points is oriented to 30 ECTS per semester.

For elective courses in WP 23 modules the following applies: elective courses totaling 12 ECTS points are to be chosen from Systematic Botany listings in the elective course catalog.

**Entry requirements** See individual course descriptions.

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<b>Level</b>	Recommended semester: 1
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 15 point module for first semester students includes one lecture and a combination of basic and molecular topics of Systematic Botany-related seminar(s) and/or instructed practical courses or an independent practical research course.</p> <p>The module aims to provide students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Systematic Botany, and training in presentation and communication skills.</p> <p>The module is intended to serve first semester students interested in acquiring broad exposure to topics in Systematic Botany in research-oriented courses. This module can serve as a basis for advanced or specialized courses, as well as the prerequisite for the master's thesis.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Susanne Renner (Chair, Systematic Botany and Mycology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

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## Module: WP 24 Systematic Botany 3

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 24.1 Lecture: Basics in Systematic Botany	WS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 24.2.1 Practical course: Basics in Systematic Botany	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 24.2.2 Seminar: Basics in Systematic Botany	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 24.2.3 Practical course: Systematic Botany	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 24.2.4 Seminar: Systematic Botany	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 24.2.5 Practical research course in Systematic Botany	WS	180 h (12 SWS)	180 h	12
Practical course	WP 24.2.6 Practical course: Systematic Botany	WS	90 h (6 SWS)	90 h	6
Excursion	WP 24.2.7 Systematic-botanical excursion	WS	90 h (6 SWS)	90 h	6
Excursion	WP 24.2.8 Systematic-botanical excursion	WS	180 h (12 SWS)	180 h	12

\* May only be chosen with accompanying practical course.

In this module a total of 21 ECTS points must be accrued, 18 ECTS points of which are elective courses. Class attendance is 18-20 SWS; total time, including preparation time, is approx. 630 h.

### Type of module

Elective module with mandatory and elective courses.

### Elective guidelines

The module is composed of thematically related course elements (in general lecture, practical course and seminar, see elective course catalog). The sum of ECTS points is oriented to 30 ECTS per semester.

For elective courses in WP 24 modules the following applies: elective courses totaling 18 ECTS points are to be chosen from Systematic Botany listings in the elective course catalog.

<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 1
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 21 point module for students includes one lecture and a combination of basic, molecular, and Systematic Botany-related seminar(s) and/or instructed practical courses or an independent practical research course.</p> <p>The module aims to provide students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Systematic Botany, and training in presentation and communication skills.</p> <p>The module is intended to serve first semester students interested in concentrating on Systematic Botany in research-oriented courses. This module can serve as a basis for advanced or specialized courses, as well as the prerequisite for the master's thesis.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Susanne Renner (Chair, Systematic Botany and Mycology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 25 Biologically relevant courses

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 25.1 Basic subject-related lecture	WS	30 h (2 SWS)	60 h	3
Practical course	WP 25.2 Basic subject-related practical course	WS	45 h (3 SWS)	45 h	(3)
Seminar	WP 25.3 Basic subject-related seminar	WS	30 h (2 SWS)	60 h	(3)

This module is comprised of 9 ECTS points. Class attendance is 7 SWS; total time, including preparation time, is 270 h.

### Type of module

Optional module with required courses.

### Elective guidelines

The module is composed of thematically related course elements (in general lecture, practical course and seminar, see elective course catalog). The sum of ECTS points is oriented to 30 ECTS per semester.

### Entry requirements

See individual course descriptions.

### Level

Recommended semester: 1

### Duration

The module spans 1 semester.

### Content and qualification goals

This 9 point module for first semester students includes a lecture, seminar and an instructed practical course in biology-related subjects (e.g. Physics, Bioinformatics, Biochemistry).

This basic module aims at providing first semester students with theoretical knowledge, training in researching, presenting and critically discussing a topic, as well as practical experience in application and interpretation of methods and concepts. It provides first semester students with the opportunity to study biology-related subjects outside of the faculty.

### Grading

The module is graded according to lecture grade.

### Pass/fail conditions for ECTS points

ECTS points are awarded for individual courses according to successful completion; module completion is awarded



granted successful completion of individual elements.

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**Responsible person**

See individual courses in elective course catalog.

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**Language**

English, with exception of courses also offered for teaching and bachelor's degrees.

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**Other information**

## Module: WP 26 Interdisciplinary lectures and seminars 1

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 26.0.1 Lecture: Basics in Plant Sciences	WS	30 h (2 SWS)	60 h	3
Lecture	WP 26.0.2 Lecture: Methods in Plant Sciences	WS	30 h (2 SWS)	60 h	3
Lecture	WP 26.0.3 Lecture: Basics in Genetics	WS	30 h (2 SWS)	60 h	3
Lecture	WP 26.0.4 Lecture: Methods in Genetics	WS	30 h (2 SWS)	60 h	3
Lecture	WP 26.0.5 Lecture: Basics in Human Biology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 26.0.6 Lecture: Methods in Human Biology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 26.0.7 Lecture: Basics in Microbiology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 26.0.8 Lecture: Methods in Microbiology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 26.0.9 Lecture: Basics in Cell Biology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 26.0.10 Lecture: Methods in Cell Biology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 26.0.11 Lecture: Basics in Zoology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 26.0.12 Lecture: Methods in Zoology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 26.0.13 Lecture: Evolutionary Genetics	WS	60 h (4 SWS)	60 h	(4)
* Tutorial	WP 26.0.14 Tutorial Evolutionary Genetics	WS	15 h (1 SWS)	45 h	(2)
Lecture	WP 26.0.15 Lecture: Evolutionary Ecology	WS	60 h (4 SWS)	60 h	(4)
* Tutorial	WP 26.0.16 Tutorial Evolutionary Ecology	WS	15 h (1 SWS)	45 h	(2)
Lecture	WP 26.0.17 Lecture: Systematic Data and Evidence	WS	60 h (4 SWS)	60 h	(4)
* Tutorial	WP 26.0.18 Tutorial Systematic Data and Evidence	WS	15 h (1 SWS)	45 h	(2)
Lecture	WP 26.0.19 Lecture: Basics in Anthropology	WS	30 h (2 SWS)	60 h	3

Lecture	WP 26.0.20 Lecture: Methods in Anthropology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 26.0.21 Lecture: Basics in Systematic Botany	WS	30 h (2 SWS)	60 h	3
Lecture	WP 26.0.22 Lecture: Methods in Systematic Botany	WS	30 h (2 SWS)	60 h	3
Seminar	WP 26.0.23 Tutoring 1	WS	45 h (3 SWS)	45 h	3
Seminar	WP 26.0.24 Professional qualification 1	WS	30 h (2 SWS)	60 h	3

\* May only be chosen with accompanying practical course.

In this module a total of 6 ECTS points must be accrued, 6 ECTS points of which are elective courses. Class attendance is 4-5 SWS; total time, including preparation time, is approx. 180 h.

<b>Type of module</b>	Elective module with elective courses.
<b>Elective guidelines</b>	<p>The module is composed of thematically related course elements (in general lecture, practical course and seminar, see elective course catalog). The sum of ECTS points is oriented to 30 ECTS per semester.</p> <p>For elective courses in WP 26 modules the following applies: elective courses totaling 6 ECTS points are to be chosen from course listings in the elective course catalog.</p>
<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 1
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	This 6 point interdisciplinary module is composed of freely chosen lectures and/or seminars, chosen from the elective course catalog or courses from other LMU faculties or associated institutions. It offers first semester students flexibility to explore subjects or attend courses in relevant professional skills.
<b>Grading</b>	The module is graded according to lecture grade(s).
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible persons</b>	See individual courses in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.

**Other information**

## Module: WP 27 Interdisciplinary lectures and seminars 2

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 27.0.1 Lecture: Basics in Plant Sciences	WS	30 h (2 SWS)	60 h	3
Lecture	WP 27.0.2 Lecture: Methods in Plant Sciences	WS	30 h (2 SWS)	60 h	3
Lecture	WP 27.0.3 Lecture: Basics in Genetics	WS	30 h (2 SWS)	60 h	3
Lecture	WP 27.0.4 Lecture: Methods in Genetics	WS	30 h (2 SWS)	60 h	3
Lecture	WP 27.0.5 Lecture: Basics in Human Biology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 27.0.6 Lecture: Methods in Human Biology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 27.0.7 Lecture: Basics in Microbiology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 27.0.8 Lecture: Methods in Microbiology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 27.0.9 Lecture: Basics in Cell Biology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 27.0.10 Lecture: Methods in Cell Biology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 27.0.11 Lecture: Basics in Zoology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 27.0.12 Lecture: Methods in Zoology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 27.0.13 Lecture: Basics in Anthropology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 27.0.14 Lecture: Methods in Anthropology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 27.0.15 Lecture: Basics in Systematic Botany	WS	30 h (2 SWS)	60 h	3
Lecture	WP 27.0.16 Lecture: Methods in Systematic Botany	WS	30 h (2 SWS)	60 h	3
Seminar	WP 27.0.17 Tutoring 1	WS	45 h (3 SWS)	45 h	3
Seminar	WP 27.0.18 Professional qualification 1	WS	30 h (2 SWS)	60 h	3

In this module a total of 3 ECTS points must be accrued. 3 ECTS points of which are elective

courses. Class attendance is 2-3 SWS; total time, including preparation time, is 90 h.

<b>Type of module</b>	Elective module with elective courses.
<b>Elective guidelines</b>	<p>The module is composed of thematically related course elements (in general lecture, practical course and seminar, see elective course catalog). The sum of ECTS points is oriented to 30 ECTS per semester.</p> <p>For elective courses in WP 27 modules the following applies: elective courses totaling 3 ECTS points are to be chosen from course listings in the elective course catalog.</p>
<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 1
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	This 3 point interdisciplinary module is composed of a lecture or seminar chosen from the elective course catalog or courses from other LMU faculties or associated institutions. It offers first semester students flexibility to explore subjects or attend courses in relevant professional skills.
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible persons</b>	See individual courses in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 28 Advanced Plant Sciences 1

### Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 28.1 Advanced lecture in Plant Sciences	SS	30 h (2 SWS)	60 h	3
Practical course	WP 28.2 Advanced practical course in Plant Sciences	SS	45 h (3 SWS)	45 h	(3)
Seminar	WP 28.3 Advanced seminar in Plant Sciences	SS	30 h (2 SWS)	60 h	(3)

This module is comprised of 9 ECTS points. Class attendance is 7 SWS; total time, including preparation time, is 270 h.

### Type of module

Optional module with required courses.

### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from Plant Sciences listings in the elective course catalog.

### Entry requirements

See individual course descriptions.

### Level

Recommended semester: 2

### Duration

The module spans 1 semester.

### Content and qualification goals

The 9 point advanced module includes a lecture, seminar and an instructed practical course in Plant Sciences in the second semester. This module aims at providing students with theoretical knowledge, training in researching, presenting and critically discussing a topic, as well as practical experience in application and interpretation of methods and concepts. Teamwork, learning strategies, organizational and communication skills are required, and serve as the basis for specialized courses.

The module is intended to serve second semester students as an introduction to Plant Sciences, allowing flexibility to incorporate modules/courses in additional subject areas.

### Grading

The module is graded according to lecture grade.

### Pass/fail conditions for ECTS

ECTS points are awarded for individual courses according to

<b>points</b>	successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Dario Leister, Prof. Dr. Jürgen Soll (Chairs, Plant Sciences division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	



## Module: WP 29 Advanced Plant Sciences 2

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 29.1 Advanced lecture in Plant Sciences	SS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 29.2.1 Advanced practical course in Plant Sciences	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 29.2.2 Advanced seminar in Plant Sciences	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 29.2.3 Advanced practical course in Molecular Plant Sciences	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 29.2.4 Advanced Seminar: Molecular Biology in Plant Sciences	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 29.2.5 Advanced practical research course in Plant Sciences	SS	180 h (12 SWS)	180 h	12
Practical course	WP 29.2.6 Advanced practical course for Molecular Biology of Plants	SS	90 h (6 SWS)	90 h	6

\* May only be chosen with accompanying practical course.

In this module a total of 15 ECTS points must be accrued, 12 ECTS points of which are elective courses. Class attendance is 12-14 SWS; total time, including preparation time, is approx. 450 h.

<b>Type of module</b>	Elective module with mandatory and elective courses.
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<b>Elective guidelines</b>	<p>The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from Plant Sciences listings in the elective course catalog.</p> <p>For elective courses in WP 29 modules the following applies: elective courses totaling 12 ECTS points are to be chosen from Plant Sciences listings in the elective course catalog.</p>
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<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 2
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 15 point advanced module includes one lecture and a combination of basic and molecular topics of Plant Sciences-related seminar(s) and/or instructed practical courses or an independent practical research course in the second semester.</p> <p>The module aims to provide second semester students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Plant Sciences, and training in presentation and communication skills.</p> <p>The module is intended to serve second semester students interested in acquiring broad exposure to topics in Plant Sciences in research-oriented courses. This module can serve as a basis for specialized courses, as well as the prerequisite for the master's thesis.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible persons</b>	Prof. Dr. Dario Leister, Prof. Dr. Jürgen Soll (Chairs, Plant Sciences division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

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## Module: WP 30 Advanced Plant Sciences 3

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 30.1 Advanced lecture in Plant Sciences	SS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 30.2.1 Advanced practical course in Plant Sciences	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 30.2.2 Advanced seminar in Plant Sciences	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 30.2.3 Advanced practical course in Molecular Plant Sciences	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 30.2.4 Advanced seminar: Molecular Biology in Plant Sciences	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 30.2.5 Advanced practical research course in Plant Sciences	SS	180 h (12 SWS)	180 h	12
Practical course	WP 30.2.6 Advanced practical course for Molecular Biology of Plants	SS	90 h (6 SWS)	90 h	6
Practical course	WP 30.2.7 Practical course: Methods in Plant Sciences	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 30.2.8 Seminar: Methods in Plant Sciences	SS	30 h (2 SWS)	60 h	(3)

\* May only be chosen with accompanying practical course.

In this module a total of 21 ECTS points must be accrued, 18 ECTS points of which are elective courses. Class attendance is 17-20 SWS; total time, including preparation time, is approx. 630 h.

### Type of module

Elective module with mandatory and elective courses.

### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from Plant Sciences listings in the elective course catalog.

For elective courses in WP 30 modules the following applies: elective courses totaling 18 ECTS points are to be chosen from Plant Sciences listings in the elective course catalog.

<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 2
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 21 point advanced module includes one lecture and a combination of basic, molecular, and Plant Sciences-related seminar(s) and/or instructed practical courses or an independent practical research course in the second semester.</p> <p>The module aims to provide second semester students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Plant Sciences, and training in presentation and communication skills.</p> <p>The module is intended to serve second semester students interested in acquiring broad exposure to areas of Plant Sciences in research-oriented courses. This module can serve as a basis for specialized courses, as well as the prerequisite for the master's thesis.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible persons</b>	Prof. Dr. Dario Leister, Prof. Dr. Jürgen Soll (Chairs, Plant Sciences division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 31 Advanced Genetics 1

### Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 31.1 Advanced lecture in Genetics	SS	30 h (2 SWS)	60 h	3
Practical course	WP 31.2 Advanced practical course in Genetics	SS	45 h (3 SWS)	45 h	(3)
Seminar	WP 31.3 Advanced seminar in Genetics	SS	30 h (2 SWS)	60 h	(3)

This module is comprised of 9 ECTS points. Class attendance is 7 SWS; total time, including preparation time, is 270 h.

### Type of module

Optional module with required courses.

### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from Genetics listings in the elective course catalog.

### Entry requirements

See individual course descriptions.

### Level

Recommended semester: 2

### Duration

The module spans 1 semester.

### Content and qualification goals

The 9 point advanced module includes a lecture, seminar and an instructed practical course in Genetics in the second semester. This module aims at providing students with theoretical knowledge, training in researching, presenting and critically discussing a topic, as well as practical experience in application and interpretation of methods and concepts. Teamwork, learning strategies, organizational and communication skills are required, and serve as the basis for specialized courses.

The module is intended to serve second semester students as an introduction to Genetics, allowing flexibility to incorporate modules/courses in additional subject areas.

### Grading

The module is graded according to lecture grade.

### Pass/fail conditions for ECTS

ECTS points are awarded for individual courses according to

**points** successful completion; module completion is awarded granted successful completion of individual elements.

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**Responsible person** Prof. Dr. Martin Parniske (Chair, Genetics division). Teaching responsibilities for individual courses are listed in elective course catalog.

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**Language** English, with exception of courses also offered for teaching and bachelor's degrees.

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**Other information**

## Module: WP 32 Advanced Genetics 2

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 32.1 Advanced lecture in Genetics	SS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 32.2.1 Advanced practical course in Genetics	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 32.2.2 Advanced seminar in Genetics	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 32.2.3 Advanced practical course for Molecular Genetics	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 32.2.4 Advanced seminar for Molecular Genetics	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 32.2.5 Advanced practical research course in Genetics	SS	180 h (12 SWS)	180 h	12
Practical course	WP 32.2.6 Advanced practical course for Molecular Biology	SS	90 h (6 SWS)	90 h	6

\* May only be chosen with accompanying practical course.

In this module a total of 15 ECTS points must be accrued, 12 ECTS points of which are elective courses. Class attendance is 12-14 SWS; total time, including preparation time, is approx. 450 h.

<b>Type of module</b>	Elective module with mandatory and elective courses.
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<b>Elective guidelines</b>	<p>The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from Genetics listings in the elective course catalog.</p> <p>For elective courses in WP 32 modules the following applies: elective courses totaling 12 ECTS points are to be chosen from Genetics listings in the elective course catalog.</p>
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<b>Entry requirements</b>	See individual course descriptions.
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<b>Level</b>	Recommended semester: 2
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<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 15 point advanced module includes one lecture and a combination of basic and molecular topics of Genetics-related seminar(s) and/or instructed practical courses or an independent practical research course in the second semester.</p> <p>The module aims to provide second semester students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Genetics, and training in presentation and communication skills.</p> <p>The module is intended to serve second semester students interested in acquiring broad exposure to topics in Genetics in research-oriented courses. This module can serve as a basis for specialized courses, as well as the prerequisite for the master's thesis.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Martin Parniske (Chair, Genetics division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	



## Module: WP 33 Advanced Genetics 3

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 33.1 Advanced Lecture in Genetics	SS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 33.2.1 Advanced practical course in Genetics	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 33.2.2 Advanced seminar in Genetics	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 33.2.3 Advanced practical course for Molecular Genetics	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 33.2.4 Advanced seminar for Molecular Genetics	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 33.2.5 Advanced practical research course in Genetics	SS	180 h (12 SWS)	180 h	12
Practical course	WP 33.2.6 Advanced practical course for Molecular Biology	SS	90 h (6 SWS)	90 h	6
Practical course	WP 33.2.7 Practical course: Methods in Genetics	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 33.2.8 Seminar: Methods in Genetics	SS	30 h (2 SWS)	60 h	(3)

\* May only be chosen with accompanying practical course.

In this module a total of 21 ECTS points must be accrued, 18 ECTS points of which are elective courses. Class attendance is 17-20 SWS; total time, including preparation time, is approx. 630 h.

<b>Type of module</b>	Elective module with mandatory and elective courses.
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### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from Genetics listings in the elective course catalog.

For elective courses in WP 33 modules the following applies: elective courses totaling 18 ECTS points are to be chosen from Genetics listings in the elective course catalog.

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<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 2
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 21 point advanced module includes one lecture and a combination of basic, molecular, and Genetics-related seminar(s) and/or instructed practical courses or an independent practical research course in the second semester.</p> <p>The module aims to provide second semester students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Genetics, and training in presentation and communication skills.</p> <p>The module is intended to serve second semester students interested in acquiring broad exposure to areas of Genetics in research-oriented courses. This module can serve as a basis for specialized courses, as well as the prerequisite for the master's thesis.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Martin Parniske (Chair, Genetics division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

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## Module: WP 34 Advanced Human Biology 1

### Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 34.1 Advanced lecture in Human Biology	SS	30 h (2 SWS)	60 h	3
Practical course	WP 34.2 Advanced Practical course in Human Biology	SS	45 h (3 SWS)	45 h	(3)
Seminar	WP 34.3 Advanced seminar in Human Biology	SS	30 h (2 SWS)	60 h	(3)

This module is comprised of 9 ECTS points. Class attendance is 7 SWS; total time, including preparation time, is 270 h.

### Type of module

Optional module with required courses.

### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from Human Biology listings in the elective course catalog.

### Entry requirements

See individual course descriptions.

### Level

Recommended semester: 2

### Duration

The module spans 1 semester.

### Content and qualification goals

The 9 point advanced module includes a lecture, seminar and an instructed practical course in Human Biology in the second semester. This module aims at providing students with theoretical knowledge, training in researching, presenting and critically discussing a topic, as well as practical experience in application and interpretation of methods and concepts. Teamwork, learning strategies, organizational and communication skills are required, and serve as the basis for specialized courses.

The module is intended to serve second semester students as an introduction to Human Biology, allowing flexibility to incorporate modules/courses in additional subject areas.

### Grading

The module is graded according to lecture grade.

### Pass/fail conditions for ECTS

ECTS points are awarded for individual courses according to

**points** successful completion; module completion is awarded granted successful completion of individual elements.

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**Responsible person** Prof. Dr. Heinrich Leonhardt (Chair, Human Biology division). Teaching responsibilities for individual courses are listed in elective course catalog.

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**Language** English, with exception of courses also offered for teaching and bachelor's degrees.

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**Other information**

## Module: WP 35 Advanced Human Biology 2

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 35.1 Advanced lecture in Human Biology	SS	30 h (2 SWS)	60 h	3
Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 35.2.1 Advanced practical course in Human Biology	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 35.2.2 Advanced seminar in Human Biology	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 35.2.3 Advanced Practical course in Molecular Human Biology	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 35.2.4 Advanced seminar in molecular Human Biology	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 35.2.5 Advanced practical research course in Human Biology	SS	180 h (12 SWS)	180 h	12
Practical course	WP 35.2.6 Advanced practical course in Human Biology	SS	90 h (6 SWS)	90 h	6

\* May only be chosen with accompanying practical course.

In this module a total of 15 ECTS points must be accrued, 12 ECTS points of which are elective courses. Class attendance is 12-14 SWS; total time, including preparation time, is approx. 450 h.

**Type of module** Elective module with mandatory and elective courses.

### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from Human Biology listings in the elective course catalog.

For elective courses in WP 35 modules the following applies: elective courses totaling 12 ECTS points are to be chosen from Human Biology listings in the elective course catalog.

### Entry requirements

See individual course descriptions.

<b>Level</b>	Recommended semester: 2
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 15 point advanced module includes one lecture and a combination of basic and molecular topics of Human Biology-related seminar(s) and/or instructed practical courses or an independent practical research course in the second semester.</p> <p>The module aims to provide second semester students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Human Biology, and training in presentation and communication skills.</p> <p>The module is intended to serve second semester students interested in acquiring broad exposure to topics in Human Biology in research-oriented courses. This module can serve as a basis for specialized courses, as well as the prerequisite for the master's thesis.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Heinrich Leonhardt (Chair, Human Biology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 36 Advanced Human Biology 3

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 36.1 Advanced lecture in Human Biology	SS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 36.2.1 Advanced practical course in Human Biology	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 36.2.2 Advanced seminar in Human Biology	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 36.2.3 Advanced practical course in Molecular Human Biology	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 36.2.4 Advanced seminar in molecular Human Biology	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 36.2.5 Advanced practical research course in Human Biology	SS	180 h (12 SWS)	180 h	12
Practical course	WP 36.2.6 Advanced practical course in Human Biology	SS	90 h (6 SWS)	90 h	6
Practical course	WP 36.2.7 Practical course: Methods in Human Biology	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 36.2.8 Seminar: Methods in Human Biology	SS	30 h (2 SWS)	60 h	(3)

\* May only be chosen with accompanying practical course.

In this module a total of 21 ECTS points must be accrued, 18 ECTS points of which are elective courses. Class attendance is 17-20 SWS; total time, including preparation time, is approx. 630 h.

### Type of module

Elective module with mandatory and elective courses.

### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from Human Biology listings in the elective course catalog.

For elective courses in WP 36 modules the following applies: elective courses totaling 18 ECTS points are to be chosen

	from Human Biology listings in the elective course catalog.
<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 2
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 21 point advanced module includes one lecture and a combination of basic, molecular, and Human Biology-related seminar(s) and/or instructed practical courses or an independent practical research course in the second semester.</p> <p>The module aims to provide second semester students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Human Biology, and training in presentation and communication skills.</p> <p>The module is intended to serve second semester students interested in acquiring broad exposure to areas of Human Biology in research-oriented courses. This module can serve as a basis for specialized courses, as well as the prerequisite for the master's thesis.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Heinrich Leonhardt (Chair, Human Biology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	



## Module: WP 37 Advanced Microbiology 1

### Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 37.1 Advanced lecture in Microbiology	SS	30 h (2 SWS)	60 h	3
Practical course	WP 37.2 Advanced practical course in Microbiology	SS	45 h (3 SWS)	45 h	(3)
Seminar	WP 37.3 Advanced seminar in Microbiology	SS	30 h (2 SWS)	60 h	(3)

This module is comprised of 9 ECTS points. Class attendance is 7 SWS; total time, including preparation time, is 270 h.

### Type of module

Optional module with required courses.

### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from Microbiology listings in the elective course catalog.

### Entry requirements

See individual course descriptions.

### Level

Recommended semester: 2

### Duration

The module spans 1 semester.

### Content and qualification goals

The 9 point advanced module includes a lecture, seminar and an instructed practical course in Microbiology in the second semester. This module aims at providing students with theoretical knowledge, training in researching, presenting and critically discussing a topic, as well as practical experience in application and interpretation of methods and concepts. Teamwork, learning strategies, organizational and communication skills are required, and serve as the basis for specialized courses.

The module is intended to serve second semester students as an introduction to Microbiology, allowing flexibility to incorporate modules/courses in additional subject areas.

### Grading

The module is graded according to lecture grade.

### Pass/fail conditions for ECTS

ECTS points are awarded for individual courses according to

<b>points</b>	successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Kirsten Jung (Chair, Microbiology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 38 Advanced Microbiology 2

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 38.1 Advanced lecture in Microbiology	SS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 38.2.1 Advanced practical course in Microbiology	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 38.2.2 Advanced seminar in Microbiology	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 38.2.3 Advanced practical course in Molecular Microbiology	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 38.2.4 Advanced seminar in molecular Microbiology	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 38.2.5 Advanced practical research course in Microbiology	SS	180 h (12 SWS)	180 h	12
Practical course	WP 38.2.6 Advanced practical course in Microbiology	SS	90 h (6 SWS)	90 h	6

\* May only be chosen with accompanying practical course.

In this module a total of 15 ECTS points must be accrued, 12 ECTS points of which are elective courses. Class attendance is 12-14 SWS; total time, including preparation time, is approx. 450 h.

<b>Type of module</b>	Elective module with mandatory and elective courses.
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<b>Elective guidelines</b>	<p>The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.</p> <p>For elective courses in WP 38 modules the following applies: elective courses totaling 12 ECTS points are to be chosen from Microbiology listings in the elective course catalog.</p>
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<b>Entry requirements</b>	See individual course descriptions.
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<b>Level</b>	Recommended semester: 2
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<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 15 point advanced module includes one lecture and a combination of basic and molecular topics of Microbiology-related seminar(s) and/or instructed practical courses or an independent practical research course in the second semester.</p> <p>The module aims to provide second semester students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Microbiology, and training in presentation and communication skills.</p> <p>The module is intended to serve second semester students interested in acquiring broad exposure to topics in Microbiology in research-oriented courses. This module can serve as a basis for specialized courses, as well as the prerequisite for the master's thesis.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Kirsten Jung (Chair, Microbiology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 39 Advanced Microbiology 3

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 39.1 Advanced lecture in Microbiology	SS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 39.2.1 Advanced practical course in Microbiology	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 39.2.2 Advanced seminar in Microbiology	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 39.2.3 Advanced practical course in Molecular Microbiology	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 39.2.4 Advanced seminar in molecular Microbiology	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 39.2.5 Advanced practical research course in Microbiology	SS	180 h (12 SWS)	180 h	12
Practical course	WP 39.2.6 Advanced practical course in Microbiology	SS	90 h (6 SWS)	90 h	6
Practical course	WP 39.2.7 Advanced practical course: Methods in Microbiology	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 39.2.8 Seminar: Methods in Microbiology	SS	30 h (2 SWS)	60 h	(3)

\* May only be chosen with accompanying practical course.

In this module a total of 21 ECTS points must be accrued, 18 ECTS points of which are elective courses. Class attendance is 17-20 SWS; total time, including preparation time, is approx. 630 h.

<b>Type of module</b>	Elective module with mandatory and elective courses.
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### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.

For elective courses in WP 39 modules the following applies: elective courses totaling 18 ECTS points are to be chosen

	from Microbiology listings in the elective course catalog.
<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 2
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 21 point advanced module includes one lecture and a combination of basic, molecular, and Microbiology-related seminar(s) and/or instructed practical courses or an independent practical research course in the second semester.</p> <p>The module aims to provide second semester students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Microbiology, and training in presentation and communication skills.</p> <p>The module is intended to serve second semester students interested in acquiring broad exposure to areas of Microbiology in research-oriented courses. This module can serve as a basis for specialized courses, as well as the prerequisite for the master's thesis.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Kirsten Jung (Chair, Microbiology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 40 Advanced Cell Biology 1

### Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 40.1 Advanced lecture in Cell Biology	SS	30 h (2 SWS)	60 h	3
Practical course	WP 40.2 Advanced practical course in Cell Biology	SS	45 h (3 SWS)	45 h	(3)
Seminar	WP 40.3 Advanced seminar in Cell Biology	SS	30 h (2 SWS)	60 h	(3)

This module is comprised of 9 ECTS points. Class attendance is 7 SWS; total time, including preparation time, is 270 h.

### Type of module

Optional module with required courses.

### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.

### Entry requirements

See individual course descriptions.

### Level

Recommended semester: 2

### Duration

The module spans 1 semester.

### Content and qualification goals

The 9 point advanced module includes a lecture, seminar and an instructed practical course in Cell Biology in the second semester. This module aims at providing students with theoretical knowledge, training in researching, presenting and critically discussing a topic, as well as practical experience in application and interpretation of methods and concepts. Teamwork, learning strategies, organizational and communication skills are required, and serve as the basis for specialized courses.

The module is intended to serve second semester students as an introduction to Cell Biology, allowing flexibility to incorporate modules/courses in additional subject areas.

### Grading

The module is graded according to lecture grade.

### Pass/fail conditions for ECTS

ECTS points are awarded for individual courses according to successful completion; module completion is awarded

<b>points</b>	granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Barbara Conradt (Chair, Cell and Developmental Biology division). Teaching responsibilities for individual courses are listed in elective course catalog
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	



## Module: WP 41 Advanced Cell Biology 2

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 41.1 Advanced lecture in Cell Biology	SS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 41.2.1 Advanced practical course in Cell Biology	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 41.2.2 Advanced seminar in Cell Biology	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 41.2.3 Advanced practical course in Molecular Cell Biology	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 41.2.4 Advanced Seminar: Molecular Cell Biology	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 41.2.5 Advanced practical research course in Cell Biology	SS	180 h (12 SWS)	180 h	12
Practical course	WP 41.2.6 Advanced practical course in Cell Biology	SS	90 h (6 SWS)	90 h	6

\* May only be chosen with accompanying practical course.

In this module a total of 15 ECTS points must be accrued, 12 ECTS points of which are elective courses. Class attendance is 12-14 SWS; total time, including preparation time, is approx. 450 h.

<b>Type of module</b>	Elective module with mandatory and elective courses.
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<b>Elective guidelines</b>	<p>The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog</p> <p>For elective courses in WP 41 modules the following applies: elective courses totaling 12 ECTS points are to be chosen from Cell Biology listings in the elective course catalog.</p>
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<b>Entry requirements</b>	See individual course descriptions.
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<b>Level</b>	Recommended semester: 2
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<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 15 point advanced module includes one lecture and a combination of basic and molecular topics of Cell Biology-related seminar(s) and/or instructed practical courses or an independent practical research course in the second semester.</p> <p>The module aims to provide second semester students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Cell Biology, and training in presentation and communication skills.</p> <p>The module is intended to serve second semester students interested in acquiring broad exposure to topics in Cell Biology in research-oriented courses. This module can serve as a basis for specialized courses, as well as the prerequisite for the master's thesis.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Barbara Conradt (Chair, Cell and Developmental Biology division). Teaching responsibilities for individual courses are listed in elective course catalog
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

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## Module: WP 42 Advanced Cell Biology 3

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 42.1 Advanced lecture in Cell Biology	SS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 42.2.1 Advanced practical course in Cell Biology	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 42.2.2 Advanced seminar in Cell Biology	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 42.2.3 Advanced practical course in Molecular Cell Biology	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 42.2.4 Advanced Seminar: Molecular Cell Biology	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 42.2.5 Advanced practical research course in Cell Biology	SS	180 h (12 SWS)	180 h	12
Practical course	WP 42.2.6 Advanced practical course in Cell Biology	SS	90 h (6 SWS)	90 h	6
Practical course	WP 42.2.7 Practical course: Methods in Cell Biology	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 42.2.8 Seminar: Methods in Cell Biology	SS	30 h (2 SWS)	60 h	(3)

\* May only be chosen with accompanying practical course.

In this module a total of 21 ECTS points must be accrued, 18 ECTS points of which are elective courses. Class attendance is 17-20 SWS; total time, including preparation time, is approx. 630 h.

<b>Type of module</b>	Elective module with mandatory and elective courses.
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### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.

For elective courses in WP 42 modules the following applies: elective courses totaling 18 ECTS points are to be chosen from Cell Biology listings in the elective course catalog.

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<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 2
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 21 point advanced module includes one lecture and a combination of basic, molecular, and Cell Biology-related seminar(s) and/or instructed practical courses or an independent practical research course in the second semester.</p> <p>The module aims to provide second semester students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Cell Biology, and training in presentation and communication skills.</p> <p>The module is intended to serve second semester students interested in acquiring broad exposure to areas of Cell Biology in research-oriented courses. This module can serve as a basis for specialized courses, as well as the prerequisite for the master's thesis.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Barbara Conradt (Chair, Cell and Developmental Biology division). Teaching responsibilities for individual courses are listed in elective course catalog
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

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## Module: WP 43 Advanced Zoology 1

### Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 43.1 Advanced lecture in Zoology	SS	30 h (2 SWS)	60 h	3
Practical course	WP 43.2 Advanced practical course in Zoology	SS	45 h (3 SWS)	45 h	(3)
Seminar	WP 43.3 Advanced seminar in Zoology	SS	30 h (2 SWS)	60 h	(3)

This module is comprised of 9 ECTS points. Class attendance is 7 SWS; total time, including preparation time, is 270 h.

### Type of module

Optional module with required courses.

### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog

### Entry requirements

See individual course descriptions.

### Level

Recommended semester: 2

### Duration

The module spans 1 semester.

### Content and qualification goals

The 9 point advanced module includes a lecture, seminar and an instructed practical course in Zoology in the second semester. This module aims at providing students with theoretical knowledge, training in researching, presenting and critically discussing a topic, as well as practical experience in application and interpretation of methods and concepts. Teamwork, learning strategies, organizational and communication skills are required, and serve as the basis for specialized courses.

The module is intended to serve second semester students as an introduction to Zoology, allowing flexibility to incorporate modules/courses in additional subject areas.

### Grading

The module is graded according to lecture grade.

### Pass/fail conditions for ECTS

ECTS points are awarded for individual courses according to successful completion; module completion is awarded

<b>points</b>	granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Gerhard Haszprunar, Prof. Dr. Matthias Starck (Chairs, Zoology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 44 Advanced Zoology 2

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 44.1 Advanced lecture in Zoology	SS	30 h (2 SWS)	60 h	3
Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 44.2.1 Advanced practical course in Zoology	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 44.2.2 Advanced seminar in Zoology	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 44.2.3 Advanced practical course Methods in Zoology	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 44.2.4 Seminar: Methods in Zoology	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 44.2.5 Advanced practical research course in Zoology	SS	180 h (12 SWS)	180 h	12
Practical course	WP 44.2.6 Advanced practical course in Zoology	SS	90 h (6 SWS)	90 h	6
Excursion	WP 44.2.7 Advanced zoological excursion	SS	90 h (6 SWS)	90 h	6

\* May only be chosen with accompanying practical course.

In this module a total of 15 ECTS points must be accrued, 12 ECTS points of which are elective courses. Class attendance is 12-14 SWS; total time, including preparation time, is approx. 450 h.

**Type of module** Elective module with mandatory and elective courses.

**Elective guidelines** The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.

For elective courses in WP 44 modules the following applies: elective courses totaling 12 ECTS points are to be chosen from Zoology listings in the elective course catalog.

**Entry requirements** See individual course descriptions.

**Level** Recommended semester: 2

<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 15 point advanced module includes one lecture and a combination of basic and molecular topics of Zoology-related seminar(s) and/or instructed practical courses or an independent practical research course in the second semester.</p> <p>The module aims to provide second semester students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Zoology, and training in presentation and communication skills.</p> <p>The module is intended to serve second semester students interested in acquiring broad exposure to topics in Zoology in research-oriented courses. This module can serve as a basis for specialized courses, as well as the prerequisite for the master's thesis.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Gerhard Haszprunar, Prof. Dr. Matthias Starck (Chairs, Zoology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	



## Module: WP 45 Advanced Zoology 3

**Program**

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 45.1 Advanced lecture in Zoology	SS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 45.2.1 Advanced practical course in Zoology	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 45.2.2 Advanced seminar in Zoology	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 45.2.3 Advanced practical course: Methods in Zoology	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 45.2.4 Advanced Seminar: Methods in Zoology	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 45.2.5 Advanced practical research course in Zoology	SS	180 h (12 SWS)	180 h	12
Practical course	WP 45.2.6 Advanced practical course in Zoology	SS	90 h (6 SWS)	90 h	6
Excursion	WP 45.2.7 Advanced zoological excursion	SS	90 h (6 SWS)	90 h	6
Excursion	WP 45.2.8 Advanced zoological excursion	SS	180 h (12 SWS)	180 h	12

\* May only be chosen with accompanying practical course.

In this module a total of 21 ECTS points must be accrued, 18 ECTS points of which are elective courses. Class attendance is 18-20 SWS; total time, including preparation time, is approx. 630 h.

<b>Type of module</b>	Elective module with mandatory and elective courses.
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### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.

For elective courses in WP 45 modules the following applies: elective courses totaling 18 ECTS points are to be chosen from Zoology listings in the elective course catalog.

### Entry requirements

See individual course descriptions.

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<b>Level</b>	Recommended semester: 2
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 21 point advanced module includes one lecture and a combination of basic, molecular, and Zoology-related seminar(s) and/or instructed practical courses or an independent practical research course in the second semester.</p> <p>The module aims to provide second semester students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Zoology, and training in presentation and communication skills.</p> <p>The module is intended to serve second semester students interested in acquiring broad exposure to areas of Zoology in research-oriented courses. This module can serve as a basis for specialized courses, as well as the prerequisite for the master's thesis.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Gerhard Haszprunar, Prof. Dr. Matthias Starck (Chairs, Zoology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

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## Module: WP 46 Advanced Anthropology 1

### Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 46.1 Advanced lecture in Anthropology	SS	30 h (2 SWS)	60 h	3
Practical course	WP 46.2 Advanced practical course in Anthropology	SS	45 h (3 SWS)	45 h	(3)
Seminar	WP 46.3 Advanced seminar in Anthropology	SS	30 h (2 SWS)	60 h	(3)

This module is comprised of 9 ECTS points. Class attendance is 7 SWS; total time, including preparation time, is 270 h.

### Type of module

Optional module with required courses.

### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.

### Entry requirements

See individual course descriptions.

### Level

Recommended semester: 2

### Duration

The module spans 1 semester.

### Content and qualification goals

The 9 point advanced module includes a lecture, seminar and an instructed practical course in Anthropology in the second semester. This module aims at providing students with theoretical knowledge, training in researching, presenting and critically discussing a topic, as well as practical experience in application and interpretation of methods and concepts. Teamwork, learning strategies, organizational and communication skills are required, and serve as the basis for specialized courses.

The module is intended to serve second semester students as an introduction to Anthropology, allowing flexibility to incorporate modules/courses in additional subject areas.

### Grading

The module is graded according to lecture grade.

### Pass/fail conditions for ECTS

ECTS points are awarded for individual courses according to successful completion; module completion is awarded

**points** granted successful completion of individual elements.

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**Responsible person** Prof. Dr. Gisela Grupe (acting Chair, Anthropology division).  
Teaching responsibilities for individual courses are listed in  
elective course catalog.

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**Language** English, with exception of courses also offered for teaching  
and bachelor's degrees.

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**Other information**

## Module: WP 47 Advanced Anthropology 2

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 47.1 Advanced lecture in Anthropology	SS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 47.2.1 Advanced practical course in Anthropology	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 47.2.2 Advanced seminar in Anthropology	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 47.2.3 Advanced practical course: Methods in Anthropology	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 47.2.4 Seminar: Methods in Anthropology	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 47.2.5 Advanced practical research course in Anthropology	SS	180 h (12 SWS)	180 h	12
Practical course	WP 47.2.6 Advanced practical course in Anthropology	SS	90 h (6 SWS)	90 h	6
Excursion	WP 47.2.7 Advanced anthropological excavation/excursion	SS	90 h (6 SWS)	90 h	6

\* May only be chosen with accompanying practical course.

In this module a total of 15 ECTS points must be accrued, 12 ECTS points of which are elective courses. Class attendance is 12-14 SWS; total time, including preparation time, is approx. 450 h.

<b>Type of module</b>	Elective module with mandatory and elective courses.
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### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.

For elective courses in WP 47 modules the following applies: elective courses totaling 12 ECTS points are to be chosen from Anthropology listings in the elective course catalog.

<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 2
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 15 point advanced module includes one lecture and a combination of basic and molecular topics of Anthropology-related seminar(s) and/or instructed practical courses or an independent practical research course in the second semester.</p> <p>The module aims to provide second semester students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Anthropology, and training in presentation and communication skills.</p> <p>The module is intended to serve second semester students interested in acquiring broad exposure to topics in Anthropology in research-oriented courses. This module can serve as a basis for specialized courses, as well as the prerequisite for the master's thesis.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Gisela Grupe (acting Chair, Anthropology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 48 Advanced Anthropology 3

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 48.1 Advanced lecture in Anthropology	SS	30 h (2 SWS)	60 h	3
Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 48.2.1 Advanced practical course in Anthropology	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 48.2.2 Advanced seminar in Anthropology	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 48.2.3 Advanced practical course: Methods in Anthropology	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 48.2.4 Seminar: Methods in Anthropology	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 48.2.5 Advanced practical research course in Anthropology	SS	180 h (12 SWS)	180 h	12
Practical course	WP 48.2.6 Advanced practical course in Anthropology	SS	90 h (6 SWS)	90 h	6
Excursion	WP 48.2.7 Advanced anthropological excavation/excursion	SS	90 h (6 SWS)	90 h	6
Excursion	WP 48.2.8 Advanced anthropological excavation/excursion	SS	180 h (12 SWS)	180 h	12

\* May only be chosen with accompanying practical course.

In this module a total of 21 ECTS points must be accrued, 18 ECTS points of which are elective courses. Class attendance is 18-20 SWS; total time, including preparation time, is approx. 630 h.

### Type of module

Elective module with mandatory and elective courses.

### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.

For elective courses in WP 48 modules the following applies:

	elective courses totaling 18 ECTS points are to be chosen from Anthropology listings in the elective course catalog.
<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 2
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 21 point advanced module includes one lecture and a combination of basic, molecular, and Anthropology-related seminar(s) and/or instructed practical courses or an independent practical research course in the second semester.</p> <p>The module aims to provide second semester students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Anthropology, and training in presentation and communication skills.</p> <p>The module is intended to serve second semester students interested in acquiring broad exposure to areas of Anthropology in research-oriented courses. This module can serve as a basis for specialized courses, as well as the prerequisite for the master's thesis.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Gisela Grupe (acting Chair, Anthropology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	



## Module: WP 49 Advanced Systematic Botany 1

### Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 49.1 Advanced lecture in Systematic Botany	SS	30 h (2 SWS)	60 h	3
Practical course	WP 49.2 Advanced practical course in Systematic Botany	SS	45 h (3 SWS)	45 h	(3)
Seminar	WP 49.3 Advanced seminar in Systematic Botany	SS	30 h (2 SWS)	60 h	(3)

This module is comprised of 9 ECTS points. Class attendance is 7 SWS; total time, including preparation time, is 270 h.

### Type of module

Optional module with required courses.

### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.

### Entry requirements

See individual course descriptions.

### Level

Recommended semester: 2

### Duration

The module spans 1 semester.

### Content and qualification goals

The 9 point advanced module includes a lecture, seminar and an instructed practical course in Systematic Botany in the second semester. This module aims at providing students with theoretical knowledge, training in researching, presenting and critically discussing a topic, as well as practical experience in application and interpretation of methods and concepts. Teamwork, learning strategies, organizational and communication skills are required, and serve as the basis for specialized courses.

The module is intended to serve second semester students as an introduction to Systematic Botany, allowing flexibility to incorporate modules/courses in additional subject areas.

### Grading

The module is graded according to lecture grade.

### Pass/fail conditions for ECTS

ECTS points are awarded for individual courses according to successful completion; module completion is awarded

<b>points</b>	granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Susanne Renner (Chair, Systematic Botany and Mycology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 50 Advanced Systematic Botany 2

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 50.1 Advanced lecture in Systematic Botany	SS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 50.2.1 Advanced practical course in Systematic Botany	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 50.2.2 Advanced seminar in Systematic Botany	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 50.2.3 Advanced practical course: Methods in Systematic Botany	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 50.2.4 Seminar: Methods in Systematic Botany	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 50.2.5 Advanced practical research course in Systematic Botany	SS	180 h (12 SWS)	180 h	12
Practical course	WP 50.2.6 Advanced practical course in Systematic Botany	SS	90 h (6 SWS)	90 h	6
Excursion	WP 50.2.7 Advanced systematic-botanical excursion	SS	90 h (6 SWS)	90 h	6

\* May only be chosen with accompanying practical course.

In this module a total of 15 ECTS points must be accrued, 12 ECTS points of which are elective courses. Class attendance is 12-14 SWS; total time, including preparation time, is approx. 450 h.

<b>Type of module</b>	Elective module with mandatory and elective courses.
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<b>Elective guidelines</b>	<p>The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.</p> <p>For elective courses in WP 50 modules the following applies: elective courses totaling 12 ECTS points are to be chosen from Systematic Botany listings in the elective course catalog.</p>
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<b>Entry requirements</b>	See individual course descriptions.
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<b>Level</b>	Recommended semester: 2
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 15 point advanced module includes one lecture and a combination of basic and molecular topics of Systematic Botany-related seminar(s) and/or instructed practical courses or an independent practical research course in the second semester.</p> <p>The module aims to provide second semester students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Systematic Botany, and training in presentation and communication skills.</p> <p>The module is intended to serve second semester students interested in acquiring broad exposure to topics in Systematic Botany in research-oriented courses. This module can serve as a basis for specialized courses, as well as the prerequisite for the master's thesis.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Susanne Renner (Chair, Systematic Botany and Mycology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 51 Advanced Systematic Botany 3

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 51.1 Advanced lecture in Systematic Botany	SS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 51.2.1 Advanced practical course in Systematic Botany	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 51.2.2 Advanced seminar in Systematic Botany	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 51.2.3 Advanced practical course: Methods in Systematic Botany	SS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 51.2.4 Seminar: Methods in Systematic Botany	SS	30 h (2 SWS)	60 h	(3)
Practical course	WP 51.2.5 Advanced practical research course in Systematic Botany	SS	180 h (12 SWS)	180 h	12
Practical course	WP 51.2.6 Advanced practical course in Systematic Botany	SS	90 h (6 SWS)	90 h	6
Excursion	WP 51.2.7 Advanced systematic-botanical excursion	SS	90 h (6 SWS)	90 h	6
Excursion	WP 51.2.8 Advanced systematic-botanical excursion	SS	180 h (12 SWS)	180 h	12

\* May only be chosen with accompanying practical course.

In this module a total of 21 ECTS points must be accrued, 18 ECTS points of which are elective courses. Class attendance is 18-20 SWS; total time, including preparation time, is approx. 630 h.

### Type of module

Elective module with mandatory and elective courses.

### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.

For elective courses in WP 51 modules the following applies: elective courses totaling 18 ECTS points are to be chosen from Systematic Botany listings in the elective course catalog.

<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 2
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 21 point advanced module includes one lecture and a combination of basic, molecular, and Systematic Botany-related seminar(s) and/or instructed practical courses or an independent practical research course in the second semester.</p> <p>The module aims to provide second semester students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Systematic Botany, and training in presentation and communication skills.</p> <p>The module is intended to serve second semester students interested in acquiring broad exposure to areas of Systematic Botany in research-oriented courses. This module can serve as a basis for specialized courses, as well as the prerequisite for the master's thesis.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Susanne Renner (Chair, Systematic Botany and Mycology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 52 Advanced biologically relevant courses

**Program** Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 52.1 Subject-related lecture	SS	30 h (2 SWS)	60 h	3
Practical course	WP 52.2 Basic practical course	SS	45 h (3 SWS)	45 h	(3)
Seminar	WP 52.3 Basic subject-related seminar	SS	30 h (2 SWS)	60 h	(3)

This module is comprised of 9 ECTS points. Class attendance is 7 SWS; total time, including preparation time, is 270 h.

**Type of module** Optional module with required courses.

**Elective guidelines** The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.

**Entry requirements** See individual course descriptions.

**Level** Recommended semester: 2

**Duration** The module spans 1 semester.

**Content and qualification goals** This 9 point module for second semester students includes a lecture, seminar and an instructed practical course in biology-related subjects (e.g. Physics, Bioinformatics, Biochemistry).  
This module aims at providing second semester students with theoretical knowledge, training in researching, presenting and critically discussing a topic, as well as practical experience in application and interpretation of methods and concepts. It provides second semester students with the opportunity to study biology-related subjects outside of the faculty.

**Grading** The module is graded according to lecture grade.

**Pass/fail conditions for ECTS points**

ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.

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**Responsible person**

See individual courses in elective course catalog.

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**Language**

English, with exception of courses also offered for teaching and bachelor's degrees.

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**Other information**



## Module: WP 53 Advanced interdisciplinary lectures and seminars 1

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 53.0.1 Advanced lecture in Plant Sciences	SS	30 h (2 SWS)	60 h	3
Lecture	WP 53.0.2 Advanced lecture Methods in Plant Sciences	SS	30 h (2 SWS)	60 h	3
Lecture	WP 53.0.3 Advanced lecture in Genetics	SS	30 h (2 SWS)	60 h	3
Lecture	WP 53.0.4 Advanced lecture Methods in Genetics	SS	30 h (2 SWS)	60 h	3
Lecture	WP 53.0.5 Advanced lecture in Human Biology	SS	30 h (2 SWS)	60 h	3
Lecture	WP 53.0.6 Advanced lecture Methods in Human Biology	SS	30 h (2 SWS)	60 h	3
Lecture	WP 53.0.7 Advanced lecture in Microbiology	SS	30 h (2 SWS)	60 h	3
Lecture	WP 53.0.8 Advanced lecture Methods in Microbiology	SS	30 h (2 SWS)	60 h	3
Lecture	WP 53.0.9 Advanced lecture in Cell Biology	SS	30 h (2 SWS)	60 h	3
Lecture	WP 53.0.10 Advanced Lecture: Methods in Cell Biology	SS	30 h (2 SWS)	60 h	3
Lecture	WP 53.0.11 Advanced lecture in Zoology	SS	30 h (2 SWS)	60 h	3
Lecture	WP 53.0.12 Advanced Lecture: Methods in Zoology	SS	30 h (2 SWS)	60 h	3
Lecture	WP 53.0.13 Advanced lecture in Anthropology	SS	30 h (2 SWS)	60 h	3
Lecture	WP 53.0.14 Advanced Lecture: Methods in Anthropology	SS	30 h (2 SWS)	60 h	3
Lecture	WP 53.0.15 Advanced lecture in Systematic Botany	SS	30 h (2 SWS)	60 h	3
Lecture	WP 53.0.16 Advanced Lecture: Methods in Systematic Botany	SS	30 h (2 SWS)	60 h	3
Seminar	WP 53.0.17 Tutoring 2	SS	45 h (3 SWS)	45 h	3
Seminar	WP 53.0.18 Professional qualification 2	SS	30 h (2 SWS)	60 h	3

In this module a total of 6 ECTS points must be accrued, 6 ECTS points of which are elective

courses. Class attendance is 4-5 SWS; total time, including preparation time, is approx. 180 h.

<b>Type of module</b>	Elective module with elective courses.
<b>Elective guidelines</b>	<p>The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.</p> <p>For elective courses in WP 53 modules the following applies: elective courses totaling 6 ECTS points are to be chosen from the elective course catalog.</p>
<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 2
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	This 6 point interdisciplinary module is composed of freely chosen lectures and/or seminars, chosen from the elective course catalog or courses from other LMU faculties or associated institutions. It offers second semester students flexibility to explore subjects or attend courses in relevant professional skills.
<b>Grading</b>	The module is graded according to lecture grade(s).
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	See individual courses in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 54 Advanced interdisciplinary lectures and seminars 2

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 54.0.1 Advanced lecture in Plant Sciences	SS	30 h (2 SWS)	60 h	3
Lecture	WP 54.0.2 Advanced Lecture: Methods in Plant Sciences	SS	30 h (2 SWS)	60 h	3
Lecture	WP 54.0.3 Advanced lecture in Genetics	SS	30 h (2 SWS)	60 h	3
Lecture	WP 54.0.4 Advanced Lecture: Methods in Genetics	SS	30 h (2 SWS)	60 h	3
Lecture	WP 54.0.5 Advanced lecture in Human Biology	SS	30 h (2 SWS)	60 h	3
Lecture	WP 54.0.6 Advanced Lecture: Methods in Human Biology	SS	30 h (2 SWS)	60 h	3
Lecture	WP 54.0.7 Advanced lecture in Microbiology	SS	30 h (2 SWS)	60 h	3
Lecture	WP 54.0.8 Advanced Lecture: Methods in Microbiology	SS	30 h (2 SWS)	60 h	3
Lecture	WP 54.0.9 Advanced lecture in Cell Biology	SS	30 h (2 SWS)	60 h	3
Lecture	WP 54.0.10 Advanced Lecture: Methods in Cell Biology	SS	30 h (2 SWS)	60 h	3
Lecture	WP 54.0.11 Advanced lecture in Zoology	SS	30 h (2 SWS)	60 h	3
Lecture	WP 54.0.12 Advanced Lecture: Methods in Zoology	SS	30 h (2 SWS)	60 h	3
Lecture	WP 54.0.13 Advanced lecture in Anthropology	SS	30 h (2 SWS)	60 h	3
Lecture	WP 54.0.14 Advanced Lecture: Methods in Anthropology	SS	30 h (2 SWS)	60 h	3
Lecture	WP 54.0.15 Advanced lecture in Systematic Botany	SS	30 h (2 SWS)	60 h	3
Lecture	WP 54.0.16 Advanced Lecture: Methods in Systematic Botany	SS	30 h (2 SWS)	60 h	3
Seminar	WP 54.0.17 Tutoring 2	SS	45 h (3 SWS)	45 h	3
Seminar	WP 54.0.18 Professional qualification 2	SS	30 h (2 SWS)	60 h	3

In this module a total of 3 ECTS points must be accrued. 3 ECTS points of which are elective

courses. Class attendance is 2-3 SWS; total time, including preparation time, is 90 h.

<b>Type of module</b>	Elective module with elective courses.
<b>Elective guidelines</b>	<p>The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.</p> <p>For elective courses in WP 54 modules the following applies: elective courses totaling 3 ECTS points are to be chosen from the elective course catalog.</p>
<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 2
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	This 3 point interdisciplinary module is composed of a lecture or seminar chosen from the elective course catalog or courses from other LMU faculties or associated institutions. It offers second semester students flexibility to explore subjects or attend courses in relevant professional skills.
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	See individual courses elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 55 Specialized courses in Plant Sciences 1

**Program**

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 55.1 Specialized lecture in Plant Sciences	WS	30 h (2 SWS)	60 h	3
Practical course	WP 55.2 Specialized practical course in Plant Sciences	WS	45 h (3 SWS)	45 h	(3)
Seminar	WP 55.3 Seminar for specialized practical course in Plant Sciences	WS	30 h (2 SWS)	60 h	(3)

This module is comprised of 9 ECTS points. Class attendance is 7 SWS; total time, including preparation time, is 270 h.

### Type of module

Optional module with required courses.

### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.

### Entry requirements

See individual course descriptions.

### Level

Recommended semester: 3

### Duration

The module spans 1 semester.

### Content and qualification goals

The 9 point specialized module includes a lecture, seminar and an instructed practical course in Plant Sciences in the third semester. This basic module aims at providing students with theoretical knowledge, training in researching, presenting and critically discussing a topic, as well as practical experience in application and interpretation of methods and concepts. Teamwork, learning strategies, organizational and communication skills are required, and serve as the basis for the master's thesis and future professional roles.

The module is intended to serve third semester students as an introduction to Plant Sciences, allowing flexibility to incorporate modules/courses in additional subject areas.

### Grading

The module is graded according to lecture grade.

**Pass/fail conditions for ECTS points**

ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.

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**Responsible persons**

Prof. Dr. Dario Leister, Prof. Dr. Jürgen Soll (Chairs, Plant Sciences division). Teaching responsibilities for individual courses are listed in elective course catalog.

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**Language**

English, with exception of courses also offered for teaching and bachelor's degrees.

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**Other information**

## Module: WP 56 Specialized courses in Plant Sciences 2

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 56.1 Specialized lecture in Plant Sciences	WS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 56.2.1 Specialized practical course in Plant Sciences	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 56.2.2 Seminar for specialized practical course in Plant Sciences	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 56.2.3 Specialized practical course for Molecular Biology in Plant Sciences	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 56.2.4 Seminar for specialized practical course for Molecular Biology in Plant Sciences	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 56.2.5 Specialized practical research course in Plant Sciences	WS	450 h (30 SWS)	0 h	12
Practical course	WP 56.2.6 Specialized practical course for Cell Biology in Plants	WS	90 h (6 SWS)	90 h	6

\* May only be chosen with accompanying practical course.

In this module a total of 15 ECTS points must be accrued, 12 ECTS points of which are elective courses. Class attendance is 12-32 SWS; total time, including preparation time, is approx. 450 h.

<b>Type of module</b>	Elective module with mandatory and elective courses.
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### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.

For elective courses in WP 56 modules the following applies: elective courses totaling 12 ECTS points are to be chosen from Plant Sciences listings in the elective course catalog.

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<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 3
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 15 point specialized module includes one lecture and a combination of basic and molecular topics of Plant Sciences-related seminar(s) and/or instructed practical courses or an independent practical research course in the third semester. The module aims to provide third semester students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Plant Sciences and training in presentation and communication skills.</p> <p>The module is intended to serve third semester students interested in concentrating on Plant Sciences in research-oriented courses. This module can serve as a basis for the master's thesis and future professional roles.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible persons</b>	Prof. Dr. Dario Leister, Prof. Dr. Jürgen Soll (Chairs, Plant Sciences division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

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## Module: WP 57 Specialized courses in Plant Sciences 3

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 57.1 Specialized lecture in Plant Sciences	WS	30 h (2 SWS)	60 h	3
Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 57.2.1 Specialized practical course in Plant Sciences	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 57.2.2 Seminar for specialized practical course in Plant Sciences	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 57.2.3 Specialized practical course for Molecular Biology in Plant Sciences	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 57.2.4 Seminar for specialized practical course for Molecular Biology in Plant Sciences	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 57.2.5 Specialized practical research course in Plant Sciences	WS	450 h (30 SWS)	0 h	12
Practical course	WP 57.2.6 Specialized practical course for Cell Biology in Plants	WS	90 h (6 SWS)	90 h	6
Practical course	WP 57.2.7 Specialized practical course: Methods in Plant Sciences	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 57.2.8 Seminar for specialized practical course Methods in Plant Sciences	WS	30 h (2 SWS)	60 h	(3)

\* May only be chosen with accompanying practical course.

In this module a total of 21 ECTS points must be accrued, 18 ECTS points of which are elective courses. Class attendance is 17-38 SWS; total time, including preparation time, is approx. 630 h.

Type of module

Elective module with mandatory and elective courses.

<b>Elective guidelines</b>	<p>The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.</p> <p>For elective courses in WP 57 modules the following applies: elective courses totaling 18 ECTS points are to be chosen from Plant Sciences listings in the elective course catalog.</p>
<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 3
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 21 point specialized module includes one lecture and a combination of basic, molecular, and Plant Sciences-related seminar(s) and/or instructed practical courses or an independent practical research course.</p> <p>The module aims to provide students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Plant Sciences, and training in presentation and communication skills.</p> <p>The module is intended to serve third semester students interested in concentrating on Plant Sciences in research-oriented courses. This module can serve as the basis for the master's thesis and future professional roles.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Dario Leister, Prof. Dr. Jürgen Soll (Chairs, Plant Sciences division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 58 Specialized courses in Genetics 1

**Program**

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 58.1 Specialized lecture in Genetics	WS	30 h (2 SWS)	60 h	3
Practical course	WP 58.2 Specialized practical course in Genetics	WS	45 h (3 SWS)	45 h	(3)
Seminar	WP 58.3 Seminar for specialized practical course in Genetics	WS	30 h (2 SWS)	60 h	(3)

This module is comprised of 9 ECTS points. Class attendance is 7 SWS; total time, including preparation time, is 270 h.

### Type of module

Optional module with required courses.

### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.

### Entry requirements

See individual course descriptions.

### Level

Recommended semester: 3

### Duration

The module spans 1 semester.

### Content and qualification goals

The 9 point specialized module includes a lecture, seminar and an instructed practical course in Genetics in the third semester. This basic module aims at providing students with theoretical knowledge, training in researching, presenting and critically discussing a topic, as well as practical experience in application and interpretation of methods and concepts. Teamwork, learning strategies, organizational and communication skills are required, and serve as the basis for the master's thesis and future professional roles.

The module is intended to serve third semester students as an introduction to Genetics, allowing flexibility to incorporate modules/courses in additional subject areas.

### Grading

The module is graded according to lecture grade.

### Pass/fail conditions for ECTS

ECTS points are awarded for individual courses according to

**points** successful completion; module completion is awarded granted successful completion of individual elements.

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**Responsible person** Prof. Dr. Martin Parniske (Chair, Genetics division). Teaching responsibilities for individual courses are listed in elective course catalog.

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**Language** English, with exception of courses also offered for teaching and bachelor's degrees.

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**Other information**

## Module: WP 59 Specialized courses in Genetics 2

Program Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 59.1 Specialized lecture in Genetics	WS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 59.2.1 Specialized practical course in Genetics	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 59.2.2 Seminar for specialized practical course in Genetics	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 59.2.3 Specialized practical course for Molecular Biology in Genetics	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 59.2.4 Seminar for specialized practical course for Molecular Biology in Genetics	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 59.2.5 Specialized practical research course in Genetics	WS	450 h (30 SWS)	0 h	12
Practical course	WP 59.2.6 Specialized practical course for Molecular Biology	WS	90 h (6 SWS)	90 h	6

\* May only be chosen with accompanying practical course.

In this module a total of 15 ECTS points must be accrued, 12 ECTS points of which are elective courses. Class attendance is 12-32 SWS; total time, including preparation time, is approx. 450 h.

<b>Type of module</b>	Elective module with mandatory and elective courses.
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<b>Elective guidelines</b>	<p>The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.</p> <p>For elective courses in WP 59 modules the following applies: elective courses totaling 12 ECTS points are to be chosen from Genetics listings in the elective course catalog.</p>
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<b>Entry requirements</b>	See individual course descriptions.
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<b>Level</b>	Recommended semester: 3
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 15 point specialized module includes one lecture and a combination of basic and molecular topics of Genetics-related seminar(s) and/or instructed practical courses or an independent practical research course in the third semester. The module aims to provide third semester students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Genetics, and training in presentation and communication skills.</p> <p>The module is intended to serve third semester students interested in concentrating on Genetics in research-oriented courses. This module can serve as a basis for the master's thesis and future professional roles.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Martin Parniske (Chair, Genetics division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 60 Specialized courses in Genetics 3

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 60.1 Specialized lecture in Genetics	WS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 60.2.1 Specialized practical course in Genetics	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 60.2.2 Seminar for specialized practical course in Genetics	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 60.2.3 Specialized practical course for Molecular Biology in Genetics	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 60.2.4 Seminar for specialized practical course for Molecular Biology in Genetics	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 60.2.5 Specialized practical research course in Genetics	WS	450 h (30 SWS)	0 h	12
Practical course	WP 60.2.6 Specialized practical course for Molecular Biology	WS	90 h (6 SWS)	90 h	6
Practical course	WP 60.2.7 Specialized practical course Methods in Genetics	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 60.2.8 Seminar for specialized practical course Methods in Genetics	WS	30 h (2 SWS)	60 h	(3)

\* May only be chosen with accompanying practical course.

In this module a total of 21 ECTS points must be accrued, 18 ECTS points of which are elective courses. Class attendance is 17-38 SWS; total time, including preparation time, is approx. 630 h.

<b>Type of module</b>	Elective module with mandatory and elective courses.
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### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.

For elective courses in WP 60 modules the following applies:

	elective courses totaling 18 ECTS points are to be chosen from Genetics listings in the elective course catalog.
<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 3
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 21 point specialized module includes one lecture and a combination of basic, molecular, and Genetics-related seminar(s) and/or instructed practical courses or an independent practical research course.</p> <p>The module aims to provide students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Genetics, and training in presentation and communication skills.</p> <p>The module is intended to serve third semester students interested in concentrating on Genetics in research-oriented courses. This module can serve as the basis for the master's thesis and future professional roles.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Martin Parniske (Chair, Genetics division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	



## Module: WP 61 Specialized courses in Human Biology 1

**Program**

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 61.1 Specialized lecture in Human Biology	WS	30 h (2 SWS)	60 h	3
Practical course	WP 61.2 Specialized practical course in Human Biology	WS	45 h (3 SWS)	45 h	(3)
Seminar	WP 61.3 Seminar for specialized practical course in Human Biology	WS	30 h (2 SWS)	60 h	(3)

This module is comprised of 9 ECTS points. Class attendance is 7 SWS; total time, including preparation time, is 270 h.

### Type of module

Optional module with required courses.

### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.

### Entry requirements

See individual course descriptions.

### Level

Recommended semester: 3

### Duration

The module spans 1 semester.

### Content and qualification goals

The 9 point specialized module includes a lecture, seminar and an instructed practical course in Human Biology in the third semester. This basic module aims at providing students with theoretical knowledge, training in researching, presenting and critically discussing a topic, as well as practical experience in application and interpretation of methods and concepts. Teamwork, learning strategies, organizational and communication skills are required, and serve as the basis for the master's thesis and future professional roles.

The module is intended to serve third semester students as an introduction to Human Biology, allowing flexibility to incorporate modules/courses in additional subject areas.

### Grading

The module is graded according to lecture grade.

**Pass/fail conditions for ECTS points**

ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.

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**Responsible person**

Prof. Dr. Heinrich Leonhardt (Chair, Human Biology division). Teaching responsibilities for individual courses are listed in elective course catalog.

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**Language**

English, with exception of courses also offered for teaching and bachelor's degrees.

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**Other information**

## Module: WP 62 Specialized courses in Human Biology 2

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 62.1 Specialized lecture in Human Biology	WS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 62.2.1 Specialized practical course in Human Biology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 62.2.2 Seminar for specialized practical course in Human Biology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 62.2.3 Specialized practical course in Molecular Human Biology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 62.2.4 Seminar for specialized practical course in Molecular Human Biology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 62.2.5 practical research course in Human Biology	WS	450 h (30 SWS)	0 h	12
Practical course	WP 62.2.6 Specialized practical course in Human Cell Biology	WS	90 h (6 SWS)	90 h	6

\* May only be chosen with accompanying practical course.

In this module a total of 15 ECTS points must be accrued, 12 ECTS points of which are elective courses. Class attendance is 12-32 SWS; total time, including preparation time, is approx. 450 h.

<b>Type of module</b>	Elective module with mandatory and elective courses.
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<b>Elective guidelines</b>	<p>The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.</p> <p>For elective courses in WP 62 modules the following applies: elective courses totaling 12 ECTS points are to be chosen from Human Biology listings in the elective course catalog.</p>
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<b>Entry requirements</b>	See individual course descriptions.
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<b>Level</b>	Recommended semester: 3
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 15 point specialized module includes one lecture and a combination of basic and molecular topics of Human Biology-related seminar(s) and/or instructed practical courses or an independent practical research course in the third semester. The module aims to provide third semester students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Human Biology, and training in presentation and communication skills.</p> <p>The module is intended to serve third semester students interested in concentrating on Human Biology in research-oriented courses. This module can serve as a basis for the master's thesis and future professional roles.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Heinrich Leonhardt (Chair, Human Biology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

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## Module: WP 63 Specialized courses in Human Biology 3

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 63.1 Specialized lecture in Human Biology	WS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 63.2.1 Specialized practical course in Human Biology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 63.2.2 Seminar for specialized practical course in Human Biology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 63.2.3 Specialized practical course in Molecular Human Biology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 63.2.4 Seminar for specialized practical course in Molecular Human Biology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 63.2.5 Specialized practical research course in Human Biology	WS	450 h (30 SWS)	0 h	12
Practical course	WP 63.2.6 Practical course in Cell Biology and Human Biology	WS	90 h (6 SWS)	90 h	6
Practical course	WP 63.2.7 Specialized practical course: Methods in Human Biology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 63.2.8 Seminar for specialized practical course: Methods in Human Biology	WS	30 h (2 SWS)	60 h	(3)

\* May only be chosen with accompanying practical course.

In this module a total of 21 ECTS points must be accrued, 18 ECTS points of which are elective courses. Class attendance is 17-38 SWS; total time, including preparation time, is approx. 630 h.

**Type of module** Elective module with mandatory and elective courses.

**Elective guidelines** The module can be chosen according to the following: Elective modules totaling 30 ECTS points should

be selected from the elective course catalog.

For elective courses in WP 63 modules the following applies: elective courses totaling 18 ECTS points are to be chosen from Human Biology listings in the elective course catalog.

<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 3
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 21 point specialized module includes one lecture and a combination of basic, molecular, and Human Biology-related seminar(s) and/or instructed practical courses or an independent practical research course.</p> <p>The module aims to provide students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Human Biology, and training in presentation and communication skills.</p> <p>The module is intended to serve third semester students interested in concentrating on Human Biology in research-oriented courses. This module can serve as the basis for the master's thesis and future professional roles.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Heinrich Leonhardt (Chair, Human Biology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 64 Specialized courses in Microbiology 1

**Program**

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 64.1 Specialized lecture in Microbiology	WS	30 h (2 SWS)	60 h	3
Practical course	WP 64.2 Specialized practical course in Microbiology	WS	45 h (3 SWS)	45 h	(3)
Seminar	WP 64.3 Seminar for specialized practical course in Microbiology	WS	30 h (2 SWS)	60 h	(3)

This module is comprised of 9 ECTS points. Class attendance is 7 SWS; total time, including preparation time, is 270 h.

### Type of module

Optional module with required courses.

### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.

### Entry requirements

See individual course descriptions.

### Level

Recommended semester: 3

### Duration

The module spans 1 semester.

### Content and qualification goals

The 9 point specialized module includes a lecture, seminar and an instructed practical course in Microbiology in the third semester. This basic module aims at providing students with theoretical knowledge, training in researching, presenting and critically discussing a topic, as well as practical experience in application and interpretation of methods and concepts. Teamwork, learning strategies, organizational and communication skills are required, and serve as the basis for the master's thesis and future professional roles.

The module is intended to serve third semester students as an introduction to Microbiology, allowing flexibility to incorporate modules/courses in additional subject areas.

### Grading

The module is graded according to lecture grade.

**Pass/fail conditions for ECTS points**

ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.

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**Responsible person**

Prof. Dr. Kirsten Jung (Chair, Microbiology division).  
Teaching responsibilities for individual courses are listed in elective course catalog.

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**Language**

English, with exception of courses also offered for teaching and bachelor's degrees.

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**Other information**



## Module: WP 65 Specialized courses in Microbiology 2

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 65.1 Specialized lecture in Microbiology	WS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 65.2.1 Specialized practical course in Microbiology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 65.2.2 Seminar for specialized practical course in Microbiology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 65.2.3 Specialized practical course in Molecular Microbiology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 65.2.4 Seminar for specialized practical course in Molecular Microbiology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 65.2.5 Specialized practical research course in Microbiology	WS	450 h (30 SWS)	0 h	12
Practical course	WP 65.2.6 Specialized practical course in Molecular Microbiology	WS	90 h (6 SWS)	90 h	6

\* May only be chosen with accompanying practical course.

In this module a total of 15 ECTS points must be accrued, 12 ECTS points of which are elective courses. Class attendance is 12-32 SWS; total time, including preparation time, is approx. 450 h.

<b>Type of module</b>	Elective module with mandatory and elective courses.
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### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.

For elective courses in WP 65 modules the following applies: elective courses totaling 12 ECTS points are to be chosen from Microbiology listings in the elective course catalog.

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<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 3
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 15 point specialized module includes one lecture and a combination of basic and molecular topics of Microbiology-related seminar(s) and/or instructed practical courses or an independent practical research course in the third semester. The module aims to provide third semester students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Microbiology, and training in presentation and communication skills.</p> <p>The module is intended to serve third semester students interested in concentrating on Microbiology in research-oriented courses. This module can serve as a basis for the master's thesis and future professional roles.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Kirsten Jung (Chair, Microbiology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

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## Module: WP 66 Specialized courses in Microbiology 3

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 66.1 Specialized lecture in Microbiology	WS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 66.2.1 Specialized practical course in Microbiology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 66.2.2 Seminar for specialized practical course in Microbiology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 66.2.3 Specialized practical course in Molecular Microbiology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 66.2.4 Seminar for specialized practical course in Molecular Microbiology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 66.2.5 Specialized practical research course in Microbiology	WS	450 h (30 SWS)	0 h	12
Practical course	WP 66.2.6 Specialized practical course in Molecular Microbiology	WS	90 h (6 SWS)	90 h	6
Practical course	WP 66.2.7 Specialized practical course: Methods in Microbiology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 66.2.8 Seminar for specialized practical course: Methods in Microbiology	WS	30 h (2 SWS)	60 h	(3)

\* May only be chosen with accompanying practical course.

In this module a total of 21 ECTS points must be accrued, 18 ECTS points of which are elective courses. Class attendance is 17-38 SWS; total time, including preparation time, is approx. 630 h.

**Type of module** Elective module with mandatory and elective courses.

**Elective guidelines** The module can be chosen according to the following: Elective modules totaling 30 ECTS points should

be selected from the elective course catalog.

For elective courses in WP 66 modules the following applies: elective courses totaling 18 ECTS points are to be chosen from Microbiology listings in the elective course catalog.

<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 3
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 21 point specialized module includes one lecture and a combination of basic, molecular, and Microbiology-related seminar(s) and/or instructed practical courses or an independent practical research course.</p> <p>The module aims to provide students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Microbiology, and training in presentation and communication skills.</p> <p>The module is intended to serve third semester students interested in concentrating on Microbiology in research-oriented courses. This module can serve as the basis for the master's thesis and future professional roles.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Kirsten Jung (Chair, Microbiology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 67 Specialized courses in Cell Biology 1

**Program**

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 67.1 Specialized lecture in Cell Biology	WS	30 h (2 SWS)	60 h	3
Practical course	WP 67.2 Specialized practical course in Cell Biology	WS	45 h (3 SWS)	45 h	(3)
Seminar	WP 67.3 Seminar for specialized practical course in Cell Biology	WS	30 h (2 SWS)	60 h	(3)

This module is comprised of 9 ECTS points. Class attendance is 7 SWS; total time, including preparation time, is 270 h.

### Type of module

Optional module with required courses.

### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.

### Entry requirements

See individual course descriptions.

### Level

Recommended semester: 3

### Duration

The module spans 1 semester.

### Content and qualification goals

The 9 point specialized module includes a lecture, seminar and an instructed practical course in Cell Biology in the third semester. This basic module aims at providing students with theoretical knowledge, training in researching, presenting and critically discussing a topic, as well as practical experience in application and interpretation of methods and concepts. Teamwork, learning strategies, organizational and communication skills are required, and serve as the basis for the master's thesis and future professional roles.

The module is intended to serve third semester students as an introduction to Cell Biology, allowing flexibility to incorporate modules/courses in additional subject areas.

### Grading

The module is graded according to lecture grade.

### Pass/fail conditions for ECTS

ECTS points are awarded for individual courses according to

<b>points</b>	successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Barbara Conradt (Chair, Cell and Developmental Biology division). Teaching responsibilities for individual courses are listed in elective course catalog
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 68 Specialized courses in Cell Biology 2

Program Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 68.1 Specialized lecture in Cell Biology	WS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 68.2.1 Specialized practical course in Cell Biology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 68.2.2 Seminar for specialized practical course in Cell Biology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 68.2.3 Specialized practical course in Molecular Cell Biology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 68.2.4 Seminar for specialized practical course in Molecular Cell Biology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 68.2.5 Specialized practical research course in Cell Biology	WS	450 h (30 SWS)	0 h	12
Practical course	WP 68.2.6 Specialized practical course in Cell Biology	WS	90 h (6 SWS)	90 h	6

\* May only be chosen with accompanying practical course.

In this module a total of 15 ECTS points must be accrued, 12 ECTS points of which are elective courses. Class attendance is 12-32 SWS; total time, including preparation time, is approx. 450 h.

<b>Type of module</b>	Elective module with mandatory and elective courses.
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<b>Elective guidelines</b>	<p>The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.</p> <p>For elective courses in WP 68 modules the following applies: elective courses totaling 12 ECTS points are to be chosen from Cell Biology listings in the elective course catalog.</p>
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<b>Entry requirements</b>	See individual course descriptions.
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<b>Level</b>	Recommended semester: 3
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 15 point specialized module includes one lecture and a combination of basic and molecular topics of Cell Biology-related seminar(s) and/or instructed practical courses or an independent practical research course in the third semester. The module aims to provide third semester students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Cell Biology, and training in presentation and communication skills.</p> <p>The module is intended to serve third semester students interested in concentrating on Cell Biology in research-oriented courses. This module can serve as a basis for the master's thesis and future professional roles.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Barbara Conradt (Chair, Cell and Developmental Biology division). Teaching responsibilities for individual courses are listed in elective course catalog
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

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## Module: WP 69 Specialized courses in Cell Biology 3

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 69.1 Specialized lecture in Cell Biology	WS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 69.2.1 Specialized practical course in Cell Biology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 69.2.2 Seminar for specialized practical course in Cell Biology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 69.2.3 Specialized practical course in Molecular Cell Biology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 69.2.4 Seminar for specialized practical course in Molecular Cell Biology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 69.2.5 Specialized practical research course in Cell Biology	WS	450 h (30 SWS)	0 h	12
Practical course	WP 69.2.6 Specialized practical course in Cell Biology	WS	90 h (6 SWS)	90 h	6
Practical course	WP 69.2.7 Specialized practical course Methods in Cell Biology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 69.2.8 Seminar for specialized practical course Methods in Cell Biology	WS	30 h (2 SWS)	60 h	(3)

\* May only be chosen with accompanying practical course.

In this module a total of 21 ECTS points must be accrued, 18 ECTS points of which are elective courses. Class attendance is 17-38 SWS; total time, including preparation time, is approx. 630 h.

### Type of module

Elective module with mandatory and elective courses.

### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.

For elective courses in WP 69 modules the following applies:

	elective courses totaling 18 ECTS points are to be chosen from Cell Biology listings in the elective course catalog.
<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 3
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 21 point specialized module includes one lecture and a combination of basic, molecular, and Cell Biology-related seminar(s) and/or instructed practical courses or an independent practical research course.</p> <p>The module aims to provide students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Cell Biology, and training in presentation and communication skills.</p> <p>The module is intended to serve third semester students interested in concentrating on Cell Biology in research-oriented courses. This module can serve as the basis for the master's thesis and future professional roles.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Barbara Conradt (Chair, Cell and Developmental Biology division). Teaching responsibilities for individual courses are listed in elective course catalog
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 70 Specialized courses in Zoology 1

**Program**

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 70.1 Specialized lecture in Zoology	WS	30 h (2 SWS)	60 h	3
Practical course	WP 70.2 Specialized practical course in Zoology	WS	45 h (3 SWS)	45 h	(3)
Seminar	WP 70.3 Seminar for specialized practical course in Zoology	WS	30 h (2 SWS)	60 h	(3)

This module is comprised of 9 ECTS points. Class attendance is 7 SWS; total time, including preparation time, is 270 h.

### Type of module

Optional module with required courses.

### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.

### Entry requirements

See individual course descriptions.

### Level

Recommended semester: 3

### Duration

The module spans 1 semester.

### Content and qualification goals

The 9 point specialized module includes a lecture, seminar and an instructed practical course in Zoology in the third semester. This basic module aims at providing students with theoretical knowledge, training in researching, presenting and critically discussing a topic, as well as practical experience in application and interpretation of methods and concepts. Teamwork, learning strategies, organizational and communication skills are required, and serve as the basis for the master's thesis and future professional roles.

The module is intended to serve third semester students as an introduction to Zoology, allowing flexibility to incorporate modules/courses in additional subject areas.

### Grading

The module is graded according to lecture grade.

### Pass/fail conditions for ECTS

ECTS points are awarded for individual courses according to

<b>points</b>	successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Gerhard Haszprunar, Prof. Dr. Matthias Starck (Chairs, Zoology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.

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**Other information**

## Module: WP 71 Specialized courses in Zoology 2

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 71.1 Specialized lecture in Zoology	WS	30 h (2 SWS)	60 h	3
Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 71.2.1 Specialized practical course in Zoology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 71.2.2 Seminar for specialized practical course in Zoology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 71.2.3 Specialized practical course: Methods in Zoology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 71.2.4 Seminar for specialized practical course: Methods in Zoology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 71.2.5 Specialized practical research course in Zoology	WS	450 h (30 SWS)	0 h	12
Practical course	WP 71.2.6 Specialized practical course in Zoology	WS	90 h (6 SWS)	90 h	6
Excursion	WP 71.2.7 Specialized zoological excursion	WS	90 h (6 SWS)	90 h	6

\* May only be chosen with accompanying practical course.

In this module a total of 15 ECTS points must be accrued, 12 ECTS points of which are elective courses. Class attendance is 12-32 SWS; total time, including preparation time, is approx. 450 h.

### Type of module

Elective module with mandatory and elective courses.

### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.

For elective courses in WP 71 modules the following applies: elective courses totaling 12 ECTS points are to be chosen from Zoology listings in the elective course catalog.

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<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 3
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 15 point specialized module includes one lecture and a combination of basic and molecular topics of Zoology-related seminar(s) and/or instructed practical courses or an independent practical research course in the third semester. The module aims to provide third semester students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Zoology, and training in presentation and communication skills.</p> <p>The module is intended to serve third semester students interested in concentrating on Zoology in research-oriented courses. This module can serve as a basis for the master's thesis and future professional roles.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Gerhard Haszprunar, Prof. Dr. Matthias Starck (Chairs, Zoology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

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## Module: WP 72 Specialized courses in Zoology 3

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 72.1 Specialized lecture in Zoology	WS	30 h (2 SWS)	60 h	3
Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 72.2.1 Specialized practical course in Zoology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 72.2.2 Seminar for specialized practical course in Zoology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 72.2.3 Specialized practical course: Methods in Zoology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 72.2.4 Seminar for specialized practical course: Methods in Zoology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 72.2.5 Specialized practical research course in Zoology	WS	450 h (30 SWS)	0 h	12
Practical course	WP 72.2.6 Specialized practical course in Zoology	WS	90 h (6 SWS)	90 h	6
Excursion	WP 72.2.7 Specialized zoological excursion	WS	90 h (6 SWS)	90 h	6
Excursion	WP 72.2.8 Specialized zoological excursion	WS	180 h (12 SWS)	180 h	12

\* May only be chosen with accompanying practical course.

In this module a total of 21 ECTS points must be accrued, 18 ECTS points of which are elective courses. Class attendance is 18-38 SWS; total time, including preparation time, is approx. 630 h.

### Type of module

Elective module with mandatory and elective courses.

### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.

For elective courses in WP 72 modules the following applies:

	elective courses totaling 18 ECTS points are to be chosen from Zoology listings in the elective course catalog.
<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 3
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 21 point specialized module includes one lecture and a combination of basic, molecular, and Zoology-related seminar(s) and/or instructed practical courses or an independent practical research course.</p> <p>The module aims to provide students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Zoology, and training in presentation and communication skills.</p> <p>The module is intended to serve third semester students interested in concentrating on Zoology in research-oriented courses. This module can serve as the basis for the master's thesis and future professional roles.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Gerhard Haszprunar, Prof. Dr. Matthias Starck (Chairs, Zoology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	



## Module: WP 73 Specialized courses in Anthropology 1

**Program**

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 73.1 Specialized lecture in Anthropology	WS	30 h (2 SWS)	60 h	3
Practical course	WP 73.2 Specialized practical course in Anthropology	WS	45 h (3 SWS)	45 h	(3)
Seminar	WP 73.3 Seminar for specialized practical course in Anthropology	WS	30 h (2 SWS)	60 h	(3)

This module is comprised of 9 ECTS points. Class attendance is 7 SWS; total time, including preparation time, is 270 h.

### Type of module

Optional module with required courses.

### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.

### Entry requirements

See individual course descriptions.

### Level

Recommended semester: 3

### Duration

The module spans 1 semester.

### Content and qualification goals

The 9 point specialized module includes a lecture, seminar and an instructed practical course in Anthropology in the third semester. This basic module aims at providing students with theoretical knowledge, training in researching, presenting and critically discussing a topic, as well as practical experience in application and interpretation of methods and concepts. Teamwork, learning strategies, organizational and communication skills are required, and serve as the basis for the master's thesis and future professional roles.

The module is intended to serve third semester students as an introduction to Anthropology, allowing flexibility to incorporate modules/courses in additional subject areas.

### Grading

The module is graded according to lecture grade.

**Pass/fail conditions for ECTS points**

ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.

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**Responsible person**

Prof. Dr. Gisela Grupe (acting Chair, Anthropology division). Teaching responsibilities for individual courses are listed in elective course catalog.

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**Language**

English, with exception of courses also offered for teaching and bachelor's degrees.

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**Other information**

## Module: WP 74 Specialized courses in Anthropology 2

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 74.1 Specialized lecture in Anthropology	WS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 74.2.1 Specialized practical course in Anthropology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 74.2.2 Seminar for specialized practical course in Anthropology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 74.2.3 Specialized practical course: Methods in Anthropology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 74.2.4 Seminar for specialized practical course: Methods in Anthropology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 74.2.5 Specialized practical research course in Anthropology	WS	450 h (30 SWS)	0 h	12
Practical course	WP 74.2.6 Specialized practical course in Anthropology	WS	90 h (6 SWS)	90 h	6
Excursion	WP 74.2.7 Specialized anthropological excavation/excursion	WS	90 h (6 SWS)	90 h	6

\* May only be chosen with accompanying practical course.

In this module a total of 15 ECTS points must be accrued, 12 ECTS points of which are elective courses. Class attendance is 12-32 SWS; total time, including preparation time, is approx. 450 h.

<b>Type of module</b>	Elective module with mandatory and elective courses.
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### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.

For elective courses in WP 74 modules the following applies: elective courses totaling 12 ECTS points are to be chosen

	from Anthropology listings in the elective course catalog.
<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 3
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 15 point specialized module includes one lecture and a combination of basic and molecular topics of Anthropology-related seminar(s) and/or instructed practical courses or an independent practical research course in the third semester. The module aims to provide third semester students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Anthropology, and training in presentation and communication skills.</p> <p>The module is intended to serve third semester students interested in concentrating on Anthropology in research-oriented courses. This module can serve as a basis for the master's thesis and future professional roles.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Gisela Grupe (acting Chair, Anthropology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 75 Specialized courses in Anthropology 3

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 75.1 Specialized lecture in Anthropology	WS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 75.2.1 Specialized practical course in Anthropology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 75.2.2 Seminar for specialized practical course in Anthropology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 75.2.3 Specialized practical course: Methods in Anthropology	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 75.2.4 Seminar for specialized practical course: Methods in Anthropology	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 75.2.5 practical research course in Anthropology	WS	450 h (30 SWS)	0 h	12
Practical course	WP 75.2.6 Specialized practical course in Anthropology	WS	90 h (6 SWS)	90 h	6
Excursion	WP 75.2.7 Specialized anthropological excavation/excursion	WS	90 h (6 SWS)	90 h	6
Excursion	WP 75.2.8 Specialized anthropological excavation/excursion	WS	180 h (12 SWS)	180 h	12

\* May only be chosen with accompanying practical course.

In this module a total of 21 ECTS points must be accrued, 18 ECTS points of which are elective courses. Class attendance is 18-38 SWS; total time, including preparation time, is approx. 630 h.

### Type of module

Elective module with mandatory and elective courses.

### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.

For elective courses in WP 75 modules the following applies: elective courses totaling 18 ECTS points are to be chosen from Anthropology listings in the elective course catalog.

<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 3
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 21 point specialized module includes one lecture and a combination of basic, molecular, and Anthropology-related seminar(s) and/or instructed practical courses or an independent practical research course.</p> <p>The module aims to provide students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Anthropology, and training in presentation and communication skills.</p> <p>The module is intended to serve third semester students interested in concentrating on Anthropology in research-oriented courses. This module can serve as the basis for the master's thesis and future professional roles.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Gisela Grupe (acting Chair, Anthropology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 76 Specialized courses in Systematic Botany 1

### Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 76.1 Specialized lecture in Systematic Botany	WS	30 h (2 SWS)	60 h	3
Practical course	WP 76.2 Specialized practical course in Systematic Botany	WS	45 h (3 SWS)	45 h	(3)
Seminar	WP 76.3 Seminar for specialized practical course in Systematic Botany	WS	30 h (2 SWS)	60 h	(3)

This module is comprised of 9 ECTS points. Class attendance is 7 SWS; total time, including preparation time, is 270 h.

### Type of module

Optional module with required courses.

### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.

### Entry requirements

See individual course descriptions.

### Level

Recommended semester: 3

### Duration

The module spans 1 semester.

### Content and qualification goals

The 9 point specialized module includes a lecture, seminar and an instructed practical course in Anthropology in the third semester. This basic module aims at providing students with theoretical knowledge, training in researching, presenting and critically discussing a topic, as well as practical experience in application and interpretation of methods and concepts. Teamwork, learning strategies, organizational and communication skills are required, and serve as the basis for the master's thesis and future professional roles.

The module is intended to serve third semester students as an introduction to Systematic Botany, allowing flexibility to incorporate modules/courses in additional subject areas.

### Grading

The module is graded according to lecture grade.

**Pass/fail conditions for ECTS points**

ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.

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**Responsible person**

Prof. Dr. Susanne Renner (Chair, Systematic Botany and Mycology division). Teaching responsibilities for individual courses are listed in elective course catalog.

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**Language**

English, with exception of courses also offered for teaching and bachelor's degrees.

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**Other information**



## Module: WP 77 Specialized courses in Systematic Botany 2

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 77.1 Specialized lecture in Systematic Botany	WS	30 h (2 SWS)	60 h	3
Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 77.2.1 Specialized practical course in Systematic Botany	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 77.2.2 Seminar for specialized practical course in Systematic Botany	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 77.2.3 Specialized practical course: Methods in Systematic Botany	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 77.2.4 Seminar for specialized practical course: Methods in Systematic Botany	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 77.2.5 Specialized practical research course in Systematic Botany	WS	450 h (30 SWS)	0 h	12
Practical course	WP 77.2.6 Specialized practical course in Systematic Botany	WS	90 h (6 SWS)	90 h	6
Excursion	WP 77.2.7 Specialized systematic-botanical excursion	WS	90 h (6 SWS)	90 h	6

\* May only be chosen with accompanying practical course.

In this module a total of 15 ECTS points must be accrued, 12 ECTS points of which are elective courses. Class attendance is 12-32 SWS; total time, including preparation time, is approx. 450 h.

### Type of module

Elective module with mandatory and elective courses.

### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.

For elective courses in WP 77 modules the following applies:

	elective courses totaling 12 ECTS points are to be chosen from Systematic Botany listings in the elective course catalog.
<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 3
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 15 point specialized module includes one lecture and a combination of basic and molecular topics of Systematic Botany-related seminar(s) and/or instructed practical courses or an independent practical research course in the third semester.</p> <p>The module aims to provide third semester students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Systematic Botany, and training in presentation and communication skills.</p> <p>The module is intended to serve third semester students interested in concentrating on Systematic Botany in research-oriented courses. This module can serve as a basis for the master's thesis and future professional roles.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Susanne Renner (Chair, Systematic Botany and Mycology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 78 Specialized courses in Systematic Botany 3

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 78.1 Specialized lecture in Systematic Botany	WS	30 h (2 SWS)	60 h	3

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Practical course	WP 78.2.1 Specialized practical course in Systematic Botany	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 78.2.2 Seminar for specialized practical course in Systematic Botany	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 78.2.3 Specialized practical course: Methods in Systematic Botany	WS	45 h (3 SWS)	45 h	(3)
* Seminar	WP 78.2.4 Seminar for specialized practical course: Methods in Systematic Botany	WS	30 h (2 SWS)	60 h	(3)
Practical course	WP 78.2.5 Specialized practical research course in Systematic Botany	WS	450 h (30 SWS)	0 h	12
Practical course	WP 78.2.6 Specialized practical course in Systematic Botany	WS	90 h (6 SWS)	90 h	6
Excursion	WP 78.2.7 Specialized systematic-botanical excursion	WS	90 h (6 SWS)	90 h	6
Excursion	WP 78.2.8 Specialized systematic-botanical excursion	WS	180 h (12 SWS)	180 h	12

\* May only be chosen with accompanying practical course.

In this module a total of 21 ECTS points must be accrued, 18 ECTS points of which are elective courses. Class attendance is 18-38 SWS; total time, including preparation time, is approx. 630 h.

**Type of module** Elective module with mandatory and elective courses.

**Elective guidelines** The module can be chosen according to the following: Elective modules totaling 30 ECTS points should

be selected from the elective course catalog.

For elective courses in WP 78 modules the following applies: elective courses totaling 18 ECTS points are to be chosen from Systematic Botany listings in the elective course catalog.

<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 3
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	<p>The 21 point specialized module includes one lecture and a combination of basic, molecular, and Systematic Botany-related seminar(s) and/or instructed practical courses or an independent practical research course.</p> <p>The module aims to provide students with theoretical knowledge and opportunities for its transfer and application in practical research. The practical research course, in particular, requires independent planning, organization and performance of experiments, and interpretation and documentation of results. Seminars provide exposure to and critical evaluation of relevant literature on Systematic Botany, and training in presentation and communication skills.</p> <p>The module is intended to serve third semester students interested in concentrating on Systematic Botany in research-oriented courses. This module can serve as the basis for the master's thesis and future professional roles.</p>
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	Prof. Dr. Susanne Renner (Chair, Systematic Botany and Mycology division). Teaching responsibilities for individual courses are listed in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: WP 79 Specialized biologically relevant courses

**Program**

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 79.1 Specialized subject-related lecture	WS	30 h (2 SWS)	60 h	3
Practical course	WP 79.2 Specialized subject-related practical course	WS	45 h (3 SWS)	45 h	(3)
Seminar	WP 79.3 Basic seminar	WS	30 h (2 SWS)	60 h	(3)

This module is comprised of 9 ECTS points. Class attendance is 7 SWS; total time, including preparation time, is 270 h.

### Type of module

Optional module with required courses.

### Elective guidelines

The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.

### Entry requirements

See individual course descriptions.

### Level

Recommended semester: 3

### Duration

The module spans 1 semester.

### Content and qualification goals

This 9 point module for third semester students includes a lecture, seminar and an instructed practical course in biology-related subjects (e.g. Physics, Bioinformatics, Biochemistry).

This module aims at providing third semester students with theoretical knowledge, training in researching, presenting and critically discussing a topic, as well as practical experience in application and interpretation of methods and concepts. It provides third semester students with the opportunity to study biology-related subjects outside of the faculty.

### Grading

The module is graded according to lecture grade.

### Pass/fail conditions for ECTS points

ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.

**Responsible person** See individual courses in elective course catalog.

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**Language** English, with exception of courses also offered for teaching and bachelor's degrees.

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**Other information**

## Module: WP 80 Specialized interdisciplinary lectures and seminars 1

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 80.0.1 Specialized lecture in Plant Sciences	WS	30 h (2 SWS)	60 h	3
Lecture	WP 80.0.2 Specialized Lecture: Methods in Plant Sciences	WS	30 h (2 SWS)	60 h	3
Lecture	WP 80.0.3 Specialized lecture in Genetics	WS	30 h (2 SWS)	60 h	3
Lecture	WP 80.0.4 Specialized Lecture: Methods in Genetics	WS	30 h (2 SWS)	60 h	3
Lecture	WP 80.0.5 Specialized lecture in Human Biology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 80.0.6 Specialized Lecture: Methods in Human Biology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 80.0.7 Specialized lecture in Microbiology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 80.0.8 Specialized Lecture: Methods in Microbiology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 80.0.9 Specialized lecture in Cell Biology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 80.0.10 Specialized Lecture: Methods in Cell Biology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 80.0.11 Specialized lecture in Zoology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 80.0.12 Specialized Lecture: Methods in Zoology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 80.0.13 Specialized lecture in Anthropology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 80.0.14 Specialized Lecture: Methods in Anthropology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 80.0.15 Specialized lecture in Systematic Botany	WS	30 h (2 SWS)	60 h	3
Lecture	WP 80.0.16 Specialized Lecture: Methods in Systematic Botany	WS	30 h (2 SWS)	60 h	3
Seminar	WP 80.0.17 Tutoring 3	WS	45 h (3 SWS)	45 h	3

Seminar	WP 80.0.18 Professional qualification 3	WS	30 h (2 SWS)	60 h	3
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In this module a total of 6 ECTS points must be accrued, 6 ECTS points of which are elective courses. Class attendance is 4-5 SWS; total time, including preparation time, is approx. 180 h.

<b>Type of module</b>	Elective module with elective courses.
<b>Elective guidelines</b>	<p>The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.</p> <p>For elective courses in WP 80 modules the following applies: elective courses totaling 6 ECTS points are to be chosen from the elective course catalog.</p>
<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 3
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	This 6 point interdisciplinary module is composed of freely chosen lectures and/or seminars, chosen from the elective course catalog or courses from other LMU faculties or associated institutions. It offers third semester students flexibility to explore subjects or attend courses in relevant professional skills.
<b>Grading</b>	The module is graded according to lecture grade(s).
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	See individual courses in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	



## Module: WP 81 Specialized interdisciplinary lectures and seminars 2

Program

Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Optional course	Rotation	Class attendance	Preparation	ECTS
Lecture	WP 81.0.1 Specialized lecture in Plant Sciences	WS	30 h (2 SWS)	60 h	3
Lecture	WP 81.0.2 Specialized Lecture: Methods in Plant Sciences	WS	30 h (2 SWS)	60 h	3
Lecture	WP 81.0.3 Specialized lecture in Genetics	WS	30 h (2 SWS)	60 h	3
Lecture	WP 81.0.4 Specialized Lecture: Methods in Genetics	WS	30 h (2 SWS)	60 h	3
Lecture	WP 81.0.5 Specialized lecture in Human Biology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 81.0.6 Specialized Lecture: Methods in Human Biology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 81.0.7 Specialized lecture in Microbiology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 81.0.8 Specialized Lecture: Methods in Microbiology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 81.0.9 Specialized lecture in Cell Biology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 81.0.10 Specialized Lecture: Methods in Cell Biology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 81.0.11 Specialized lecture in Zoology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 81.0.12 Specialized Lecture: Methods in Zoology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 81.0.13 Specialized lecture in Anthropology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 81.0.14 Specialized Lecture: Methods in Anthropology	WS	30 h (2 SWS)	60 h	3
Lecture	WP 81.0.15 Specialized lecture in Systematic Botany	WS	30 h (2 SWS)	60 h	3
Lecture	WP 81.0.16 Specialized Lecture: Methods in Systematic Botany	WS	30 h (2 SWS)	60 h	3
Seminar	WP 81.0.17 Tutoring 3	WS	45 h (3 SWS)	45 h	3

Seminar	WP 81.0.18 Professional qualification 3	WS	30 h (2 SWS)	60 h	3
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In this module a total of 3 ECTS points must be accrued. 3 ECTS points of which are elective courses. Class attendance is 2-3 SWS; total time, including preparation time, is 90 h.

<b>Type of module</b>	Elective module with elective courses.
<b>Elective guidelines</b>	<p>The module can be chosen according to the following: Elective modules totaling 30 ECTS points should be selected from the elective course catalog.</p> <p>For elective courses in WP 81 modules the following applies: elective courses totaling 3 ECTS points are to be chosen from course listings in the elective course catalog.</p>
<b>Entry requirements</b>	See individual course descriptions.
<b>Level</b>	Recommended semester: 3
<b>Duration</b>	The module spans 1 semester.
<b>Content and qualification goals</b>	This 3 point interdisciplinary module is composed of a lecture or seminar chosen from the elective course catalog or courses from other LMU faculties or associated institutions. It offers third semester students flexibility to explore subjects or attend courses in relevant professional skills.
<b>Grading</b>	The module is graded according to lecture grade.
<b>Pass/fail conditions for ECTS points</b>	ECTS points are awarded for individual courses according to successful completion; module completion is awarded granted successful completion of individual elements.
<b>Responsible person</b>	See individual courses in elective course catalog.
<b>Language</b>	English, with exception of courses also offered for teaching and bachelor's degrees.
<b>Other information</b>	

## Module: P 1 Final Master Module

**Program** Master's degree: Biology (Master of Science, M.Sc.)

### Assigned courses

Course type	Required course	Rotation	Class attendance	Preparation	ECTS
Colloquium	P 1.1 Colloquium 1	WS	15 h (1 SWS)	15 h	1
Colloquium	P 1.2 Colloquium 2	SS	15 h (1 SWS)	15 h	1
Final thesis	P 1.3 Master's thesis	SS	-	780 h	26
Disputation	P 1.4 Disputation	SS	-	60 h	2

In this module a total of 30 ECTS points must be accrued. Class attendance is 2 SWS; total time, including preparation time, is approx. 900 h.

**Type of module** Mandatory module with mandatory assignments.

### Elective guidelines

**Entry requirements** Master's thesis must be in a field of study in which a research course has been successfully completed.

**Level** Designated semester: 3

**Duration** The final module spans 2 semesters.

**Content and qualification goals** The master's final module is composed of a master's thesis, an oral defense and attendance to 20 scientific talks. This module represents the climax of the master's program and requires independent experimental work under supervision of an instructor/advisor.

The module requires skills in organization, strategic methodological planning and performance of experiments, documentation and interpretation of results, in addition to completion of a final thesis written according to international scientific standards. The oral defense tests communication skills, basic and applied knowledge in the given subject, and ability to explain specific processes in a broader context.

**Grading** The module is graded according to graded master's thesis.

**Pass/fail conditions for ECTS points** ECTS points are awarded according to successful completion of colloquium and disputation and passing grade of written master's thesis.

**Responsible person** Qualified supervisor from the Faculty of Biology.

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**Language** Master's thesis may be written in German or English.

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**Other information**

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