LMU LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN

Module Catalogue

Master's Programme: Plant Sciences

(Master of Science, M.Sc.)

(120 ECTS credits)

Based on the *Prüfungs- und Studienordnung* of 29. November 2019

88/628/---/M0/H/2018

Issued on 15. June 2020

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Abbreviations and annotations

CP	Credit Points, ECTS credits
ECTS	European Credit Transfer and Accumulation System
h	hours
SoSe	summer semester
SWS	contact hours
WiSe	winter semester
WP	compulsory elective course
P	mandatory

1. The ECTS credits assigned in the Module Catalogue are designated as follows: Credit Points not listed in parentheses are awarded when the pertinent examination of the Module or Module parts have/has been completed successfully. Credit Points in parentheses are listed for calculatory purposes only.

2. The semester for taking a Module can either be binding or may be considered as a recommendation, depending on the applicable data in Anlage 2 of the *Prüfungs- und Studienordnung* for your Programme. In this Module catalogue, the options are indicated as „scheduled semester“ and „recommended semester“.

3. Please note: The Module Catalogue is merely intended to serve as an orientation whereas the provisions of the applicable version of the *Prüfungs- und Studienordnung* (in German only) of your Programme are legally binding. See: www.lmu.de/studienangebot and select your Programme.

Overarching qualification goals of the master's course Plant Sciences

The overarching educational goal of the master's degree in **Plant Sciences** is to qualify students for research-related professional activity in the various areas of plant science. Graduates have acquired a broad knowledge and understanding in the course of their successful master's degree and their safe use in the following subject areas: biochemical and molecular biological processes in plants (e.g. photosynthesis, in the case of abiotic or biotic stress), intracellular and intercellular signal transduction processes in plants, mechanisms of evolution and the interaction between plants and microbes. They have more specific knowledge and skills in at least one of the four topics of molecular and cellular plant science, systematics of plants and organismic interaction in plants.

Graduates can safely apply the common laboratory methods of plant science. This includes methods of molecular, cell biology, plant physiology as well as laboratory methods for research on interactions between plants and other organisms. In addition to the application, problems that arise can be analyzed by the graduates and existing methods can be adapted to new questions.
Graduates can correctly implement the safety provisions of the various methods. They have in-depth knowledge of the common model organisms in plant science as well as the associated advantages and disadvantages for dealing with specific questions.
Graduates can use the usual evaluation methods and computer programs in plant sciences and analyze the resulting data, assess the results and derive new questions from them. The evaluation also includes processing the data with the appropriate statistical methods, presenting, and visualizing the results accordingly. Complex subject areas can be presented, discussed and assessed by the graduates in a subject-specific manner in both written and oral form. On this basis, they can derive and evaluate new questions and create and carry out corresponding experiments.

Based on the respective research data, the graduates can describe, analyze and explain relationships. They can work on the main topics of the course independently.

Graduates of the master's degree have trained analytical thinking and judgment skills, as well as practical research skills and knowledge of the methods and concepts of scientific research, i.e. their planning, implementation and evaluation, in the field of plant science.
They can work independently in the field of plant science research. They can classify scientific knowledge of plant science, discuss it with colleagues in the specialist vocabulary and convey it to society in simple language. They have their own ethical awareness and values regarding the subject areas of the course.

This includes e.g. questions about green genetic engineering, climate change, plant breeding, nutrition issues, development of sustainable resources, renewable raw materials and much more. They are empowered to take on managerial functions and to act in responsible manner. Besides that, they are able to deal competently with questions from the topics of plant sciences in research at universities, research institutes and industry as well as in public and private companies.

Module: P 1 Labormethoden der Pflanzenwissenschaften/Lab methods in Plant Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Practical course	P 1.1 Labormethoden der Pflanzenwissenschaften – Übung/Lab methods in Plant Sciences - practical course	WiSe	45 h (3 SWS)	45 h	(3)
Seminar	P 1.2 Labormethoden der Pflanzenwissenschaften – Seminar/ Lab methods in Plant Sciences - seminar	WiSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 5 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Mandatory module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	None
Entry requirements	None
Semester	Scheduled semester: 1
Duration	The completion of the module takes 1 semester.
Content	Within the course the students will learn the following contents: -RNA Extraction -RT-PCR -PCR -Cloning -Miniprep -gel electrophoresis -E.coli transformation -transfection -plant transformation -fluorescence microscopy -protein extraction -Co-immunoprecipitation -Western blotting -Model organisms: *E. coli*, mouse and human cell culture, *Arabidopsis* and *N. benthamiana*, *C. elegans*

Learning Outcomes	The students are capable of - molecular and cellular biology techniques: safe handling with the help of established protocols - writing of scientific reports based on journal guidelines - analysis and interpretation of figures using image softwares - scientific presentation
Type of examination	Report and presentation
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Anna Gasperotti, Dagmar Hann, Frank Landgraf, Daniela Meilinger, Tamara Mikeladze-Dvali, Natascha Zhang
Language(s)	English
Additional information	None

Module: P 2 Software-Anwendungen in den Pflanzenwissenschaften/Software applications in Plant Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Practical course	P 2.1 Software-Anwendungen in den Pflanzenwissenschaften – Übung/ Software applications in Plant Sciences - practical course	WiSe	45 h (3 SWS)	45 h	(3)
Vorlesung	P 2.2 Software-Anwendungen in den Pflanzenwissenschaften – Vorlesung/ Software applications in Plant Sciences - lecture	WiSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 5 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Mandatory module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	None
Entry requirements	None
Semester	Scheduled semester: 1
Duration	The completion of the module takes 1 semester.
Content	Within the course the students will learn the following contents: - Literature search and evaluation (Web of science, PubMed, Google Scholar and journal websites) - Literature Managment (Endnote) - Citations and Plagiarism - Protein function prediction (homology based searches, protein localization prediction, post-translational modification prediction, structural predictions) - CLC (sequence analysis, primer design, in silico cloning) - Phylogenetic analysis (basic concepts for evolution, the basics of building and interpreting phylologenies) - Protein modelling (chimera) - Image J/ Fiji (image preparation and quantification) - Basics of the statistical programming language R

Learning Outcomes	The students are capable of - safe usage of basic computational biology tools - basic understanding of the underlaying computational principles - understanding of the evaluation criteria used for these bioinformatic tools - understanding of potential applications of the shown bioinformatic tools
Type of examination	Report or written exam
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Prof. Dr. Martin Parniske
Language(s)	English
Additional information	None

Module: WP 1 Molekulare Pflanzenwissenschaften/Molecular Plant Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 1.1 Molekulare Pflanzenwissenschaften – Vorlesung/ Molecular Plant Sciences - lecture	WiSe	30 h (2 SWS)	60 h	(3)
Seminar	WP 1.2 Molekulare Pflanzenwissenschaften – Seminar/ Molecular Plant Sciences - seminar	WiSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex I
Entry requirements	None
Semester	Recommended semester: 1
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Written exam and presentation
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.

Language(s)	English
Additional information	None

Module: WP 2 Theorien der molekularen Pflanzenwissenschaften/Theories in Molecular Plant Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 2.1 Mechanismen der Genregulation bei Pflanzen/Mechanisms of gene regulation in plants	WiSe	30 h (2 SWS)	60 h	(3)
Lecture	WP 2.2 Genetische Stabilität und Variabilität bei Pflanzen/Genetic stability and variability in plants	WiSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex I
Entry requirements	None
Semester	Recommended semester: 1
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Written exam
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.

Language(s)	English
Additional information	None

Module: WP 3 Methoden der molecularen Pflanzenwissenschaften/Methods in Molecular Plant Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Seminar	WP 3.1 Methoden der molekularen Pflanzenwissenschaften – Seminar/Methods in Molecular Plant Sciences - seminar	WiSe	30 h (2 SWS)	60 h	(3)
Practical course	WP 3.2 Methoden der molekularen Pflanzenwissenschaften – Übung/Methods in Molecular Plant Sciences – practical course	WiSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 5 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex I
Entry requirements	None
Semester	Recommended semester: 1
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Presentation and report
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.

Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English
Additional information	None

Module: WP 4 Zelluläre Pflanzenwissenschaften/Cellular Plant Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 4.1 Zelluläre Pflanzenwissenschaften – Vorlesung/Cellular Plant Sciences - lecture	WiSe	30 h (2 SWS)	60 h	(3)
Seminar	WP 4.2 Zelluläre Pflanzenwissenschaften – Seminar/Cellular Plant Sciences - seminar	WiSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex I
Entry requirements	None
Semester	Recommended semester: 1
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Written exam and presentation
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme..

Language(s)	English
Additional information	None

Module: WP 5 Theorien der zellulären Pflanzenwissenschaften/Theories in Cellular Plant Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 5.1 Zellbiologische Mechanismen bei Pflanzen/Cell biological mechanisms in plants	WiSe	30 h (2 SWS)	60 h	(3)
Lecture	WP 5.2 Zelldifferenzierung bei Pflanzen/Cell differentiation in plants	WiSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex I
Entry requirements	None
Semester	Recommended semester: 1
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Written exam
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English

Additional information None

Module: WP 6 Methoden der zellulären Pflanzenwissenschaften/Methods in Cellular Plant Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Seminar	WP 6.1 Methoden der zellulären Pflanzenwissenschaften – Seminar/Methods in Cellular Plant Sciences - seminar	WiSe	30 h (2 SWS)	60 h	(3)
Practical course	WP 6.2 Methoden der zellulären Pflanzenwissenschaften – Übung/ Methods in Cellular Plant Sciences – practical course	WiSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 5 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex I
Entry requirements	None
Semester	Recommended semester: 1
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Presentation und Report
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.

Language(s)	English
Additional information	None

Module: WP 7 Systematische Pflanzenwissenschaften/Systematic Plant Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 7.1 Systematische Pflanzenwissenschaften – Vorlesung/ Systematic Plant Sciences - lecture	WiSe	30 h (2 SWS)	60 h	(3)
Seminar	WP 7.2 Systematische Pflanzenwissenschaften – Seminar/ Systematic Plant Sciences - seminar	WiSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex I
Entry requirements	None
Semester	Recommended semester: 1
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Written exam and presentation
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.

Language(s)	English
Additional information	None

Module: WP 8 Theorien der systematischen Pflanzenwissenschaften/Theories in Systematic Plant Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 8.1 Systematische Fragestellungen bei Pflanzen, Moosen, Flechten und Pilzen/Systematic issues in plants, mosses, lichens and fungi	WiSe	30 h (2 SWS)	60 h	(3)
Lecture	WP 8.2 Systematische Methoden in den Pflanzenwissenschaften/Systematic methods in Plant Sciences	WiSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex I
Entry requirements	None
Semester	Recommended semester: 1
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Written exam
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.

Language(s)	English
Additional information	None

Module: WP 9 Methoden der systematischen Pflanzenwissenschaften/Methods in Systematic Plant Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Seminar	WP 9.1 Methoden der systematischen Pflanzenwissenschaften – Seminar/ Methods in Systematic Plant Sciences - seminar	WiSe	30 h (2 SWS)	60 h	(3)
Practical course	WP 9.2 Methoden der systematischen Pflanzenwissenschaften – Übung/ Methods in Systematic Plant Sciences – practical course	WiSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 5 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex I
Entry requirements	None
Semester	Recommended semester: 1
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Presentation and report
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.

Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English
Additional information	None

Module: WP 10 Organismische Interaktion bei Pflanzen/Organismic interaction in plants

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 10.1 Organismische Interaktion bei Pflanzen – Vorlesung/ Organismic interaction in plants - lecture	WiSe	30 h (2 SWS)	60 h	(3)
Seminar	WP 10.2 Organismische Interaktion bei Pflanzen – Seminar/Organismic interaction in plants	WiSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex I
Entry requirements	None
Semester	Recommended semester: 1
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Written exam and presentation
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.

Language(s)	English
Additional information	None

Module: WP 11 Theorien der organismischen Interaktion bei Pflanzen/Theories in organismic interaction in plants

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 11.1 Mechanismen der organismischen Interaktion bei Pflanzen/Mechanisms of organismic interaction in plants	WiSe	30 h (2 SWS)	60 h	(3)
Lecture	WP 11.2 Molekulare und zelluläre Prozesse der organismischen Interaktion/Molecular and cellular processes of organismic interaction	WiSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex I
Entry requirements	None
Semester	Recommended semester: 1
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Written exam
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.

Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English
Additional information	None

Module: WP 12 Methoden der organismischen Interaktion bei Pflanzen/Methods in organismic interaction in plants

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Seminar	WP 12.1 Methoden der organismischen Interaktion bei Pflanzen – Seminar/ Methods in organismic interaction in plants - seminar	WiSe	30 h (2 SWS)	60 h	(3)
Practical course	WP 12.2 Methoden der organismischen Interaktion bei Pflanzen – Übung/ Methods in organismic interaction in plants – practical course	WiSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 5 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex I
Entry requirements	None
Semester	Recommended semester: 1
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Presentation and report
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.

Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English
Additional information	None

Module: WP 13 Molekulare und zelluläre Biologie/Molecular and Cellular Biology

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 13.1 Molekulare und zelluläre Biologie – Vorlesung/ Molecular and Cellular Biology - lecture	WiSe	30 h (2 SWS)	60 h	(3)
Seminar	WP 13.2 Molekulare und zelluläre Biologie – Seminar/ Molecular and Cellular Biology – seminar	WiSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex I
Entry requirements	None
Semester	Recommended semester: 1
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme Molecular and Cellular Biology.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme Molecular and Cellular Biology.
Type of examination	Written exam and presentation
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme Molecular and Cellular Biology.

Language(s)	English
Additional information	None

Module: WP 14 Theorien der molekularen und zellulären Biologie/Theories in Molecular and Cellular Biology

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 14.1 Theorien der molekularen und zellulären Biologie 1 – Vorlesung/ Theories in Molecular and Cellular Biology 1 - lecture	WiSe	30 h (2 SWS)	60 h	(3)
Lecture	WP 14.2 Theorien der molekularen und zellulären Biologie 2 – Vorlesung/ Theories in Molecular and Cellular Biology 2 - lecture	WiSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex I
Entry requirements	None
Semester	Recommended semester: 1
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme Molecular and Cellular Biology.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme Molecular and Cellular Biology.
Type of examination	Written exam
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.

Responsible contact	Please refer to the elective course catalogue for the Master´s Programme Molecular and Cellular Biology.
Language(s)	English
Additional information	None

Module: WP 15 Methoden der molekularen und zellulären Biologie/Methods in Molecular and Cellular Biology

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Seminar	WP 15.1 Methoden der molekularen und zellulären Biologie – Seminar/ Methods in Molecular and Cellular Biology – seminar	WiSe	30 h (2 SWS)	60 h	(3)
Practical course	WP 15.2 Methoden der molekularen und zellulären Biologie – Übung/Methods in Molecular and Cellular Biology – practical course	WiSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 5 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex I
Entry requirements	None
Semester	Recommended semester: 1
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme Molecular and Cellular Biology.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme Molecular and Cellular Biology.
Type of examination	Presentation and report
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.

Responsible contact	Please refer to the elective course catalogue for the Master´s Programme Molecular and Cellular Biology.
Language(s)	English
Additional information	None

Module: WP 16 Neurobiologie/Neurobiology

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 16.1 Grundlagen der Neurowissenschaften 1 – Vorlesung/Fundamentals in Neuroscience 1 - Lecture	WiSe	60 h (4 SWS)	120 h	(6)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory course
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex I
Entry requirements	None
Semester	Recommended semester: 1
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Type of examination	Written exam or oral examination
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Language(s)	English
Additional information	None

Module: WP 17 Theorien der Neurobiologie I/Theories in Neurobiology I

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 17.1 Systemneurowissenschaften 1 – Vorlesung/Systems Neuroscience 1 - Lecture	WiSe	30 h (2 SWS)	60 h	(3)
Lecture	WP 17.2 Theoretische Biophysik und Zelluläre Physiologie – Vorlesung/Theoretical Biophysics and Cellular Physiology – Lecture	WiSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex I
Entry requirements	None
Semester	Recommended semester: 1
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Type of examination	Written exam
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.

Language(s)	English
Additional information	None

Module: WP 18 Theorien der Neurobiologie II/Theories in Neurobiology II

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 18.1 Systemneurowissenschaften 1 – Vorlesung/Systems Neuroscience 1 - Lecture	WiSe	30 h (2 SWS)	60 h	(3)
Lecture	WP 18.2 Der neuronale Code – Vorlesung/The Neural Code - Lecture	WiSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex I
Entry requirements	None
Semester	Recommended semester: 1
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Type of examination	Written exam
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Language(s)	English

Additional information	None

Module: WP 19 Theorien der Neurobiologie III/Theories in Neurobiology

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 19.1 Theoretical Biophysics and Cellular Physiology - Lecture	WiSe	30 h (2 SWS)	60 h	(3)
Lecture	WP 19.2 The Neural Code - Lecture	WiSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex I
Entry requirements	None
Semester	Recommended semester: 1
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Type of examination	Written exam
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Language(s)	English
Additional information	None

Module: WP 20 Methoden der Neurobiologie/Methods in Neurobiology

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Seminar	WP 20.1 Interdisziplinäres Training – Seminar/Interdisciplinary Training 5 - Seminar	WiSe und SoSe	30 h (2 SWS)	60 h	(3)
Practical course	WP 20.2 Methoden der Neurobiologie – Übung/Methods in Neurobiology – practical course	WiSe und SoSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 5 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex I
Entry requirements	None
Semester	Recommended semester: 1
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Type of examination	Presentation and report
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.

Language(s)	English
Additional information	None

Module: WP 21 Evolutionsbiologie, Ökologie und Systematik/Evolutionary Biology, Ecology and Systematics

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 21.1 Evolutionsbiologie, Ökologie und Systematik – Vorlesung/ Evolutionary Biology, Ecology and Systematics - lecture	WiSe	30 h (2 SWS)	60 h	(3)
Seminar	WP 21.2 Aktuelle Publikationen in der Evolutionsbiologie, Ökologie und Systematik – Seminar/Current publications in Evolutionary Biology, Ecology and Systematics - seminar	WiSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex I
Entry requirements	None
Semester	Recommended semester: 1
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme Evolution, Ecology and Systematics.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme Evolution, Ecology and Systematics.
Type of examination	Written exam and presentation
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.

Responsible contact	Please refer to the elective course catalogue for the Master´s Programme Evolution, Ecology and Systematics.
Language(s)	English
Additional information	None

Module: WP 22 Theorien der Evolutionsbiologie, Ökologie und Systematik/Theories in Evolutionary Biology, Ecology and Systematics

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 22.1 Theoretische Konzepte in Evolutionsbiologie, Ökologie und Systematik – Vorlesung/Theoretical concepts in Evolutionary Biology, Ecology and Systematics - lecture	WiSe	30 h (2 SWS)	60 h	(3)
Lecture	WP 22.2 Mechanismen in der Evolutionsbiologie, Ökologie und Systematik – Vorlesung/Mechanisms in Evolutionary Biology, Ecology and Systematics - lecture	WiSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex I
Entry requirements	None
Semester	Recommended semester: 1
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme Evolution, Ecology and Systematics.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme Evolution, Ecology and Systematics.
Type of examination	Written exam
Type of assessment	The successful completion of the module will be graded.

Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme Evolution, Ecology and Systematics.
Language(s)	English
Additional information	None

Module: WP 23 Methoden der Evolutionsbiologie, Ökologie und Systematik/Methods in Evolutionary Biology, Ecology and Systematics

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Seminar	WP 23.1 Aktuelle Publikationen zu den Methoden von Evolutionsbiologie, Ökologie und Systematik – Seminar/Current publications on the methods in Evolutionary Biology, Ecology and Systematics - seminar	WiSe	30 h (2 SWS)	60 h	(3)
Practical course	WP 23.2 Methoden in der Evolutionsbiologie, Ökologie und Systematik – Übung/Methods in Evolutionary Biology, Ecology and Systematics – practical course	WiSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 5 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex I
Entry requirements	None
Semester	Recommended semester: 1
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme Evolution, Ecology and Systematics.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme Evolution, Ecology and Systematics.
Type of examination	Presentation and report
Type of assessment	The successful completion of the module will be graded.

Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme Evolution, Ecology and Systematics.
Language(s)	English
Additional information	None

Module: WP 24 Theoretische Themen in den Biowissenschaften/Theoretical topics in Life Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 24.1 Theoretische Themen in den Biowissenschaften – Vorlesung/ Theoretical topics in Life Sciences - lecture	WiSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 3 ECTS credits have to be acquired. Class attendance averages about 2 contact hours. Including time for self-study, 90 hours have to be invested.

Module type	Compulsory elective module with mandatory course
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	With regard to the compulsory elective modules WP 24 – WP 31, two compulsory elective modules must be taken.
Entry requirements	None
Semester	Recommended semester: 1
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Written exam
Type of assessment	The successful completion of the module will not be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English

Additional information	None

Module: WP 25 Theoretische Konzepte in den Biowissenschaften/Theoretical concepts in Life Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 25.1 Theoretische Konzepte in den Biowissenschaften – Vorlesung/ Theoretical concepts in Life Sciences - lecture	WiSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 3 ECTS credits have to be acquired. Class attendance averages about 2 contact hours. Including time for self-study, 90 hours have to be invested.

Module type	Compulsory elective module with mandatory course
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	With regard to the compulsory elective modules WP 24 – WP 31, two compulsory elective modules must be taken.
Entry requirements	None
Semester	Recommended semester: 1
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Written exam
Type of assessment	The successful completion of the module will not be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English

Additional information	None

Module: WP 26 Forschungsthemen in den Biowissenschaften/Research topics in Life Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Seminar	WP 26.1 Aktuelle Publikationen zu Forschungsthemen in den Biowissenschaften – Seminar/Current publications on research subjects in Life Sciences - seminar	WiSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 3 ECTS credits have to be acquired. Class attendance averages about 2 contact hours. Including time for self-study, 90 hours have to be invested.

Module type	Compulsory elective module with mandatory course
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	With regard to the compulsory elective modules WP 24 – WP 31, two compulsory elective modules must be taken.
Entry requirements	None
Semester	Recommended semester: 1
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Presentation
Type of assessment	The successful completion of the module will not be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.

Language(s)	English
Additional information	None

Module: WP 27 Methoden in den Biowissenschaften/Methods in Life Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Seminar	WP 27.1 Aktuelle Publikationen zu Methoden in den Biowissenschaften – Seminar/Current publications on methods in Life Sciences	WiSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 3 ECTS credits have to be acquired. Class attendance averages about 2 contact hours. Including time for self-study, 90 hours have to be invested.

Module type	Compulsory elective module with mandatory course
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	With regard to the compulsory elective modules WP 24 – WP 31, two compulsory elective modules must be taken.
Entry requirements	None
Semester	Recommended semester: 1
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Presentation
Type of assessment	The successful completion of the module will not be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English

Additional information	None

Module: WP 28 Labormethoden in den Biowissenschaften/Lab methods in Life Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Practical course	WP 28.1 Labormethoden in den Biowissenschaften – Übung/Lab methods in Life Sciences – practical course	WiSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 3 ECTS credits have to be acquired. Class attendance averages about 3 Contact hours. Including time for self-study, 90 Hours have to be invested.

Module type	Compulsory elective module with mandatory course
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	With regard to the compulsory elective modules WP 24 – WP 31, two compulsory elective modules must be taken.
Entry requirements	None
Semester	Recommended semester: 1
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Report
Type of assessment	The successful completion of the module will not be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English

Additional information	None

Module: WP 29 Computergestützte Methoden in den Biowissenschaften/Computational methods in Life Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Practical course	WP 29.1 Computergestützte Methoden in den Biowissenschaften – Übung/ Computational methods in Life Sciences – practical course	WiSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 3 ECTS credits have to be acquired. Class attendance averages about 3 contact hours. Including time for self-study, 90 hours have to be invested.

Module type	Compulsory elective module with mandatory course
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	With regard to the compulsory elective modules WP 24 – WP 31, two compulsory elective modules must be taken.
Entry requirements	None
Semester	Recommended semester: 1
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Report
Type of assessment	The successful completion of the module will not be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English

Additional information	None

Module: WP 30 Betreuung von Studierenden I/Tutoring of students I

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Practical course	WP 30.1 Betreuung von Studierenden – Übung/Tutoring of students – practical course	WiSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 3 ECTS credits have to be acquired. Class attendance averages about 3 contact hours. Including time for self-study, 90 hours have to be invested.

Module type	Compulsory elective module with mandatory course
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	With regard to the compulsory elective modules WP 24 – WP 31, two compulsory elective modules must be taken.
Entry requirements	None
Semester	Recommended semester: 1
Duration	The completion of the module takes 1 semester.
Content	Tutoring of students: the students are tutoring other students in different courses. The courses could be on Bachelor or Master level. Requirement is sufficient knowledge in the specific field.
Learning Outcomes	Besides the content of the specific course students gain knowledge about course preparation including administration, preparation of material for experiments, answering strategies of questions and how to handle requirements of different students. They learn about self organization, necessary preparation for the different contents and the necessary knowledge between understanding and teaching content to other students.
Type of examination	Presentation
Type of assessment	The successful completion of the module will not be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory

	and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Dean of studies, all teaching staff of the different courses students are involved as tutors
Language(s)	English
Additional information	None

Module: WP 31 Berufsqualifikation I/Vocational course I

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Practical course	WP 31.1 Berufsqualifikation 1 – Übung/Vocational course 1 – practical course	WiSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 3 ECTS credits have to be acquired. Class attendance averages about 3 contact hours. Including time for self-study, 90 hours have to be invested.

Module type	Compulsory elective module with mandatory course
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	With regard to the compulsory elective modules WP 24 – WP 31, two compulsory elective modules must be taken.
Entry requirements	None
Semester	Recommended semester: 1
Duration	The completion of the module takes 1 semester.
Content	This module contains courses which equip students for their future career with necessary skills besides their biological knowledge. This could be courses e.g. about time management, self-organization, leadership, language and communication skills, entrepreneurship as well as internships in companies about marketing, human resources, management or administration.
Learning Outcomes	At the end of the module each student will have a realistic perspective of the future work expectations regarding the soft skills. The objectives are to help students gain good self-positioning, self-reflection and self-organization, an understanding how to be a good communicator and listener with problem-solving skills in a modern work environment.
Type of examination	Presentation or report
Type of assessment	The successful completion of the module will not be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory

	and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Dean of studies, teaching staff of the different courses
Language(s)	English
Additional information	None

Module: WP 32 Vertiefende molekulare Pflanzenwissenschaften/Advanced Molecular Plant Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 32.1 Vertiefende molekulare Pflanzenwissenschaften – Vorlesung/Advanced Molecular Plant Sciences - lecture	SoSe	30 h (2 SWS)	60 h	(3)
Seminar	WP 32.2 Vertiefende molekulare Pflanzenwissenschaften – Seminar/Advanced Molecular Plant Sciences - seminar	SoSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex II
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Written exam and presentation
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.

Language(s)	English
Additional information	None

Module: WP 33 Vertiefende Theorien der molekularen Pflanzenwissenschaften/Advanced theories in Molecular Plant Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 33.1 Vertiefende Mechanismen der Genregulation bei Pflanzen/Advanced mechanisms of gene regulation in plants	SoSe	30 h (2 SWS)	60 h	(3)
Lecture	WP 33.2 Vertiefende Konzepte der genetischen Stabilität und Variabilität bei Pflanzen/Advanced concepts of genetic stability and variability in plants	SoSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex II
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Written exam
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory

	and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English
Additional information	None

Module: WP 34 Vertiefende Methoden der molekularen Pflanzenwissenschaften/Advanced methods in Molecular Plant Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Seminar	WP 34.1 Vertiefende Methoden der molekularen Pflanzenwissenschaften – Seminar/Advanced methods in Molecular Plant Sciences - seminar	SoSe	30 h (2 SWS)	60 h	(3)
Practical course	WP 34.2 Vertiefende Methoden der molekularen Pflanzenwissenschaften – Übung/Advanced methods in Molecular Plant Sciences – practical course	SoSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 5 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex II
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Presentation and report
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory

	and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English
Additional information	None

Module: WP 35 Vertiefende zelluläre Pflanzenwissenschaften/Advanced Cellular Plant Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 35.1 Vertiefende zelluläre Pflanzenwissenschaften – Vorlesung/ Advanced Cellular Plant Sciences - lecture	SoSe	30 h (2 SWS)	60 h	(3)
Seminar	WP 35.2 Vertiefende zelluläre Pflanzenwissenschaften – Seminar/Advanced Cellular Plant Sciences - seminar	SoSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex II
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Written exam and presentation
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.

Language(s)	English
Additional information	None

Module: WP 36 Vertiefende Theorien der zellulären Pflanzenwissenschaften/Advanced theories in Cellular Plant Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 36.1 Vertiefende zellbiologische Mechanismen bei Pflanzen/Advances cell biological mechanisms in plants	SoSe	30 h (2 SWS)	60 h	(3)
Lecture	WP 36.2 Vertiefende Konzepte der Zelldifferenzierung bei Pflanzen/Advanced concepts of cell differentiation in plants	SoSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex II
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Written exam
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.

Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English
Additional information	None

Module: WP 37 Vertiefende Methoden der zellulären Pflanzenwissenschaften/Advanced methods in Cellular Plant Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Seminar	WP 37.1 Vertiefende Methoden der zellulären Pflanzenwissenschaften – Seminar/Advanced methods in Cellular Plant Sciences - seminar	SoSe	30 h (2 SWS)	60 h	(3)
Practical course	WP 37.2 Vertiefende Methoden der zellulären Pflanzenwissenschaften – Übung/Advanced methods in Cellular Plant Sciences – practical course	SoSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 5 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex II
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Presentation and report
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory

	and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English
Additional information	None

Module: WP 38 Vertiefende systematische Pflanzenwissenschaften/Advanced Systematic Plant Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 38.1 Vertiefende systematische Pflanzenwissenschaften – Vorlesung/Advanced Systematic Plant Sciences - lecture	SoSe	30 h (2 SWS)	60 h	(3)
Seminar	WP 38.2 Vertiefende systematische Pflanzenwissenschaften – Seminar/ Advanced Systematic Plant Sciences - seminar	SoSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex II
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Written exam and presentation
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.

Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English
Additional information	None

Module: WP 39 Vertiefende Theorien der systematischen Pflanzenwissenschaften/Advanced theories in Systematic Plant Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 39.1 Vertiefende systematische Fragestellungen bei Pflanzen, Moosen, Flechten und Pilzen/Advanced systematic issues in plants, mosses, lichens and fungi	SoSe	30 h (2 SWS)	60 h	(3)
Lecture	WP 39.2 Vertiefende systematische Methoden in den Pflanzenwissenschaften/Advanced systematic methods in Plant Sciences	SoSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex II
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Written exam
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory

	and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English
Additional information	None

Module: WP 40 Vertiefende Methoden der systematischen Pflanzenwissenschaften/Advanced methods in Systematic Plant Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Seminar	WP 40.1 Vertiefende Methoden der systematischen Pflanzenwissenschaften – Seminar/Advanced methods in Systematic Plant Sciences - seminar	SoSe	30 h (2 SWS)	60 h	(3)
Practical course	WP 40.2 Vertiefende Methoden der systematischen Pflanzenwissenschaften – Übung/Advanced methods in Systematic Plant Sciences – practical course	SoSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 5 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex II
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Presentation and report
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory

	and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English
Additional information	None

Module: WP 41 Vertiefende organismische Interaktion bei Pflanzen/Advanced organismic interaction in plants

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 41.1 Vertiefende organismische Interaktion bei Pflanzen – Vorlesung/ Advanced organismic interaction in plants - lecture	SoSe	30 h (2 SWS)	60 h	(3)
Seminar	WP 41.2 Vertiefende organismische Interaktion bei Pflanzen – Seminar/Advanced organismic interaction in plants - seminar	SoSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex II
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Written exam and presentation
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.

Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English
Additional information	None

Module: WP 42 Vertiefende Theorien der organismischen Interaktion bei Pflanzen/Advanced theories of organismic interactions in plants

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 42.1 Vertiefende Mechanismen der organismischen Interaktion bei Pflanzen/Advanced mechanisms of organismic interaction in plants	SoSe	30 h (2 SWS)	60 h	(3)
Lecture	WP 42.2 Vertiefende molekulare und zelluläre Prozesse der organismischen Interaktion/Advanced molecular and cellular processes of organismic interaction	SoSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex II
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Written exam
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory

	and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English
Additional information	None

Module: WP 43 Vertiefende Methoden der organismischen Interaktion bei Pflanzen/Advanced methods of organismic interaction in plants

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Seminar	WP 43.1 Vertiefende Methoden der organismischen Interaktion bei Pflanzen – Seminar/ Advanced methods of organismic interaction in plants - seminar	SoSe	30 h (2 SWS)	60 h	(3)
Practical course	WP 43.2 Vertiefende Methoden der organismischen Interaktion bei Pflanzen – Übung/ Advanced methods of organismic interaction in plants – practical course	SoSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 5 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex II
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Presentation und Report
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory

	and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English
Additional information	None

Module: WP 44 Vertiefende molekulare und zelluläre Biologie/Advanced Molecular and Cellular Biology

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 44.1 Vertiefende molekulare und zelluläre Biologie – Vorlesung/Advanced Molecular and Cellular Biology - lecture	SoSe	30 h (2 SWS)	60 h	(3)
Seminar	WP 44.2 Vertiefende molekulare und zelluläre Biologie – Seminar/Advanced Molecular and Cellular Biology - seminar	SoSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex II
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme Molecular and Cellular Biology.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme Molecular and Cellular Biology.
Type of examination	Written exam and presentation
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.

Responsible contact	Please refer to the elective course catalogue for the Master´s Programme Molecular and Cellular Biology.
Language(s)	English
Additional information	None

Module: WP 45 Vertiefende Theorien der molekularen und zellulären Biologie/Advanced theories in Molecular and Cellular Biology

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 45.1 Vertiefende Theorien der molekularen und zellulären Biologie 1 – Vorlesung/ Advanced theories in Molecular and Cellular Biology 1- lecture	SoSe	30 h (2 SWS)	60 h	(3)
Lecture	WP 45.2 Vertiefende Theorien der molekularen und zellulären Biologie 2 – Vorlesung/ Advanced theories in Molecular and Cellular Biology - seminar	SoSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex II
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme Molecular and Cellular Biology.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme Molecular and Cellular Biology.
Type of examination	Written exam
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.

Responsible contact	Please refer to the elective course catalogue for the Master´s Programme Molecular and Cellular Biology.
Language(s)	English
Additional information	None

Module: WP 46 Vertiefende Methoden der molekularen und zellulären Biologie/Advanced methods in Molecular and cellular Biology

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Seminar	WP 46.1 Vertiefende Methoden der molekularen und zellulären Biologie – Seminar/ Advanced methods in Molecular and cellular Biology - seminar	SoSe	30 h (2 SWS)	60 h	(3)
Practical course	WP 46.2 Vertiefende Methoden der molekularen und zellulären Biologie – Übung/Advanced methods in Molecular and cellular Biology – practical course	SoSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 5 contact hours. Including time for self-study, 180 Hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex II
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme Molecular and Cellular Biology.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme Molecular and Cellular Biology.
Type of examination	Presentation und Report
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory

	and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme Molecular and Cellular Biology.
Language(s)	English
Additional information	None

Module: WP 47 Vertiefende Neurobiologie/Advanced Neurobiology

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 47.1 Grundlagen der Neurowissenschaften 2 – Vorlesung/Fundamentals in Neuroscience 2 - Lecture	SoSe	60 h (4 SWS)	120 h	(6)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory course
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex II
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Type of examination	Written exam or oral examination
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Language(s)	English
Additional information	None

Module: WP 48 Vertiefende Theorien der Neurobiologie I/Advanced theories in Neurobiology I

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 48.1 Spezielle Methoden der systemischen, zellulären und molekularen Neurowissenschaften für Experten – Vorlesung/Special Methods in Systemic, Cellular and Molecular Neuroscience for Experts - Lecture	SoSe	30 h (2 SWS)	60 h	(3)
Lecture	WP 48.2 Maschinelles Lernen und Analyse neuraler Daten – Vorlesung/Machine Learning and Analysis of Neural Data - Lecture	SoSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex II
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Type of examination	Written exam
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory

	and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Language(s)	English
Additional information	None

Module: WP 49 Vertiefende Theorien der Neurobiologie II/Advanced theories in Neurobiology II

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 49.1 Spezielle Methoden der systemischen, zellulären und molekularen Neurowissenschaften für Experten – Vorlesung/Special Methods in Systemic, Cellular and Molecular Neuroscience for Experts - Lecture	SoSe	30 h (2 SWS)	60 h	(3)
Lecture	WP 49.2 Mathematische Modelle neuraler Systeme und Kognitiver Funktionen – Vorlesung/Mathematical Models of Neural Systems and Cognitive Functions - Lecture	SoSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex II
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Type of examination	Written exam
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory

	and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Language(s)	English
Additional information	None

Module: WP 50 Vertiefende Theorien der Neurobiologie III/Advanced theories in Neurobiology III

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 50.1 Maschinelles Lernen und Analyse neuraler Daten – Vorlesung/Machine Learning and Analysis of Neural Data - Lecture	SoSe	30 h (2 SWS)	60 h	(3)
Lecture	WP 50.2 Mathematische Modelle neuraler Systeme und Kognitiver Funktionen – Vorlesung/Mathematical Models of Neural Systems and Cognitive Functions - Lecture	SoSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex II
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Type of examination	Written exam
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.

Responsible contact	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Language(s)	English
Additional information	None

Module: WP 51 Vertiefende Methoden der Neurobiologie/Advanced methods in Neurobiology

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Seminar	WP 51.1 Spezielle Methoden der systemischen, zellulären und molekularen Neurowissenschaften für Experten – Seminar/Special Methods in Systemic, Cellular and Molecular Neuroscience for Experts - Seminar	SoSe	30 h (2 SWS)	60 h	(3)
Practical course	WP 51.2 Maschinelles Lernen und Analyse neuraler Daten – Übung/Machine Learning and Analysis of Neural Data - Practical Course	SoSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 5 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex II
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Type of examination	Presentation and report
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory

	and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Language(s)	English
Additional information	None

Module: WP 52 Vertiefende Evolutionsbiologie, Ökologie und Systematik/Advanced Evolutionary Biology, Ecology and Systematics

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 52.1 Vertiefende Themen der Evolutionsbiologie, Ökologie und Systematik – Vorlesung/Advanced topics in Evolutionary Biology, Ecology and Systematics - lecture	SoSe	30 h (2 SWS)	60 h	(3)
Seminar	WP 52.2 Aktuelle Publikationen zu vertiefenden Forschungsthemen der Evolutionsbiologie, Ökologie und Systematik – Seminar/Current publications on advanced research topics in Evolutionary Biology, Ecology and Systematics - seminar	SoSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex II
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme Evolution, Ecology and Systematics.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme Evolution, Ecology and Systematics.
Type of examination	Written exam and presentation
Type of assessment	The successful completion of the module will be graded.

Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme Evolution, Ecology and Systematics.
Language(s)	English
Additional information	None

Module: WP 53 Vertiefende Theorien der Evolutionsbiologie, Ökologie und Systematik/Advanced theories in Evolutionary Biology, Ecology and Systematics

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 53.1 Vertiefende Konzepte der Evolutionsbiologie, Ökologie und Systematik – Vorlesung/Advanced concepts in Evolutionary Biology, Ecology and Systematics - lecture	SoSe	30 h (2 SWS)	60 h	(3)
Lecture	WP 53.2 Vertiefende Theorien der Evolutionsbiologie, Ökologie und Systematik – Vorlesung/Advanced theories in Evolutionary Biology, Ecology and Systematics - lecture	SoSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 4 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex II
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme Evolution, Ecology and Systematics.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme Evolution, Ecology and Systematics.
Type of examination	Written exam
Type of assessment	The successful completion of the module will be graded.

Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme Evolution, Ecology and Systematics.
Language(s)	English
Additional information	None

Module: WP 54 Vertiefende Methoden der Evolutionsbiologie, Ökologie und Systematik/Advanced methods in Evolutionary Biology, Ecology and Systematics

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Seminar	WP 54.1 Aktuelle Publikationen zu vertiefenden Methoden der Evolutionsbiologie, Ökologie und Systematik – Seminar/Current publications on advanced methods in Evolutionary Biology, Ecology and Systematics - seminar	SoSe	30 h (2 SWS)	60 h	(3)
Practical course	WP 54.2 Vertiefende Methoden der Evolutionsbiologie, Ökologie und Systematik – Übung/Advanced methods in Evolutionary Biology, Ecology and Systematics – practical course	SoSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 5 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex II
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme Evolution, Ecology and Systematics.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme Evolution, Ecology and Systematics.
Type of examination	Presentation and report
Type of assessment	The successful completion of the module will be graded.

Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme Evolution, Ecology and Systematics.
Language(s)	English
Additional information	None

Module: WP 55 Vertiefendes Forschungsmodul in den molekularen Pflanzenwissenschaften/Advanced research modul in Molecular Plant Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Practical course	WP 55.1 Vertiefendes Forschungspraktikum in den molekularen Pflanzenwissenschaften/Advanced research course in Molecular Plant Sciences	SoSe	180 h (12 SWS)	120 h	(10)
Seminar	WP 55.2 Begleitendes Seminar molekulare Pflanzenwissenschaften/Accompanying seminar Molecular Plant Sciences	SoSe	15 h (1 SWS)	45 h	(2)

For successful completion of the module, 12 ECTS credits have to be acquired. Class attendance averages about 13 contact hours. Including time for self-study, 360 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex III
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme. In the workgroup-seminar current project progress, scientific questions and applied lab protocols are discussed. The seminar further addresses questions related to experimental design, project schedules, experimental techniques and theoretical analysis. Students read the relevant literature, develop and discuss own scientific ideas and are expected to present their own research project.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.

	Students will learn how to present and critically discuss scientific publications, which will further hone their scientific communication skills. During these discussions, students will be exposed to a variety of experimental procedures, which will further widen their knowledge in biological methods.
Type of examination	Presentation and report
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English
Additional information	None

Module: WP 56 Vertiefendes Forschungsmodul in den zellulären Pflanzenwissenschaften/Advanced research module in Cellular Plant Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Practical course	WP 56.1 Vertiefendes Forschungspraktikum in den zellulären Pflanzenwissenschaften/Advanced research course in Cellular Plant Sciences	SoSe	180 h (12 SWS)	120 h	(10)
Seminar	WP 56.2 Begleitendes Seminar zelluläre Pflanzenwissenschaften/Accompanying seminar in Cellular Plant Sciences	SoSe	15 h (1 SWS)	45 h	(2)

For successful completion of the module, 12 ECTS credits have to be acquired. Class attendance averages about 13 contact hours. Including time for self-study, 360 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex III
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme. In the workgroup-seminar current project progress, scientific questions and applied lab protocols are discussed. The seminar further addresses questions related to experimental design, project schedules, experimental techniques and theoretical analysis. Students read the relevant literature, develop and discuss own scientific ideas and are expected to present their own research project.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.

	Students will learn how to present and critically discuss scientific publications, which will further hone their scientific communication skills. During these discussions, students will be exposed to a variety of experimental procedures, which will further widen their knowledge in biological methods.
Type of examination	Presentation und Report
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English
Additional information	None

Module: WP 57 Vertiefendes Forschungsmodul in den systematischen Pflanzenwissenschaften/Advanced research module in Systematic Plant Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Practical course	WP 57.1 Vertiefendes Forschungspraktikum in den systematischen Pflanzenwissenschaften/Advanced research course in Systematic Plant Sciences	SoSe	180 h (12 SWS)	120 h	(10)
Seminar	WP 57.2 Begleitendes Seminar systematische Pflanzenwissenschaften/Accompanying seminar in Systematic Plant Sciences	SoSe	15 h (1 SWS)	45 h	(2)

For successful completion of the module, 12 ECTS credits have to be acquired. Class attendance averages about 13 contact hours. Including time for self-study, 360 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex III
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme. In the workgroup-seminar current project progress, scientific questions and applied lab protocols are discussed. The seminar further addresses questions related to experimental design, project schedules, experimental techniques and theoretical analysis. Students read the relevant literature, develop and discuss own scientific ideas and are expected to present their own research project.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.

	Students will learn how to present and critically discuss scientific publications, which will further hone their scientific communication skills. During these discussions, students will be exposed to a variety of experimental procedures, which will further widen their knowledge in biological methods.
Type of examination	Presentation and report
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English
Additional information	None

Module: WP 58 Vertiefendes Forschungsmodul in der organismischen Interaktion bei Pflanzen/Advanced research module in organismic interaction in plants

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Practical course	WP 58.1 Vertiefendes Forschungspraktikum in der organismischen Interaktion bei Pflanzen/Advanced research course in organismic interaction in plants	SoSe	180 h (12 SWS)	120 h	(10)
Seminar	WP 58.2 Begleitendes Seminar der organismischen Interaktion bei Pflanzen/Accompanying seminar in organismic interaction in plants	SoSe	15 h (1 SWS)	45 h	(2)

For successful completion of the module, 12 ECTS credits have to be acquired. Class attendance averages about 13 contact hours. Including time for self-study, 360 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex III
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme. In the workgroup-seminar current project progress, scientific questions and applied lab protocols are discussed. The seminar further addresses questions related to experimental design, project schedules, experimental techniques and theoretical analysis. Students read the relevant literature, develop and discuss own scientific ideas and are expected to present their own research project.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.

	Students will learn how to present and critically discuss scientific publications, which will further hone their scientific communication skills. During these discussions, students will be exposed to a variety of experimental procedures, which will further widen their knowledge in biological methods.
Type of examination	Presentation and report
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English
Additional information	None

Module: WP 59 Vertiefendes Forschungsmodul in der molekularen und zellulären Biologie/Advanced research module in Molecular and Cellular Biology

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Practical course	WP 59.1 Vertiefendes Forschungspraktikum in der molekularen und zellulären Biologie/Advanced research course in Molecular and Cellular Biology	SoSe	180 h (12 SWS)	120 h	(10)
Seminar	WP 59.2 Begleitendes Seminar molekulare und zelluläre Biologie/Accompanying seminar in Molecular and Cellular Biology	SoSe	15 h (1 SWS)	45 h	(2)

For successful completion of the module, 12 ECTS credits have to be acquired. Class attendance averages about 13 contact hours. Including time for self-study, 360 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex III
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme Molecular and Cellular Biology. In the workgroup-seminar current project progress, scientific questions and applied lab protocols are discussed. The seminar further addresses questions related to experimental design, project schedules, experimental techniques and theoretical analysis. Students read the relevant literature, develop and discuss own scientific ideas and are expected to present their own research project.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme Molecular and Cellular Biology.

	Students will learn how to present and critically discuss scientific publications, which will further hone their scientific communication skills. During these discussions, students will be exposed to a variety of experimental procedures, which will further widen their knowledge in biological methods.
Type of examination	Presentation und Report
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme Molecular and Cellular Biology.
Language(s)	English
Additional information	None

Module: WP 60 Vertiefendes Forschungsmodul in der Neurobiologie/Advanced research module in Neurobiology

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Practical course	WP 60.1 Vertiefendes Forschungspraktikum in der Neurobiologie/Advanced research course in Neurobiology	SoSe	180 h (12 SWS)	120 h	(10)
Seminar	WP 60.2 Forschungsseminar – Vertiefende Themen der Neurowissenschaften/Research Seminar - Advanced Topics in Neurosciences	SoSe	15 h (1 SWS)	45 h	(2)

For successful completion of the module, 12 ECTS credits have to be acquired. Class attendance averages about 13 contact hours. Including time for self-study, 360 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex III
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme Neurosciences. In the research seminar of the workgroup current project progress, scientific questions and applied lab protocols are discussed. The seminar further addresses questions related to experimental design, project schedules, experimental techniques and theoretical analysis. Students read the relevant literature, develop and discuss own scientific ideas and are expected to present their own research project.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme Neurosciences. Students will learn how to present and critically discuss scientific publications, which will further hone their scientific communication skills. During these discussions,

	students will be exposed to a variety of experimental procedures, which will further widen their knowledge in biological methods.
Type of examination	Presentation and report
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Language(s)	English
Additional information	None

Module: WP 61 Vertiefendes Forschungsmodul in Evolutionsbiologie, Ökologie und Systematik/Advanced research module in Evolutionary Biology, Ecology and Systematics

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Practical course	WP 61.1 Vertiefendes Forschungspraktikum in Evolutionsbiologie, Ökologie und Systematik/Advanced research course in Evolutionary Biology, Ecology and Systematics	SoSe	180 h (12 SWS)	120 h	(10)
Seminar	WP 61.2 Schlüsselqualifikationen 3: Seminar Präsentationsfähigkeiten Poster/Soft Skills 3: Seminar presentation skills	SoSe	30 h (2 SWS)	30 h	(2)

For successful completion of the module, 12 ECTS credits have to be acquired. Class attendance averages about 14 contact hours. Including time for self-study, 360 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex III
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme Evolution, Ecology and Systematics. In the workgroup-seminar current project progress, scientific questions and applied lab protocols are discussed. The seminar further addresses questions related to experimental design, project schedules, experimental techniques and theoretical analysis. Students read the relevant literature, develop and discuss own scientific ideas and are expected to present their own research project.

Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme Evolution, Ecology and Systematics. Students will learn how to present and critically discuss scientific publications, which will further hone their scientific communication skills. During these discussions, students will be exposed to a variety of experimental procedures, which will further widen their knowledge in biological methods.
Type of examination	Presentation and report
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme Evolution, Ecology and Systematics.
Language(s)	English
Additional information	None

Module: WP 62 Vertiefende theoretische Themen in den Biowissenschaften/Advanced theoretical topics in Life Sciences

Programme	Master's Programme: Plant Sciences Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 62.1 Vertiefende theoretische Themen in den Biowissenschaften – Vorlesung/ Advanced theoretical topics in Life Sciences - lecture	SoSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 3 ECTS credits have to be acquired. Class attendance averages about 2 contact hours. Including time for self-study, 90 hours have to be invested.

Module type	Compulsory elective module with mandatory course
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	With regard to the compulsory elective modules WP 62 – WP 69, two compulsory elective modules must be taken.
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Written exam
Type of assessment	The successful completion of the module will not be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.

Language(s)	English
Additional information	None

Module: WP 63 Vertiefende theoretische Konzepte in den Biowissenschaften/Advanced theoretical concepts in Life Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 63.1 Vertiefende theoretische Konzepte in den Biowissenschaften – Vorlesung/ Advanced theoretical concepts in Life Sciences - lecture	SoSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 3 ECTS credits have to be acquired. Class attendance averages about 2 contact hours. Including time for self-study, 90 hours have to be invested.

Module type	Compulsory elective module with mandatory course
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	With regard to the compulsory elective modules WP 62 – WP 69, two compulsory elective modules must be taken.
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Written exam
Type of assessment	The successful completion of the module will not be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.

Language(s)	English
Additional information	None

Module: WP 64 Vertiefende Forschungsthemen in den Biowissenschaften/Advanced research topics in Life Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Seminar	WP 64.1 Vertiefende Forschungsthemen in den Biowissenschaften – Seminar/ Advanced research topics in Life Sciences	SoSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 3 ECTS credits have to be acquired. Class attendance averages about 2 contact hours. Including time for self-study, 90 hours have to be invested.

Module type	Compulsory elective module with mandatory course
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	With regard to the compulsory elective modules WP 62 – WP 69, two compulsory elective modules must be taken.
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Presentation
Type of assessment	The successful completion of the module will not be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.

Language(s)	English
Additional information	None

Module: WP 65 Vertiefende Methoden der Biowissenschaften/Advanced methods in Life Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Seminar	WP 65.1 Aktuelle Publikationen zu vertiefenden Methoden in den Biowissenschaften – Seminar/Current publications on advances methods in Life Sciences - Seminar	SoSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 3 ECTS credits have to be acquired. Class attendance averages about 2 contact hours. Including time for self-study, 90 hours have to be invested.

Module type	Compulsory elective module with mandatory course
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	With regard to the compulsory elective modules WP 62 – WP 69, two compulsory elective modules must be taken.
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Presentation
Type of assessment	The successful completion of the module will not be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.

Language(s)	English
Additional information	None

Module: WP 66 Vertiefende Labormethoden in den Biowissenschaften/Advanced lab methods in Life Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Practical course	WP 66.1 Vertiefende Labormethoden in den Biowissenschaften – Übung/ Advanced lab methods in Life Sciences – practical course	SoSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 3 ECTS credits have to be acquired. Class attendance averages about 3 contact hours. Including time for self-study, 90 hours have to be invested.

Module type	Compulsory elective module with mandatory course
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	With regard to the compulsory elective modules WP 62 – WP 69, two compulsory elective modules must be taken.
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Report
Type of assessment	The successful completion of the module will not be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.

Language(s)	English
Additional information	None

Module: WP 67 Vertiefende computergestützte Methoden in den Biowissenschaften/Advanced computational methods in Life Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Practical course	WP 67.1 Vertiefende computer-gestützte Methoden in den Biowissenschaften – Übung/ Advanced computational methods in Life Sciences – practical course	SoSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 3 ECTS credits have to be acquired. Class attendance averages about 3 contact hours. Including time for self-study, 90 Hours have to be invested.

Module type	Compulsory elective module with mandatory course
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	With regard to the compulsory elective modules WP 62 – WP 69, two compulsory elective modules must be taken.
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Report
Type of assessment	The successful completion of the module will not be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.

Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English
Additional information	None

Module: WP 68 Betreuung von Studierenden II/Tutoring of students II

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Practical course	WP 68.1 Betreuung von Studierenden 2/Tutoring of students 2	SoSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 3 ECTS credits have to be acquired. Class attendance averages about 3 contact hours. Including time for self-study, 90 hours have to be invested.

Module type	Compulsory elective module with mandatory course
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	With regard to the compulsory elective modules WP 62 – WP 69, two compulsory elective modules must be taken.
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	Tutoring of students: the students are tutoring other students in different courses. The courses could be on Bachelor or Master level. Requirement is sufficient knowledge in the specific field.
Learning Outcomes	Besides the content of the specific course students gain knowledge about course preparation including administration, preparation of material for experiments, answering strategies of questions and how to handle requirements of different students. They learn about self organization, necessary preparation for the different contents and the necessary knowledge between understanding and teaching content to other students.
Type of examination	Presentation
Type of assessment	The successful completion of the module will not be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory

	and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Dean of studies, all teaching staff of the different courses, in which students are involved as tutors
Language(s)	English
Additional information	None

Module: WP 69 Berufsqualifikation II/Vocational course II

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Practical course	WP 69.1 Berufsqualifikation 2 – Übung/ Vocational course 2 – practical course	SoSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 3 ECTS credits have to be acquired. Class attendance averages about 3 Contact hours. Including time for self-study, 90 Hours have to be invested.

Module type	Compulsory elective module with mandatory course
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	With regard to the compulsory elective modules WP 62 – WP 69, two compulsory elective modules must be taken.
Entry requirements	None
Semester	Recommended semester: 2
Duration	The completion of the module takes 1 semester.
Content	This module contains courses which equip students for their future career with necessary skills besides their biological knowledge. This could be courses e.g. about time management, self-organization, leadership, language and communication skills, entrepreneurship as well as internships in companies about marketing, human resources, management or administration.
Learning Outcomes	At the end of the module each student will have a realistic perspective of the future work expectations regarding the soft skills. The objectives are to help students gain good self-positioning, self-reflection and self-organization, an understanding how to be a good communicator and listener with problem-solving skills in a modern work environment.
Type of examination	Presentation oder Report
Type of assessment	The successful completion of the module will not be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory

	and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Dean of studies, teaching staff of the different courses
Language(s)	English
Additional information	None

Module: WP 70 Spezielles Forschungsmodul in den molekularen Pflanzenwissenschaften/Special research module in Molecular Plant Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 70.1 Spezielle Themen der molekularen Pflanzenwissenschaften – Vorlesung/Special topics in Molecular Plant Sciences - lecture	WiSe	30 h (2 SWS)	60 h	(3)
Practical course	WP 70.2 Spezielle Themen der molekularen Pflanzenwissenschaften – Forschungsprojekt/ Special topics in Molecular Plant Sciences –research course	WiSe	180 h (12 SWS)	120 h	(10)
Seminar	WP 70.3 Seminar zum Forschungsprojekt spezielle Themen der molekularen Pflanzenwissenschaften/Seminar to the research course Special topics in Molecular Plant Sciences	WiSe	15 h (1 SWS)	45 h	(2)

For successful completion of the module, 15 ECTS credits have to be acquired. Class attendance averages about 15 contact hours. Including time for self-study, 450 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex IV
Entry requirements	None
Semester	Recommended semester: 3
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme. In the workgroup-seminar current project progress, scientific questions and applied lab protocols are discussed. The seminar further addresses questions

	related to experimental design, project schedules, experimental techniques and theoretical analysis. Students read the relevant literature, develop and discuss own scientific ideas and are expected to present their own research project.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme. Students will learn how to present and critically discuss scientific publications, which will further hone their scientific communication skills. During these discussions, students will be exposed to a variety of experimental procedures, which will further widen their knowledge in biological methods.
Type of examination	Report and oral examination
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English
Additional information	None

Module: WP 71 Spezielle Methoden der molekularen Pflanzenwissenschaften/Special methods in Molecular Plant Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Seminar	WP 71.1 Spezielle Methoden der molekularen Pflanzenwissenschaften – Seminar/ Special methods in Molecular Plant Sciences - seminar	WiSe	30 h (2 SWS)	60 h	(3)
Practical course	WP 71.2 Spezielle Methoden der molekularen Pflanzenwissenschaften – Übung/ Special methods in Molecular Plant Sciences – practical course	WiSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 5 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex IV
Entry requirements	None
Semester	Recommended semester: 3
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Presentation und Report
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory

	and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English
Additional information	None

Module: WP 72 Spezielles Forschungsmodul in den zellulären Pflanzenwissenschaften/Special research module in Cellular Plant Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 72.1 Spezielle Themen der zellulären Pflanzenwissenschaften – Vorlesung/ Special topics in Cellular Plant Sciences - lecture	WiSe	30 h (2 SWS)	60 h	(3)
Practical course	WP 72.2 Spezielle Themen der zellulären Pflanzenwissenschaften – Forschungsprojekt/Special topics in Cellular Plant Sciences – research course	WiSe	180 h (12 SWS)	120 h	(10)
Seminar	WP 72.3 Seminar zum Forschungsprojekt spezielle Themen der zellulären Pflanzenwissenschaften/Seminar to research course Special topics in Cellular Plant Sciences	WiSe	15 h (1 SWS)	45 h	(2)

For successful completion of the module, 15 ECTS credits have to be acquired. Class attendance averages about 15 contact hours. Including time for self-study, 450 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex IV
Entry requirements	None
Semester	Recommended semester: 3
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme. In the workgroup-seminar current project progress, scientific questions and applied lab protocols are discussed. The seminar further addresses questions related to experimental design, project schedules, experimental techniques and theoretical analysis. Students

	read the relevant literature, develop and discuss own scientific ideas and are expected to present their own research project.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme. Students will learn how to present and critically discuss scientific publications, which will further hone their scientific communication skills. During these discussions, students will be exposed to a variety of experimental procedures, which will further widen their knowledge in biological methods.
Type of examination	Report and oral examination
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English
Additional information	None

Module: WP 73 Spezielle Methoden der zellulären Pflanzenwissenschaften/Special methods in Cellular Plant Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Seminar	WP 73.1 Spezielle Methoden der zellulären Pflanzenwissenschaften – Seminar/ Special methods in Cellular Plant Sciences - seminar	WiSe	30 h (2 SWS)	60 h	(3)
Practical course	WP 73.2 Spezielle Methoden der zellulären Pflanzenwissenschaften – Übung/Special methods in Cellular Plant Sciences – practical course	WiSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 5 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex IV
Entry requirements	None
Semester	Recommended semester: 3
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Presentation and report
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory

	and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English
Additional information	None

Module: WP 74 Spezielles Forschungsmodul in den systematischen Pflanzenwissenschaften/Special research module in Systematic Plant Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 74.1 Spezielle Themen der systematischen Pflanzenwissenschaften – Vorlesung/Special topics in Systematic Plant Sciences - lecture	WiSe	30 h (2 SWS)	60 h	(3)
Practical course	WP 74.2 Spezielle Themen der systematischen Pflanzenwissenschaften – Forschungsprojekt/ Special topics in Systematic Plant Sciences – research course	WiSe	180 h (12 SWS)	120 h	(10)
Seminar	WP 74.3 Seminar zum Forschungsprojekt spezielle Themen der systematischen Pflanzenwissenschaften/Seminar to research course Special topics in Systematic Plant Sciences	WiSe	15 h (1 SWS)	45 h	(2)

For successful completion of the module, 15 ECTS credits have to be acquired. Class attendance averages about 15 contact hours. Including time for self-study, 450 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex IV
Entry requirements	None
Semester	Recommended semester: 3
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme. In the workgroup-seminar current project progress, scientific questions and applied lab protocols are discussed. The seminar further addresses questions related to experimental design, project schedules,

	experimental techniques and theoretical analysis. Students read the relevant literature, develop and discuss own scientific ideas and are expected to present their own research project.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme. Students will learn how to present and critically discuss scientific publications, which will further hone their scientific communication skills. During these discussions, students will be exposed to a variety of experimental procedures, which will further widen their knowledge in biological methods.
Type of examination	Report and oral examination
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English
Additional information	None

Module: WP 75 Spezielle Methoden der systematischen Pflanzenwissenschaften/Special methods in systematic Plant Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Seminar	WP 75.1 Spezielle Methoden der systematischen Pflanzenwissenschaften – Seminar/ Special methods in systematic Plant Sciences - seminar	WiSe	30 h (2 SWS)	60 h	(3)
Practical course	WP 75.2 Spezielle Methoden der systematischen Pflanzenwissenschaften – Übung/Special methods in systematic Plant Sciences – practical course	WiSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 5 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex IV
Entry requirements	None
Semester	Recommended semester: 3
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Presentation and report
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory

	and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English
Additional information	None

Module: WP 76 Spezielles Forschungsmodul in der organismischen Interaktion bei Pflanzen/Special research module in organismic interaction in plants

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 76.1 Spezielle Themen der organismischen Interaktion bei Pflanzen – Vorlesung/Special topics in organismic interaction in plants - lecture	WiSe	30 h (2 SWS)	60 h	(3)
Practical course	WP 76.2 Spezielle Themen der organismischen Interaktion bei Pflanzen – Forschungsprojekt/ Special topics in organismic interaction in plants – research course	WiSe	180 h (12 SWS)	120 h	(10)
Seminar	WP 76.3 Seminar zum Forschungsprojekt spezielle Themen der organismischen Interaktion bei Pflanzen/Seminar to research course Special topics in organismic interaction in plants	WiSe	15 h (1 SWS)	45 h	(2)

For successful completion of the module, 15 ECTS credits have to be acquired. Class attendance averages about 15 contact hours. Including time for self-study, 450 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex IV
Entry requirements	None
Semester	Recommended semester: 3
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme. In the workgroup-seminar current project progress, scientific questions and applied lab protocols are discussed. The seminar further addresses questions related to experimental design, project schedules,

	experimental techniques and theoretical analysis. Students read the relevant literature, develop and discuss own scientific ideas and are expected to present their own research project.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme. Students will learn how to present and critically discuss scientific publications, which will further hone their scientific communication skills. During these discussions, students will be exposed to a variety of experimental procedures, which will further widen their knowledge in biological methods.
Type of examination	Report and oral examination
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English
Additional information	None

Module: WP 77 Spezielle Methoden der organismischen Interaktion bei Pflanzen/Special methods in organismic interaction in plants

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Seminar	WP 77.1 Spezielle Methoden der organismischen Interaktion bei Pflanzen – Seminar/Special methods in organismic interaction in plants - seminar	WiSe	30 h (2 SWS)	60 h	(3)
Practical course	WP 77.2 Spezielle Methoden der organismischen Interaktion bei Pflanzen – Übung/Special methods in organismic interaction in plants – practical course	WiSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 5 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex IV
Entry requirements	None
Semester	Recommended semester: 3
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Presentation und Report
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory

	and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English
Additional information	None

Module: WP 78 Spezielles Forschungsmodul in der molekularen und zellulären Biologie/Special research module in Molecular and Cellular Biology

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 78.1 Spezielle Themen der molekularen und zellulären Biologie – Vorlesung/Special topics in Molecular and Cellular Biology - lecture	WiSe	30 h (2 SWS)	60 h	(3)
Practical course	WP 78.2 Spezielle Themen der molekularen und zellulären Biologie – Forschungsprojekt/ Special topics in Molecular and Cellular Biology – research course	WiSe	180 h (12 SWS)	120 h	(10)
Seminar	WP 78.3 Seminar zum Forschungsprojekt spezielle Themen der molekularen und zellulären Biologie/Seminar to research course Special topics in Molecular and Cellular Biology	WiSe	15 h (1 SWS)	45 h	(2)

For successful completion of the module, 15 ECTS credits have to be acquired. Class attendance averages about 15 contact hours. Including time for self-study, 450 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex IV
Entry requirements	None
Semester	Recommended semester: 3
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme Molecular and Cellular Biology. In the workgroup-seminar current project progress, scientific questions and applied lab protocols are discussed. The seminar further addresses questions related to experimental design, project schedules,

	experimental techniques and theoretical analysis. Students read the relevant literature, develop and discuss own scientific ideas and are expected to present their own research project.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme Molecular and Cellular Biology. Students will learn how to present and critically discuss scientific publications, which will further hone their scientific communication skills. During these discussions, students will be exposed to a variety of experimental procedures, which will further widen their knowledge in biological methods.
Type of examination	Report und Oral examination
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme Molecular and Cellular Biology.
Language(s)	English
Additional information	None

Module: WP 79 Spezielle Methoden der molekularen und zellulären Biologie/Special methods in Molecular and Cellular Biology

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Seminar	WP 79.1 Spezielle Methoden der molekularen und zellulären Biologie – Seminar/ Special methods in Molecular and Cellular Biology - seminar	WiSe	30 h (2 SWS)	60 h	(3)
Practical course	WP 79.2 Spezielle Methoden der molekularen und zellulären Biologie – Übung/Special methods in Molecular and Cellular Biology – practical course	WiSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 5 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex IV
Entry requirements	None
Semester	Recommended semester: 3
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme Molecular and Cellular Biology.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme Molecular and Cellular Biology.
Type of examination	Presentation and report
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory

	and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme Molecular and Cellular Biology.
Language(s)	English
Additional information	None

Module: WP 80 Spezielles Forschungsmodul in der Neurobiologie/Special research module in Neurobiology

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 80.1 Interdisziplinäres Training 3 – Vorlesung/Interdisciplinary Training 3 - Lecture	WiSe und SoSe	30 h (2 SWS)	60 h	(3)
Practical course	WP 80.2 Spezielle Themen der Neurobiologie – Forschungsprojekt/Special topics in Neurobiology – research course	WiSe	180 h (12 SWS)	120 h	(10)
Seminar	WP 80.3 Forschungsseminar – Spezielle Themen in den Neurowissenschaften/Research Seminar - Special Topics in Neurosciences	WiSe	15 h (1 SWS)	45 h	(2)

For successful completion of the module, 15 ECTS credits have to be acquired. Class attendance averages about 15 contact hours. Including time for self-study, 450 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex IV
Entry requirements	None
Semester	Recommended semester: 3
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme Neurosciences. In the research seminar of the workgroup current project progress, scientific questions and applied lab protocols are discussed. The seminar further addresses questions related to experimental design, project schedules, experimental techniques and theoretical analysis. Students read the relevant literature, develop and discuss own scientific ideas and are expected to present their own research project.

Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme Neurosciences. Students will learn how to present and critically discuss scientific publications, which will further hone their scientific communication skills. During these discussions, students will be exposed to a variety of experimental procedures, which will further widen their knowledge in biological methods.
Type of examination	Report and oral examination
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Language(s)	English
Additional information	None

Module: WP 81 Spezielle Methoden der Neurobiologie/Special methods in Neurobiology

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Seminar	WP 81.1 Interdisziplinäres Training 7 – Seminar/Interdisciplinary Training 7 - seminar	WiSe und SoSe	30 h (2 SWS)	60 h	(3)
Practical course	WP 81.2 Interdisziplinäres Training 7 – Übung/Interdisciplinary Training 11 - Practical course	WiSe und SoSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 5 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex IV
Entry requirements	None
Semester	Recommended semester: 3
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.
Type of examination	Presentation and report
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme Neurosciences.

Language(s)	English
Additional information	None

Module: WP 82 Spezielles Forschungsmodul in Evolutionsbiologie, Ökologie und Systematik/Special research module in Evolutionary Biology, Ecology and Systematics

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 82.1 Spezielle Themen der Evolutionsbiologie, Ökologie und Systematik – Vorlesung/Special topics in Evolutionary Biology, Ecology and Systematics - lecture	WiSe	30 h (2 SWS)	60 h	(3)
Practical course	WP 82.2 Spezielle Themen der Evolutionsbiologie, Ökologie und Systematik – Forschungsprojekt/ Special topics in Evolutionary Biology, Ecology and Systematics – research course	WiSe	180 h (12 SWS)	120 h	(10)
Seminar	WP 82.3 Schlüsselqualifikationen 4: Seminar Planung von Forschungsprojekten/Soft skills 4: Seminar Design of research projects	WiSe	30 h (2 SWS)	30 h	(2)

For successful completion of the module, 15 ECTS credits have to be acquired. Class attendance averages about 16 contact hours. Including time for self-study, 450 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex IV
Entry requirements	None
Semester	Recommended semester: 3
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme Evolution, Ecology and Systematics. In the workgroup-seminar current project progress, scientific questions and applied lab protocols are discussed. The seminar further addresses questions

	related to experimental design, project schedules, experimental techniques and theoretical analysis. Students read the relevant literature, develop and discuss own scientific ideas and are expected to present their own research project.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme Evolution, Ecology and Systematics. Students will learn how to present and critically discuss scientific publications, which will further hone their scientific communication skills. During these discussions, students will be exposed to a variety of experimental procedures, which will further widen their knowledge in biological methods.
Type of examination	Report and oral examination
Type of assessment	The successful completion of the module will be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme Evolution, Ecology and Systematics.
Language(s)	English
Additional information	None

Module: WP 83 Spezielle Methoden der Evolutionsbiologie, Ökologie und Systematik/Special methods in Evolutionary Biology, Ecology and Systematics

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Seminar	WP 83.1 Spezielle Methoden der Evolutionsbiologie, Ökologie und Systematik – Seminar/ Special methods in Evolutionary Biology, Ecology and Systematics - seminar	WiSe	30 h (2 SWS)	60 h	(3)
Practical course	WP 83.2 Spezielle Labormethoden der Evolutionsbiologie, Ökologie und Systematik – Übung/Special lab methods in Evolutionary Biology, Ecology and Systematics – practical course	WiSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 6 ECTS credits have to be acquired. Class attendance averages about 5 contact hours. Including time for self-study, 180 hours have to be invested.

Module type	Compulsory elective module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	See Annex IV
Entry requirements	None
Semester	Recommended semester: 3
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme Evolution, Ecology and Systematics.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme Evolution, Ecology and Systematics.
Type of examination	Presentation and report
Type of assessment	The successful completion of the module will be graded.

Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme Evolution, Ecology and Systematics.
Language(s)	English
Additional information	None

Module: WP 84 Spezielle Themen in den Biowissenschaften/Special topics in Life Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 84.1 Spezielle Themen in den Biowissenschaften – Vorlesung/ Special topics in Life Sciences - lecture	WiSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 3 ECTS credits have to be acquired. Class attendance averages about 2 contact hours. Including time for self-study, 90 hours have to be invested.

Module type	Compulsory elective module with mandatory course
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	With regard to the compulsory elective modules WP 84 – WP 94, three compulsory elective modules must be taken.
Entry requirements	None
Semester	Recommended semester: 3
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Written exam
Type of assessment	The successful completion of the module will not be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English

Additional information	None

Module: WP 85 Spezielle Konzepte in den Biowissenschaften/Special concepts in Life Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 85.1 Spezielle Konzepte in den Biowissenschaften – Vorlesung/ Special concepts in Life Sciences - lecture	WiSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 3 ECTS credits have to be acquired. Class attendance averages about 2 contact hours. Including time for self-study, 90 hours have to be invested.

Module type	Compulsory elective module with mandatory course
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	With regard to the compulsory elective modules WP 84 – WP 94, three compulsory elective modules must be taken.
Entry requirements	None
Semester	Recommended semester: 3
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Written exam
Type of assessment	The successful completion of the module will not be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English

Additional information	None

Module: WP 86 Spezielle Theorien in den Biowissenschaften/Special theories in Life Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Lecture	WP 86.1 Spezielle Theorien in den Biowissenschaften – Vorlesung/ Special theories in Life Sciences - lecture	WiSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 3 ECTS credits have to be acquired. Class attendance averages about 2 contact hours. Including time for self-study, 90 hours have to be invested.

Module type	Compulsory elective module with mandatory course
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	With regard to the compulsory elective modules WP 84 – WP 94, three compulsory elective modules must be taken.
Entry requirements	None
Semester	Recommended semester: 3
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Written exam
Type of assessment	The successful completion of the module will not be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English

Additional information	None

Module: WP 87 Spezielle Forschungsthemen in den Biowissenschaften/Special research topics in Life Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Seminar	WP 87.1 Spezielle Forschungsthemen in den Biowissenschaften – Seminar/ Special research topics in Life Sciences - seminar	WiSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 3 ECTS credits have to be acquired. Class attendance averages about 2 contact hours. Including time for self-study, 90 hours have to be invested.

Module type	Compulsory elective module with mandatory course
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	With regard to the compulsory elective modules WP 84 – WP 94, three compulsory elective modules must be taken.
Entry requirements	None
Semester	Recommended semester: 3
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Presentation
Type of assessment	The successful completion of the module will not be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English

Additional information	None

Module: WP 88 Spezielle Methoden in den Biowissenschaften/Special methods in Life Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Seminar	WP 88.1 Spezielle Methoden in den Biowissenschaften – Seminar/ Special methods in Life Sciences - seminar	WiSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 3 ECTS credits have to be acquired. Class attendance averages about 2 contact hours. Including time for self-study, 90 hours have to be invested.

Module type	Compulsory elective module with mandatory course
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	With regard to the compulsory elective modules WP 84 – WP 94, three compulsory elective modules must be taken.
Entry requirements	None
Semester	Recommended semester: 3
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Presentation
Type of assessment	The successful completion of the module will not be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English

Additional information	None

Module: WP 89 Spezielle Auswertungsverfahren in den Biowissenschaften/Special analysis methods in Life Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Seminar	WP 89.1 Spezielle Auswertungsverfahren in den Biowissenschaften – Seminar/ Special analysis methods in Life Sciences - seminar	WiSe	30 h (2 SWS)	60 h	(3)

For successful completion of the module, 3 ECTS credits have to be acquired. Class attendance averages about 2 contact hours. Including time for self-study, 90 hours have to be invested.

Module type	Compulsory elective module with mandatory course
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	With regard to the compulsory elective modules WP 84 – WP 94, three compulsory elective modules must be taken.
Entry requirements	None
Semester	Recommended semester: 3
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Presentation
Type of assessment	The successful completion of the module will not be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.

Language(s)	English
Additional information	None

Module: WP 90 Spezielle Labormethoden in den Biowissenschaften/Special lab methods in Life Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Practical course	WP 90.1 Spezielle Labormethoden in den Biowissenschaften – Übung/ Special lab methods in Life Sciences – practical course	WiSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 3 ECTS credits have to be acquired. Class attendance averages about 3 contact hours. Including time for self-study, 90 hours have to be invested.

Module type	Compulsory elective module with mandatory course
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	With regard to the compulsory elective modules WP 84 – WP 94, three compulsory elective modules must be taken.
Entry requirements	None
Semester	Recommended semester: 3
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Report
Type of assessment	The successful completion of the module will not be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English

Additional information	None

Module: WP 91 Spezielle molekularbiologische Techniken in den Biowissenschaften/Special molecular biological techniques in Life Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Practical course	WP 91.1 Spezielle molekular-biologische Techniken in den Biowissenschaften – Übung/ Special molecular biological techniques in Life Sciences – practical course	WiSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 3 ECTS credits have to be acquired. Class attendance averages about 3 contact hours. Including time for self-study, 90 hours have to be invested.

Module type	Compulsory elective module with mandatory course
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	With regard to the compulsory elective modules WP 84 – WP 94, three compulsory elective modules must be taken.
Entry requirements	None
Semester	Recommended semester: 3
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Report
Type of assessment	The successful completion of the module will not be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.

Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English
Additional information	None

Module: WP 92 Spezielle computergestützte Methoden in den Biowissenschaften/Special computational methods in Life Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Practical course	WP 92.1 Spezielle computer-gestützte Methoden in den Biowissenschaften – Übung/ Special computational methods in Life Sciences – practical course	WiSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 3 ECTS credits have to be acquired. Class attendance averages about 3 contact hours. Including time for self-study, 90 hours have to be invested.

Module type	Compulsory elective module with mandatory course
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	With regard to the compulsory elective modules WP 84 – WP 94, three compulsory elective modules must be taken.
Entry requirements	None
Semester	Recommended semester: 3
Duration	The completion of the module takes 1 semester.
Content	Please refer to the elective course catalogue for the Master´s Programme.
Learning Outcomes	Please refer to the elective course catalogue for the Master´s Programme.
Type of examination	Report
Type of assessment	The successful completion of the module will not be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.

Responsible contact	Please refer to the elective course catalogue for the Master´s Programme.
Language(s)	English
Additional information	None

Module: WP 93 Betreuung von Studierenden III/Tutoring of students III

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Practical course	WP 93.1 Betreuung von Studierenden 3/ Tutoring of students 3	WiSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 3 ECTS credits have to be acquired. Class attendance averages about 3 contact hours. Including time for self-study, 90 hours have to be invested.

Module type	Compulsory elective module with mandatory course
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	With regard to the compulsory elective modules WP 84 – WP 94, three compulsory elective modules must be taken.
Entry requirements	None
Semester	Recommended semester: 3
Duration	The completion of the module takes 1 semester.
Content	Tutoring of students: the students are tutoring other students in different courses. The courses could be on Bachelor or Master level. Requirement is sufficient knowledge in the specific field.
Learning Outcomes	Besides the content of the specific course students gain knowledge about course preparation including administration, preparation of material for experiments, answering strategies of questions and how to handle requirements of different students. They learn about self-organization, necessary preparation for the different contents and the necessary knowledge between understanding and teaching content to other students.
Type of examination	Presentation
Type of assessment	The successful completion of the module will not be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory

	and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Dean of studies, all teaching staff of the different courses, in which students are involved as tutors
Language(s)	English
Additional information	None

Module: WP 94 Berufsqualifikation III/Vocational course III

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Practical course	WP 94.1 Berufsqualifikation 3 – Übung/Vocational course 3	WiSe	45 h (3 SWS)	45 h	(3)

For successful completion of the module, 3 ECTS credits have to be acquired. Class attendance averages about 3 contact hours. Including time for self-study, 90 hours have to be invested.

Module type	Compulsory elective module with mandatory course
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	With regard to the compulsory elective modules WP 84 – WP 94, three compulsory elective modules must be taken.
Entry requirements	None
Semester	Recommended semester: 3
Duration	The completion of the module takes 1 semester.
Content	This module contains courses which equip students for their future career with necessary skills besides their biological knowledge. This could be courses e.g. about time management, self-organization, leadership, language and communication skills, entrepreneurship as well as internships in companies about marketing, human resources, management or administration.
Learning Outcomes	At the end of the module each student will have a realistic perspective of the future work expectations regarding the soft skills. The objectives are to help students gain good self-positioning, self-reflection and self-organization, an understanding how to be a good communicator and listener with problem-solving skills in a modern work environment.
Type of examination	Presentation or report
Type of assessment	The successful completion of the module will not be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory

	and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Dean of studies, teaching staff of the different courses
Language(s)	English
Additional information	None

Module: P 3 Vernetzung in den Pflanzenwissenschaften/Interconnection in Plant Sciences

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Colloquium	P 3.1 Pflanzenwissenschaftliches Kolloquium/Cooloquim in Plant Sciences	WiSe und SoSe	15 h (1 SWS)	30 h	(1,5)
Seminar	P 3.2 Pflanzenwissenschaftliches Forschungsseminar/Research seminar in Plant Sciences	WiSe und SoSe	15 h (1 SWS)	30 h	(1,5)

For successful completion of the module, 3 ECTS credits have to be acquired. Class attendance averages about 2 contact hours. Including time for self-study, 90 hours have to be invested.

Module type	Mandatory module with mandatory courses
Usability of the module in other Programmes	Master´s Programms: Evolution, Ecology and Systematics; Molecular and Cellular Biology; Human Biology
Elective guidelines	None
Entry requirements	None
Semester	Recommended semester: 4
Duration	The completion of the module takes 1 semester.
Content	The students attend 20 scientific talks including scientific talks of invited guest speakers from outside the LMU, and the research-workgroup seminar of their master thesis supervisors.
Learning Outcomes	Students are aware of current research topics and know researchers outside of the faculty and are aware of additional current research topics. Within the research seminar of their workgroup the participants gain holistic knowledge about the topic of their master's thesis. They are able to present their current work in the group meeting and discuss current research questions related to their thesis. They understand the conception of experiments, trouble shooting procedures and critical analysis and presentation of data.
Type of examination	Presentation

Type of assessment	The successful completion of the module will not be graded.
Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Qualified supervisor from the Faculty of Biology.
Language(s)	English
Additional information	None

Module: P 4 Abschlussmodul/Final modul

Programme	Master's Programme: Plant Sciences (Master of Science, M.Sc.)

Related module parts

Course type	Course (mandatory)	Rotation	Contact hours	Self-study hours	ECTS
Thesis	P 4.1 Masterarbeit/Master's thesis	WiSe und SoSe	-	780 h	(26)
Disputation	P 4.2 Disputation	WiSe und SoSe	-	30 h	(1)

For successful completion of the module, 27 ECTS credits have to be acquired. 810 hours have to be invested.

Module type	Mandatory module with mandatory courses
Usability of the module in other Programmes	None
Elective guidelines	None
Entry requirements	Successful completion of the modules P 1 and P 2, completed acquisition of 18 ECTS credits from the elective modules WP 1 – WP 31 and completed acquisition of 30 ECTS credits from the elective modules WP 32 – WP 94
Semester	Recommended semester: 4
Duration	The completion of the module takes 1 semester.
Content	The master's final module is composed of a master's thesis and oral defense. This module represents the climax of the master's program and requires independent experimental work under supervision of an instructor/advisor.
Learning Outcomes	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.
Type of examination	Thesis and disputation
Type of assessment	The successful completion of the module will be graded.

Requirements for the gain of ECTS credits	ECTS credits will be granted when the module examination (or the examination of pertinent mandatory and potential elective compulsory module parts) has/have been completed successfully.
Responsible contact	Qualified supervisor from the Faculty of Biology.
Language(s)	English
Additional information	None

Annex I: Elective guidelines regarding the elective modules WP 1 – WP 23

Regarding the elective fields "Molekulare Pflanzenwissenschaften", "Zelluläre Pflanzenwissenschaften", "Systematische Pflanzenwissenschaften", "Organismische Interaktion bei Pflanzen", "Molekulare und zelluläre Biologie", "Neurobiologie" and "Evolutionsbiologie, Ökologie und Systematik, exactly one elective field must be taken.

By choosing

1. the elective field "Molekulare Pflanzenwissenschaften", the elective modules (WP 1 or WP 2) and WP 3

2. the elective field "Zelluläre Pflanzenwissenschaften", the elective modules (WP 4 or WP 5) and WP 6

3. the elective field "Systematische Pflanzenwissenschaften", the elective modules (WP 7 or WP 8) and WP 9

4. the elective field "Organismische Interaktion bei Pflanzen", the elective modules (WP 10 or WP 11) and WP 12

5. the elective field "Molekulare und zelluläre Biologie", the elective modules (WP 13 or WP 14) and WP 15

6. the elective field "Neurobiologie", the elective modules (WP 16 or WP 17 or WP 18 or WP 19) and WP 20

7. the elective field "Evolutionsbiologie, Ökologie und Systematik", the elective modules (WP 21 or WP 22) and WP 23

must be taken.

With regard to the elective fields "Molekulare und zelluläre Biologie" (WP 13 – WP 15), "Neurobiologie" (WP 16 – WP 20), "Evolutionsbiologie, Ökologie und Systematik" (WP 21 – WP 23), "Vertiefende molekulare und zelluläre Biologie" (WP 44 – WP 46), "Vertiefende Neurobiologie" (WP 47 – WP 51), "Vertiefende Evolutionsbiologie, Ökologie und Systematik" (WP 52 – WP 54), "Forschungsschwerpunkt molekulare und zelluläre Biologie" (WP 78 and WP 79), "Forschungsschwerpunkt Neurobiologie" (WP 80 and WP 81) and "Forschungsschwerpunkt Evolutionsbiologie, Ökologie und Systematik" (WP 82 and WP 83) and to the elective modules WP 59 – WP 61, a student may take up to 24 ECTS credits worth of elective fields and modules.

Annex II: Elective guidelines regarding the elective modules WP 32 – WP 54

With regard to the elective fields "Vertiefende molekulare Pflanzenwissenschaften", "Vertiefende zelluläre Pflanzenwissenschaften", "Vertiefende systematische Pflanzenwissenschaften", "Vertiefende organismische Interaktion bei Pflanzen", "Vertiefende molekulare und zelluläre Biologie", "Vertiefende Neurobiologie" and "Vertiefende Evolutionsbiologie, Ökologie und Systematik", exactly one elective field must be taken.

By choosing

1. the elective field "Vertiefende molekulare Pflanzenwissenschaften", the elective modules (WP 32 or WP 33) and WP 34

2. the elective field "Vertiefende zelluläre Pflanzenwissenschaften", the elective modules (WP 35 or WP 36) and WP 37

3. the elective field "Vertiefende systematische Pflanzenwissenschaften", the elective modules (WP 38 or WP 39) and WP 40

4. the elective field "Vertiefende organismische Interaktion bei Pflanzen", the elective modules (WP 41 or WP 42) and WP 43

5. the elective field "Vertiefende molekulare und zelluläre Biologie", the elective modules (WP 44 or WP 45) and WP 46

6. the elective field "Vertiefende Neurobiologie", the elective modules (WP 47 or WP 48 or WP 49 or WP 50) and WP 51

7. the elective field "Vertiefende Evolutionsbiologie, Ökologie und Systematik", the elective modules (WP 52 or WP 53) and WP 54

must be taken.

With regard to the elective fields "Molekulare und zelluläre Biologie" (WP 13 – WP 15), "Neurobiologie" (WP 16 – WP 20), "Evolutionsbiologie, Ökologie und Systematik" (WP 21 – WP 23), "Vertiefende molekulare und zelluläre Biologie" (WP 44 – WP 46), "Vertiefende Neurobiologie" (WP 47 – WP 51), "Vertiefende Evolutionsbiologie, Ökologie und Systematik" (WP 52 – WP 54), "Forschungsschwerpunkt molekulare und zelluläre Biologie" (WP 78 and WP 79), "Forschungsschwerpunkt Neurobiologie" (WP 80 and WP 81) and "Forschungsschwerpunkt Evolutionsbiologie, Ökologie und Systematik" (WP 82 and WP 83) and to the elective modules WP 59 – WP 61, a student may take up to 24 ECTS credits worth of elective fields and modules.

Annex III: Elective guidelines regarding the elective modules WP 55 – WP 61

With regard to the elective modules WP 55 – WP 61, one elective module must be taken.

With regard to the elective fields "Molekulare und zelluläre Biologie" (WP 13 – WP 15), "Neurobiologie" (WP 16 – WP 20), "Evolutionsbiologie, Ökologie und Systematik" (WP 21 – WP 23), "Vertiefende molekulare und zelluläre Biologie" (WP 44 – WP 46), "Vertiefende Neurobiologie" (WP 47 – WP 51), "Vertiefende Evolutionsbiologie, Ökologie und Systematik" (WP 52 – WP 54), "Forschungsschwerpunkt molekulare und zelluläre Biologie" (WP 78 and WP 79), "Forschungsschwerpunkt Neurobiologie" (WP 80 and WP 81) and "Forschungsschwerpunkt Evolutionsbiologie, Ökologie und Systematik" (WP 82 and WP 83) and to the elective modules WP 59 – WP 61, a student may take up to 24 ECTS credits worth of elective fields and modules.

Annex IV: Elective guidelines regarding the elective modules WP 70 – WP 83

Regarding the elective fields "Forschungsschwerpunkt molekulare Pflanzenwissenschaften", "Forschungsschwerpunkt zelluläre Pflanzenwissenschaften", "Forschungsschwerpunkt systematische Pflanzenwissenschaften", "Forschungsschwerpunkt organismische Interaktion bei Pflanzen", "Forschungsschwerpunkt molekulare und zelluläre Biologie", "Forschungsschwerpunkt Neurobiologie" and "Forschungsschwerpunkt Evolutionsbiologie, Ökologie und Systematik", exactly one elective field must be taken.

By choosing

1. the elective field "Forschungsschwerpunkt molekulare Pflanzenwissenschaften", the elective modules WP 70 and WP 71

2. the elective field "Forschungsschwerpunkt zelluläre Pflanzenwissenschaften", the elective modules WP 72 and WP 73

3. the elective field "Forschungsschwerpunkt systematische Pflanzenwissenschaften", the elective modules WP 74 and WP 75

4. the elective field "Forschungsschwerpunkt organismischen Interaktion bei Pflanzen", the elective modules WP 76 and WP 77

5. the elective field "Forschungsschwerpunkt molekulare und zelluläre Biologie", the elective modules WP 78 and WP 79

6. the elective field "Forschungsschwerpunkt Neurobiologie", the elective modules WP 80 and WP 81,

7. the elective field "Forschungsschwerpunkt Evolutionsbiologie, Ökologie und Systematik", the elective modules WP 82 and WP 83

must be taken.

With regard tot he elective fields "Molekulare und zelluläre Biologie" (WP 13 – WP 15), "Neurobiologie" (WP 16 – WP 20), "Evolutionsbiologie, Ökologie und Systematik" (WP 21 – WP 23), "Vertiefende molekulare und zelluläre Biologie" (WP 44 – WP 46), "Vertiefende Neurobiologie" (WP 47 – WP 51), "Vertiefende Evolutionsbiologie, Ökologie und Systematik" (WP 52 – WP 54), "Forschungsschwerpunkt molekulare und zelluläre Biologie" (WP 78 and WP 79), "Forschungsschwerpunkt Neurobiologie" (WP 80 and WP 81) and "Forschungsschwerpunkt Evolutionsbiologie, Ökologie und Systematik" (WP 82 and WP 83) and to the elective modules WP 59 – WP 61, a student may take up to 24 ECTS credits worth of elective fields and modules.