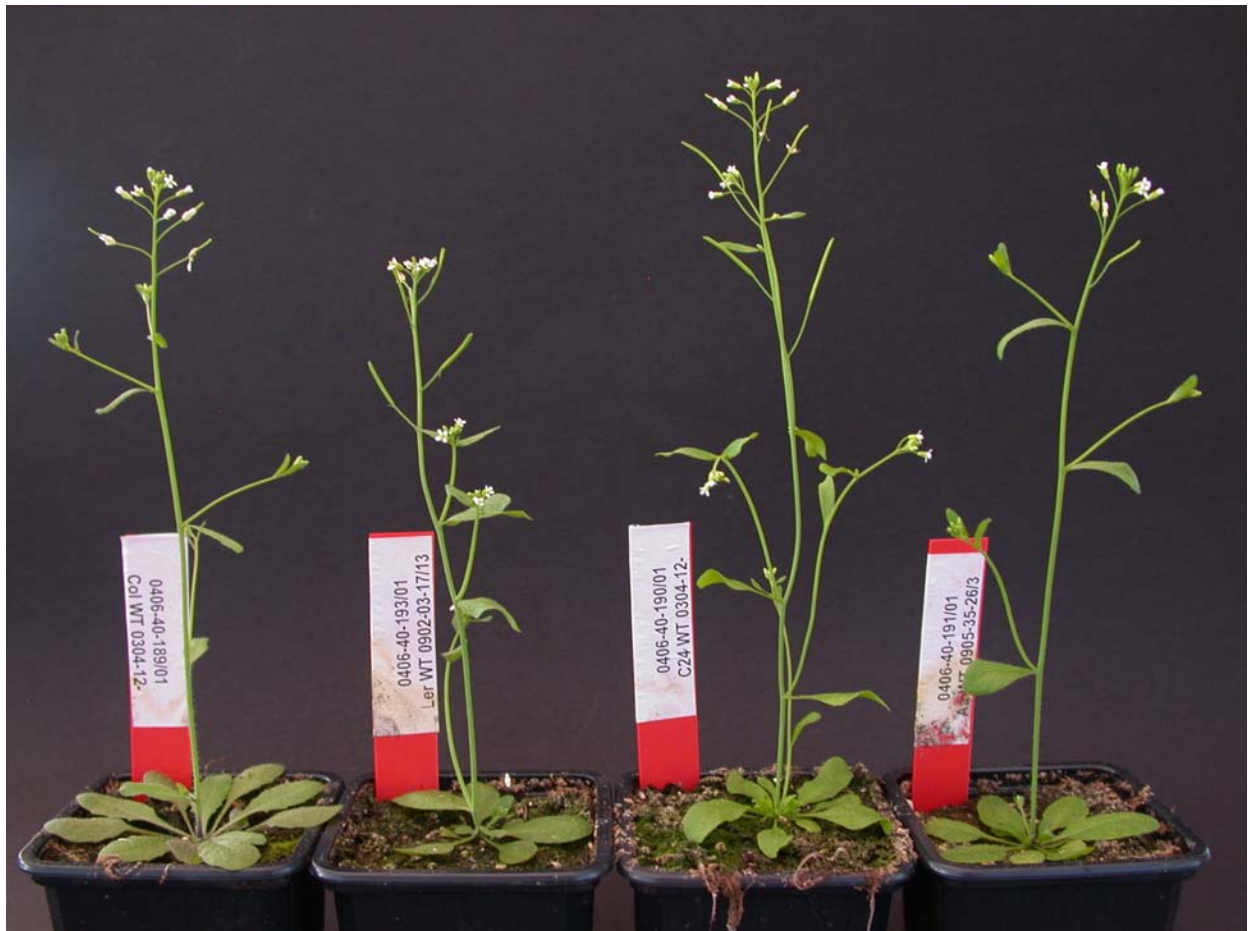


Curriculum

Master of Science
Crop Sciences



September 2011

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Preamble

This curriculum provides applicants and students as well as teaching and administrative staff with information about the M.Sc. programme „Crop Sciences“. It contains information on the programme structure and summarizes the most important examination regulations.

The information presented reflects the current situation. Titles and contents of compulsory and optional modules are sometimes subject to change. Due to administrative reasons such changes can only be considered in printed materials with delay. For this reason all information is provided without liability.

If in doubt, please refer to the co-ordinator of the programme (cropsciences@uni-hohenheim.de) to obtain up-to-date information. For up-to-date module descriptions please refer to the web-pages at www.uni-hohenheim.de/modulkatalog. **Time schedules and lecture halls of all courses offered at the university of Hohenheim are displayed in the Course Catalogue of the University of Hohenheim**, available at the beginning of each semester online on the university's homepage: www.uni-hohenheim.de.

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The Master Programme „Crop Sciences”

Programme Objectives

The goal of crop sciences is to develop crops and cropping systems with highest possible efficiency in converting light and supplemental resource into food, feed, and fiber. Biological, physiological, molecular genetic and biometric principles are applied and graduates are prepared to develop cropping systems that are profitable and ecologically sustainable.

Programme Design

The two-year M.Sc. programme “Crop Sciences” comprises four semesters, during which fifteen thematic modules, three compulsory modules, five semi-elective, seven elective modules, and the Master Thesis have to be completed. That is a total of 15 modules over three semesters. One semester remains for the thesis work.

One of the following majors has to be chosen and upon request the title of the chosen major can be reported in the transcript of records.

- „Crop Physiology and Nutrition“
- „Plant Breeding and Seed Science“
- „Crop Protection“

The full programme has an extent of 120 ECTS and is constructed by 4 semesters each with 30 ECTS-credits. The language of instruction is English.

	1. Semester	2. Semester	3. Semester	4. Semester
6 Credits	3401-470 Crop Physiology	3402-430 Bioinformatics	Compulsory module of the chosen major <u>or</u> elective module	Master Thesis (30 credits)
6 Credits	3502-440 Methods of Scientific Working (for Crop Sciences)	Compulsory module of the chosen major	Compulsory module of the chosen major <u>or</u> elective module	
6 Credits	Compulsory module of the chosen major	Compulsory module of the chosen major <u>or</u> elective module	Elective module	
6 Credits	Compulsory module of the chosen major <u>or</u> elective module	Elective module	Elective module	
6 Credits	Compulsory module of the chosen major <u>or</u> elective module	Elective module	Elective module	

Modules

Some modules are offered as blocked courses lasting three and a half weeks (B1 to B5 = winter semester, B6 – B10 = summer). Most modules are not blocked and thus last the full length of the semester. Blocked modules will usually take place Monday to Friday from 2 p.m. to 6 p.m. Non-blocked modules will usually be taught in the morning. This shall enable students to combine blocked and unblocked modules. While working out your personal time-table, please be aware of the following facts: the morning is assigned for the personal preparation of the blocked modules too and the block periods B4, B5 and B9, B10 will have a relevant overlapping with the first examination period of the unblocked modules!

6 credits based on the European Credit Transfer System (ECTS) are awarded for each module. This corresponds to a workload of 4 weekly contact hours per semester, totalling 56 contact hours per module, and in addition at least the

same time for preparation at home, summing up to a total workload of about 140-180 hours for each module including the time for exam preparation. A module may consist of different forms of teaching (e.g. seminar, lecture, practical exercise, excursion).

The modules of the programme are listed below. For details about contents, lecturers and methods of instruction refer to the module description site (www.uni-hohenheim.de/modulkatalog).

The compulsory modules are:

Sem	Modules	Block	Exam	Professor
1	3401-470 Crop Physiology	unblocked	oral	Claupein
1	3502-440 Methods of Scientific Working for Crop Sciences	unblocked	written	Schmid
2	3402-430 Bioinformatics *	unblocked	written	Piepho

* The contents of the module 3402-430 “Quantitative Methods in Biosciences” are presumed to be known.

One of the following three majors (including all modules) has to be chosen:

Major: Crop Physiology and Nutrition (*will not be offered before 2010/11*)

Sem	Modules	Block	Exam	Professor
1	3302-460 Plant Quality	unblocked	oral	N.N.
1	3302-450 Plant Symbioses for Nutrient Acquisition	unblocked	oral	Neumann
1/3	3301-460 Exercises in Plant Nutrition	after block 5	written	Müller, T.
2	3703-430 Crop – Environment Interactions	unblocked	oral	Wünsche
3	3803-440 Signalling in Plants under Stress	B 2	oral	Asch

Major: Plant Breeding and Seed Science

Sem	Modules	Block	Exam	Professor
1	3502-450 Population and Quantitative Genetics	unblocked	written	Schmid
2	3501-450 Breeding Methodology	unblocked	written	Melchinger
3	3501-460 Planning of Breeding Programmes	block 4	written with ICA	Melchinger
3	3501-470 Selection Theory	unblocked	written	Melchinger
3	3504-430 Seed Research	unblocked	oral	Kruse

ICA = in-course assessment

Major: Crop Protection

Sem	Modules	Block	Exam	Professor
1	3603-480 Entomology	unblocked	written	Zebitz
1	3602-450 Molecular Aspects of Plant Protection	unblocked	written	Gerhards
(1)/3	3601-450 Phytopathology	Partly blocked in B5	written	Vögele
2	3602-460 Information Technologies and Expert Systems in Plant Protection	block 8	written	Gerhards
3	3603-470 Ecology of Insects	unblocked	written	Zebitz

The seven **elective modules** can be chosen from the other majors, from the listing below or from the modules of other Master programmes of the faculty of Agricultural Sciences of the University of Hohenheim.

Suggestions for Elective Modules

Sem	Modules	Block	Exam	Professor
1/3	3301-450 Fertilisation and Applied Soil Chemistry in the Tropics and Subtropics	unblocked	oral	Müller, T.
1/3	3301-440 Soil Fertility and Fertilisation in Organic Farming	unblocked	oral	Müller, T.
1/3	3302-450 Plant Symbioses for Nutrient Acquisition	unblocked	oral	Neumann
1/3	3801-420 Crop Production Systems	block 4	written	Cadisch
1/3	3501-440 Plant Breeding and Seed Science in the Tropics and Sub-Tropics	block 4	written	Melchinger
1/3	3803-450 Crop Production Affecting the Hydrological Cycle	block 4	oral	Asch
1/3	3405-410 Organic Farming in the Tropics and Subtropics	block 5	written	Zikeli
1/3	3301-460 Exercises in Plant Nutrition	after block 5	written	Müller, T.
2	3401-450 Conservation Agriculture	unblocked	oral with ICA	Claupein
2	3502-470 Plant Genetic Resources	unblocked	written	Schmid
2	3603-490 Biological Pest Control	unblocked	k.A.	Zebitz
2	3504-420 Seed Technology	unblocked	oral+ICA	Kruse
2	3503-450 From Genes to Transgenic Plants	unblocked	written	Weber
2	3802-420 Biodiversity, Plant and Animal Genetic Resources	block 8	written	Sauerborn
2	3803-430 Ecophysiology of Crops in the Tropics and Subtropics	block 10	oral	Asch
2	3603-500 Exercises in Biological Pest Control	block 10	k.A.	Zebitz
3	3503-460 Transgenic Organisms in Research and Agriculture	unblocked	written	Weber
3	3802-410 Ecology and Agroecosystems	block 2	written	Sauerborn

ICA = in-course assessment

For the complete catalogue, refer to www.uni-hohenheim.de/modulkatalog.

With the approval of the examination board, study and examinations of up to five of these elective modules/30 ECTS credits can be chosen from other programmes of the University of Hohenheim as well as from other German or foreign universities.

Course Catalogue

The Course Catalogue of University of Hohenheim is available at the beginning of each semester online at the university's homepage: www.uni-hohenheim.de. By the name of the courses of the modules (see page 10 and following pages), times and lecture rooms of all courses can be found inside the Course Catalogue of the University of Hohenheim, and a personal timetable can be worked out. Mind: several non-blocked modules within that catalogue consist of more than one course. All modules, their courses and

responsible lecturers, course contents, and literature are described in the catalogue of course contents.

Course Contents

For the contents of all modules see: www.uni-hohenheim.de/modulkatalog.

Credit Point System

With each completed module the students earn 6 credits for the workload associated with each module. The M.Sc. programme has a total requirement of 120 credits. The examination result is expressed in grade points and grades. The highest score is 4.0 [grade A]. A score of 1.0 [grade D] is required for passing. Credits are multiplied with the grade points achieved to derive the number of credit points obtained. In order to calculate the grade point average, the total number of credit points obtained in all modules is divided by the total number of credits collected.

		Grade- points and grades	
		<i>grades</i>	<i>grade-points</i>
<i>excellent performance</i>	<i>very good</i>	A	4,0
		A-	3,7
<i>performance considerably exceeding the above average standard</i>	<i>good</i>	B+	3,3
		B	3,0
		B-	2,7
<i>performance meeting the average standard</i>	<i>medium</i>	C+	2,3
		C	2,0
		C-	1,7
<i>performance meeting minimum criteria</i>	<i>pass</i>	D+	1,3
		D	1,0
<i>performance not meeting minimum criteria</i>	<i>fail</i>	F	0

The credit point system used in the M.Sc. programme is fully compatible with the European Credit Transfer System, ECTS.

Study and Examination Plan

Students have to seek advice of one of the mentors of the programme on which elective modules are suitable for their individual profile. During the first month of study each student's study and examination plan has to be approved by the respective personal mentor. In the study and examination plan all chosen modules have to be mentioned. Students submit their verified study plans to the examination office. Exchanges of modules need to be approved by the responsible mentor.

Examinations

Each module is examined upon completion in an oral or a written exam. The examination may be divided in sections which can be weighted differently. The weighting of the partial performances (in-course assessments = ICA) is written down in the module descriptions. The examinations of the modules should be taken within the semester scheduled in this curriculum. The examinations of the blocked modules are held at the end of the respective block period. Those for the unblocked modules are held in the two examination periods that follow the lectures. Students will be registered by signature automatically for the three compulsory modules offered in the first and second semester. The registration for the examination of the semi-elective and elective modules will take place by submitting the verified study and examination plan to the examination office. The study and examination plan has to be submitted one week before the first examination of a semi-elective or elective module at the latest. Withdrawal on the first trial of each module

examination is possible up to 7 days before the examination date. The examination will be postponed to the next possible examination period.

Please mind that plagiarism, that means the take-over of text or phrases in a written examination (even within a partial performance) without quoting them accordingly, will be marked as attempt of deception and the respective examination performance is to be graded "fail" (F; 0 grade-points). A declaration (<https://agrar.uni-hohenheim.de/plagiate.html?&L=1>) has to be attached to homework, presentations, and to the thesis and the final digital text document has to be transferred to the mentoring supervisor.

The claim for examination expires if:

- a minimum of six examinations has not been passed by the end of the second semester at the latest
- an examination of one of the modules has not been passed by the end of the sixth semester at the latest
- in one of the 15 modules an exam has to be repeated more than two times.

The claim for examinations does not expire, if the candidate cannot be held responsible for the failure to comply with the deadline. The students themselves are responsible for complying with these examination deadlines as well as all other regulations given in the examination regulations. The examination regulations and a leaflet on registration (<https://pruefungsamt.uni-hohenheim.de>) are distributed by the examination office.

Exam Repetition

In case of failure the examination office will inform the student via mail. Normally, the letter includes the repetition date. In some cases the date for repetition has not been pointed out at the time of informing the students. Students are responsible themselves to check with the responsible professor or the examination office about dates for repeater exams. Usually repeater exams for blocked modules will be scheduled by the responsible professor within the same semester. Repeater exams in lectures will usually automatically be scheduled for the next examination period.

Master Thesis

The Master Thesis shall show that the candidate is able to work independently on a problem in the field of „Crop Sciences“, within a fixed period of time by applying scientific methods. The exam consists of a written part (thesis) and an oral presentation (defence). The candidate has to defend the essential arguments, results and methods of the thesis in a colloquium of 30-45 minutes. The written part of the Master Thesis has to be completed within a period of six months. It is usually written during the fourth semester. There might be cases, depending on the chosen modules, for which the third semester is more appropriate. Thesis work can pursue empirical or theoretical questions related to ongoing research projects but students' own initiatives and ideas are certainly welcome. It includes a literature review as well as new and original data derived from field and or laboratory work. This work can be carried out either at University of Hohenheim or at one of the partner universities.

Quality Assurance

The quality of courses and modules is evaluated in a two year rotation by the students of all study programmes. The evaluation sheets are distributed and evaluated by the Faculty of Agricultural Sciences and the results are sent back to the lecturers in an **anonymous** format. The lecturers are asked to discuss the results with the students at the end of their courses.

Mentoring

A personal mentor from the teaching staff is assigned to advise on appropriate profiles and support smooth and goal-oriented study progress. The study and examination plan has to be signed by a mentor before it is handed in to the examination office. The following scientists have been appointed as mentors:

- Prof. Dr. Ludewig (Nutritional Crop Physiology, 340)
- Prof. Dr. Neumann (Nutritional Crop Physiology, 340)
- Prof. Dr. Schmid (Crop Biodiversity and Breeding Informatics, 350)
- Prof. Dr. Zebitz (Applied Entomology, 360)
- Prof. Dr. Voegelé (Phytopathology, 360)

Academic advisor

providing specific information on the disciplines:

- Dr. Tobias Schrag (tobias.schrag@uni-hohenheim.de, phone: 459-23483)

Study Abroad

Students are encouraged to spend one semester in the second year at a partner university abroad, to gain additional experience and further strengthen their individual profile. Our credit point system is intended to facilitate the mutual acceptance of courses attended at different universities. Assessment is based on the European Credit Transfer System (ECTS), which facilitates such kind of international mobility. German students are strongly advised to spend a semester abroad. Particularly, the third semester is suitable for integrated study abroad. Students will preferably spend this time at one of the partner universities of the Euroleague for Life Sciences: Universität für Bodenkultur Wien (BOKU), Austria; Royal Veterinary and Agricultural University (KVL), Denmark; Swedish University of Agricultural Sciences (SLU), Sweden; Wageningen University, Netherlands; Czech University of Agriculture (CUA), Czech Republic, Warsaw Agricultural University (SGGW), Poland. On the basis of an agreement on quality standards the members of the Euro League for Life Sciences have agreed to mutually recognize study achievements. Quantitative parity of study achievements is based on the European Credit Transfer System (ECTS). Students may also request to spend the semester at universities other than mentioned above.

Degree

After successful completion of all modules as well as the thesis, the student is awarded the degree "Master of Science" (M.Sc.) in Crop Sciences. This degree entitles the student to continue with a Ph.D./doctoral programme if the total grade is above average.

Responsible Scientist

Prof. Dr. M. Kruse
Department of Seed Science and Technology

***Professors in charge of
the three majors***

Prof. Dr. J. Wünsche, Department of Fruit Science
Prof. Dr. A. E. Melchinger, Department of Plant Breeding
Prof. Dr. C. Zebitz, Department of Applied Entomology

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In the following table all modules from pp. 5 and 6 as well as suggestions for elective modules, all with their corresponding lectures are shown. The modules are sorted by module-code. (SWS = average hours per week per semester)

Module-Code	Name of Module	Sem.	Module obligation	Responsible Professor	Language	Module-Duration	Exam	LV-Code	Courses of the Module	Lecturer(s)	Type	SWS
3301-440	Soil Fertility and Fertilisation in Organic Farming	3	Elective	Müller	E	blocked (n. V.)	oral (75%), seminar presentation with handout (25%)	3301-441	Soil Fertility and Fertilisation in Organic Farming	Prof. Dr. Torsten Müller	Lecture with Exercise and Seminar	4
3301-450	Fertilisation and Applied Soil Chemistry in the Tropics and Subtropics	1	Elective	Müller	E	1 Sem.	oral (75%), presentation with handout (25%)	3301-451	Fertilisation and Applied Soil Chemistry in the Tropics and Subtropics	Prof. Dr. Torsten Müller, Dr. Rudolf Schulz, Herr Markus Weinmann	Lecture with Seminar and Labexercise	4
3301-460	Exercises in Plant Nutrition	1	Compulsory Crop Physiology and Nutrition	Müller	D/E	3,5 Weeks (nach B05)	written	3301-461	Exercises in Plant Nutrition	Prof. Dr. Torsten Müller	Exercise with Exkursion	4
3301-470	Fertilisation and Applied Soil Chemistry in the Tropics and Subtropics (e-learning module)	1	Elective	Müller	E	1 Sem.	oral (75%), presentation with handout (25%)	3301-471	Fertilisation and Applied Soil Chemistry in the Tropics and Subtropics (ILIAS online module)	Dr. Kurt Möller, Prof. Dr. Torsten Müller	E-Learning	4
3301-470	Fertilisation and Applied Soil Chemistry in the Tropics and Subtropics (e-learning module)	2	Elective	Müller	E	1 Sem.	oral (75%), presentation with handout (25%)	3301-471	Fertilisation and Applied Soil Chemistry in the Tropics and Subtropics (ILIAS online module)	Dr. Kurt Möller, Prof. Dr. Torsten Müller	E-Learning	4
3302-450	Plant Symbioses for Nutrient Acquisition	1	Compulsory Crop Physiology and Nutrition	Neumann	D/E	1 Sem.	oral	3302-451	Biological Nitrogen Fixation and Mycorrhizae	Prof. Dr. Uwe Ludewig, PD Dr. Günther Neumann	Lecture with Exercise	4
3302-460	Plant Quality	1	Compulsory Crop	Ludewig	E	1 Sem.	oral	3302-461	Plant Quality	Prof. Dr. Uwe Ludewig, PD Dr.	Lecture	4

Module-Code	Name of Module	Sem.	Module obligation	Responsible Professor	Langu-age	Module-Duration	Exam	LV-Code	Courses of the Module	Lecturer(s)	Type	SWS
			Physiology and Nutrition							Günther Neumann, apl. Prof. Dr. Franz Wiesler		
3401-450	Conservation Agriculture	2	Elective	Claupein	E	1 Sem.	oral (2/3) with excursion report (1/3)	3401-451	Conservation Agriculture	Prof. Dr. Wilhelm Claupein, Prof. Dr. Roland Gerhards, Prof. Dr. Hans W. Griepentrog, Prof. Dr. Karlheinz Kölller, Dr. Martina Mayus	Lecture with Seminar and Excursion	4
3401-470	Crop Physiology	1	Compulsory	Claupein	E	1 Sem.	oral	3401-471	Crop Physiology	Prof. Dr. Wilhelm Claupein	Lecture	4
3402-430	Bioinformatics	2	Compulsory	Piepho	E	1 Sem.	written	3402-432 3402-431	Advanced Statistical Methods Mixed Models	Prof. Dr. Hans-Peter Piepho Prof. Dr. Hans-Peter Piepho	Lecture Lecture	2 2
3405-410	Organic Farming in the Tropics and Subtropics	3	Elective	Zikeli	E	3,5 Weeks (B05)	written	3405-411	Organic Farming in the Tropics and Subtropics	Prof. Dr. Wilhelm Claupein, M. Sc. Inga Häuser, Prof. Dr. Joachim Sauerborn, Prof. Dr. Anne Valle Zárate, Prof. Dr. Claus Zebitz, Dr. Sabine Zikeli	Lecture with Seminar and Excursion	4
3501-440	Plant Breeding and Seed Science in the Tropics and Subtropics	1	Elective	Melchinger	E	3,5 Weeks (B04)	written	3501-441	Plant Breeding and Seed Science in the Tropics and Subtropics	Dr. agr. Bettina Haußmann, Prof. Dr. Albrecht Melchinger, -Dr. sc. agr. Wolfgang Schipprack, Prof. Dr. Gerd Weber	Lecture	4
3501-450	Breeding Methodology	2	Compulsory Plant Breeding and Seed Science	Melchinger	E	1 Sem.	written	3501-453 3501-451 3501-452	Breeding Methodology Demonstrations with Excursion Methodology and Categories of Breeding	Prof. Dr. Albrecht Melchinger Prof. Dr. Albrecht Melchinger Prof. Dr. Thomas	Lecture with Excursion Lecture Lecture	2 1 1

Module-Code	Name of Module	Sem.	Module obligation	Responsible Professor	Langu-age	Module-Duration	Exam	LV-Code	Courses of the Module	Lecturer(s)	Type	SWS
									Resistance Breeding	Miedaner		
3501-460	Planning of Breeding Programmes	3	Compulsory Plant Breeding and Seed Science	Melchinger	E	3,5 Weeks (B04)	written with incourse-assessment	3501-461	<ul style="list-style-type: none"> ▪ Planning of Breeding Programmes 	<ul style="list-style-type: none"> ▪ Prof. Dr. Albrecht Melchinger 	<ul style="list-style-type: none"> ▪ Lecture 	4
3501-470	Selection Theory	3	Compulsory Plant Breeding and Seed Science	Melchinger	E	1 Sem.	written	3501-471	<ul style="list-style-type: none"> ▪ Selection Theory 	<ul style="list-style-type: none"> ▪ Prof. Dr. Albrecht Melchinger 	<ul style="list-style-type: none"> ▪ Lecture 	4
3502-440	Methods of Scientific Working (for Crop Sciences)	1	Compulsory	Schmid	E	1 Sem.	written	3502-441	<ul style="list-style-type: none"> ▪ Methods of Scientific Working (for Crop Sciences) 	<ul style="list-style-type: none"> ▪ Prof. Dr. Karl Schmid 	<ul style="list-style-type: none"> ▪ Lecture 	4
3502-450	Population and Quantitative Genetics	1	Compulsory Plant Breeding and Seed Science	Schmid	E	1 Sem.	written	3502-451	<ul style="list-style-type: none"> ▪ Population and Quantitative Genetics 	<ul style="list-style-type: none"> ▪ Prof. Dr. Karl Schmid 	<ul style="list-style-type: none"> ▪ Lecture with Exercise 	4
3502-470	Plant Genetic Resources	2	Elective	Schmid	E	1 Sem.	oral	3502-471 3502-472	<ul style="list-style-type: none"> ▪ Biodiversity and Genetic Resources ▪ Utilization of Genetic Resources by Breeders 	<ul style="list-style-type: none"> ▪ Prof. Dr. Karl Schmid ▪ Prof. Dr. Karl Schmid 	<ul style="list-style-type: none"> ▪ Lecture ▪ Lecture 	2 2
3503-450	From Genes to Transgenic Plants	2	Elective	Weber	E	1 Sem.	schriftlich	3503-451	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪ Prof. Dr. Gerd Weber 	<ul style="list-style-type: none"> ▪ Lecture 	4
3503-460	Transgenic Organisms in Research and Agriculture	3	Elective	Weber	D	1 Sem.	schriftlich	3503-461	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪ Prof. Dr. Gerd Weber 	<ul style="list-style-type: none"> ▪ Exercise 	4
3504-420	Seed Technology	2	Elective	Kruse	D	1 Sem.	mündlich	3504-421 3504-422	<ul style="list-style-type: none"> ▪ Saatguttechnologie ▪ Übungen zur Saatgutprüfung mit Exkursion 	<ul style="list-style-type: none"> ▪ M. Sc. Sebastian Bopper, Prof. Dr. Michael Kruse ▪ M. Sc. Sebastian Bopper, Prof. Dr. Michael Kruse 	<ul style="list-style-type: none"> ▪ Lecture ▪ Exercise with Excursion 	2 1
3504-430	Seed Research	3	Compulsory Plant Breeding	Kruse	E	1 Sem.	oral presentation	3504-432 3504-431	<ul style="list-style-type: none"> ▪ Practical Course in Seed Research ▪ Seed Research 	<ul style="list-style-type: none"> ▪ M. Sc. Sebastian Bopper, Prof. Dr. Michael Kruse 	<ul style="list-style-type: none"> ▪ Exercise ▪ Lecture 	3 1

Module-Code	Name of Module	Sem.	Module obligation	Responsible Professor	Language	Module-Duration	Exam	LV-Code	Courses of the Module	Lecturer(s)	Type	SWS
			and Seed Science							M. Sc. Sebastian Bopper, Prof. Dr. Michael Kruse		
3601-450	Phytopathology	3	Compulsory Crop Protection	Vögele	E	1 Sem.	written	3601-452 3601-451	<ul style="list-style-type: none"> ▪ Exercises in Molecular Phytopathology ▪ Molecular Phytopathology 	<ul style="list-style-type: none"> ▪ Prof. Dr. Ralf Vögele ▪ Prof. Dr. Ralf Vögele 	<ul style="list-style-type: none"> ▪ Exercise Lecture with Seminar 	<ul style="list-style-type: none"> ▪ 2 ▪ 2
3602-450	Molecular Aspects of Plant Protection	1	Compulsory Crop Protection	Gerhards	E	1 Sem.	written	3602-454 3602-451 3602-452 3602-453	<ul style="list-style-type: none"> ▪ Mode of Action of Fungicides and Fungicide Resistance ▪ Mode of Action of Herbicides and Herbicide Resistance ▪ Mode of Action of Insecticides and Insecticide Resistance ▪ Natural Products for Plant Protection 	<ul style="list-style-type: none"> ▪ Prof. Dr. Ralf Vögele ▪ Prof. Dr. Roland Gerhards ▪ Prof. Dr. Claus Zebitz ▪ Prof. Dr. Roland Gerhards, Prof. Dr. Claus Zebitz 	<ul style="list-style-type: none"> ▪ Exercise Lecture ▪ Lecture ▪ Lecture 	<ul style="list-style-type: none"> ▪ 1 ▪ 1 ▪ 1
3602-460	Information Technologies and Expert Systems in Plant Protection	2	Compulsory Crop Protection	Gerhards	E	3,5 Weeks (B08)	written (80%) with presentation Ihinger Hof (20%)	3602-462 3602-461	<ul style="list-style-type: none"> ▪ Application Technologies and Expert Systems in Weed Management with Exercises ▪ Sensor Technologies for Plant Protection 	<ul style="list-style-type: none"> ▪ Prof. Dr. Roland Gerhards ▪ Prof. Dr. Roland Gerhards 	<ul style="list-style-type: none"> ▪ Seminar with Exercise ▪ Lecture 	<ul style="list-style-type: none"> ▪ 3 ▪ 1
3603-420	Crop Protection in Organic Farming	2	Elective	Zebitz	E	1 Sem.	written (70%) plus seminar (30%)	3603-421	<ul style="list-style-type: none"> ▪ Crop Protection in Organic Farming 	<ul style="list-style-type: none"> ▪ Prof. Dr. Claus Zebitz 	<ul style="list-style-type: none"> ▪ Lecture with Seminar 	<ul style="list-style-type: none"> ▪ 4
3603-470	Ecology of Insects	3	Compulsory Crop Protection	Zebitz	E	1 Sem.	written	3603-471	<ul style="list-style-type: none"> ▪ Ecology of Insects 	<ul style="list-style-type: none"> ▪ Prof. Dr. Claus Zebitz 	<ul style="list-style-type: none"> ▪ Lecture 	<ul style="list-style-type: none"> ▪ 4
3603-480	Entomology	1	Compulsory Crop Protection	Zebitz	D/E	1 Sem.	written	3603-481	<ul style="list-style-type: none"> ▪ Entomology 	<ul style="list-style-type: none"> ▪ Prof. Dr. Claus Zebitz 	<ul style="list-style-type: none"> ▪ Lecture 	<ul style="list-style-type: none"> ▪ 4

Module-Code	Name of Module	Sem.	Module obligation	Responsible Professor	Langu-age	Module-Duration	Exam	LV-Code	Courses of the Module	Lecturer(s)	Type	SWS
3603-490	Biological Pest Control	2	Elective	Zebitz	E	1 Sem.	written	3603-491	▪ Biological Pest Control	▪ Prof. Dr. Claus Zebitz	▪ Lecture	▪ 4
3603-500	Exercises in Biological Pest Control	2	Elective	Zebitz	E	3,5 Weeks (B10)	written	3603-501	▪ Exercises in Biological Pest Control	▪ Prof. Dr. Claus Zebitz	▪ Exercise	▪ 4
3703-430	Crop - Environment Interactions	2	Compulsory Crop Physiology and Nutrition	Wünsche	E	1 Sem.	report (70%) with oral presentation (30%)	3703-431	▪ Crop - Environment Interactions	▪ Prof. Dr. Jens Wünsche	▪ Lecture	▪ 4
3801-420	Crop Production Systems	3	Elective	Cadisch	E	3,5 Weeks (B04)	written	3801-421	▪ Crop Production Systems	▪ Prof. Dr. Georg Cadisch, Dr. Thomas Hilger	▪ Lecture with Exercise and Seminar	▪ 4
3802-410	Ecology and Agroecosystems	3	Elective	Sauerborn	E	3,5 Weeks (B02)	written	3802-411	▪ Ecology and Agroecosystems	▪ M. Sc. Inga Häuser, apl. Prof. Dr. Konrad Martin, Prof. Dr. Joachim Sauerborn	▪ Lecture with Seminar and Excursion	▪ 4
3802-420	Biodiversity, Plant and Animal Genetic Resources	2	Elective	Sauerborn	E	3,5 Weeks (B08)	written	3802-421	▪ Biodiversity, Plant and Animal Genetic Resources	▪ M. Sc. Inga Häuser, apl. Prof. Dr. Konrad Martin, Prof. Dr. Joachim Sauerborn, Prof. Dr. Karl Schmid, Prof. Dr. Anne Valle Zárate	▪ Lecture with Seminar, Excursion and Labexercise	▪ 4
3803-430	Ecophysiology of Crops in the Tropics and Subtropics	2	Elective	Asch	E	3,5 Weeks (B10)	oral	3803-431	▪ Ecophysiology of Crops in the Tropics and Subtropics	▪ Prof. Dr. Folkard Asch, Dr. Holger Brück	▪ Lecture with Exercise	▪ 4
3803-440	Signalling in Plants under Stress	3	Compulsory Crop Physiology and Nutrition	Asch	E	3,5 Weeks (B02)	oral	3803-441	▪ Signalling in Plants under Stress	▪ Prof. Dr. Folkard Asch, Prof. Dr. Uwe Ludewig, Prof. Dr. Jens Wünsche	▪ Lecture with Exercise	▪ 4
3803-450	Crop Production Affecting the Hydrological Cycle	3	Elective	Asch	E	3,5 Weeks (B04)	seminar paper and oral exam	3803-451	▪ Crop Production Affecting the Hydrological Cycle	▪ Prof. Dr. Folkard Asch, Dr. Holger Brück, Prof. Dr. Joachim Müller	▪ Lecture with Exercise	▪ 4

Block Periods 2011/2012

	Block	Period
Winter Semester	1	17.10. – 09.11.2011
	2	10.11. – 02.12.2011
	3	05.12. – 11.01.2012
	4	12.01. – 03.02.2012
	5	06.02. – 28.02.2012
Summer Semester	6	02.04. – 26.04.2012
	7	27.04. – 23.05.2012
	8	24.05. – 25.06.2012
	9	26.06. – 19.07.2012
	10	20.07. – 13.08.2012

Important Advice for the Personal Time-Table: Blocked modules will usually take place Monday to Friday from 2 p.m. to 6 p.m. Non-blocked modules will usually be taught in the morning. This shall enable students to combine blocked and unblocked modules. (Because of the limited number of lecture rooms, this aim can unfortunately not always be kept.) While working out your personal time-table, please be aware of the following facts: the morning is assigned for the personal preparation of the blocked modules too and the block periods B4, B5 and B9, B10 will have a relevant overlapping with the first examination period of the unblocked modules!

Please register 3 weeks before the respective block at the responsible institute!

Blocked Modules Winter Semester 2011/12

02.09.2011

● = Compulsory ◐ = Semi-elective ○ = Elective

Period	1 (17 days)	2 (17 days)	3 (17 days)	4 (17 days)	5 (17 days)	by Arrangement
Study Course	17.10. - 09.11.2011	10.11. - 02.12.2011	05.12. – 22.12.11 9.01. – 11.01.2012	12.01. - 03.02.2012	06.02. - 28.02.2012	
M. Sc. AgEcon	● 4904-460 (Berger) Farm System Modelling	● 4902-410 (Brockmeier) Applied Econometrics	◐ 4903-480 (Birner) Governance, Institut. and Organisat. Development	◐ 4301-410 (Hoffmann) Knowledge and Innovation Management	◐ 4201-420 (Grethe) Advanced Policy Analysis Modelling	
	◐ 4901-420 (Zeller) Poverty and Development Strategies		◐ 4902-420 (Brockmeier) International Food and Agricultural Trade (in 12/13!)	◐ 4904-430 (Berger) Land Use Economics		
M. Sc. AgriTropics	● 4901-420 (Zeller) Poverty and Development Strategies	● 3802-410 (Sauerborn) Ecology and Agroecosystems	● 4403-530 (Müller, J.) Natural Resource (Water and Soil) Management ..	● 3801-420 (Cadisch) Crop Production Systems	● 4801-450 (Valle Zárate) Livestock Production Systems ...	
	○ 4301-430 (Hoffmann) Rural Communication and Extension	○ 4904-450 (Berger) Farm and Project Evaluation	○ 4901-470 (Zeller) Quantitative Methods in Economics	○ 3803-450 (Asch) Crop Production Affecting the Hydrological Cycle	○ 3405-410 (Zikeli) Organic Farming in the Tropics and Subtropics	
	○ 3101-410 (Stahr) Tropical Soils and Land Evaluation	○ 4802-410 (Focken) Intensive Aquacult. Systems	○ 4801-430 (Valle Zárate) Livestock Breeding Programmes ...	○ 3501-440 (Melchinger) Plant Breeding and Seed Science in the T+S	○ 4802-420 (N.N.) Phys. and Ecol. Aspects of Animal Nutrition T+S	
		◐ 3803-440 (Asch) Signalling in Plants under Stress (in 12/13!)	◐ 4902-420 (Brockmeier) International Food and Agricultural Trade (in 12/13!)	○ 4903-490 (Birner) Social Dimensions of Agricultural Development	○ 4903-510 (Birner) Agriculture and Food Security in Fragile Systems	
M. Sc. Crop Sciences		◐ 3803-440 (Asch) Signalling in Plants under Stress (in 12/13!)		◐ 3501-460 (Melchinger) Planning. of Breeding Programmes		◐ 3301-460 (Müller, T.) Exercises in Plant Nutrition (after B5)
M. Sc. EnviroFood	VB● 4402-440 (Jungbluth) Agricultural Production and Residues	● 3202-410 (Fangmeier) Ecotoxicology and Environmental Analytics	● 3103-440 (Streck) Matter Cycling in Agro-Ecosystems	● 4602-460 (Hölzle) Environmental Microbiology, Parasitology ...	◐ 3004-410 (Trempp) Inland Water Ecosystems	
	VB● 1503-410 (Kohlus) Food Technology and Residues	◐ 3802-410 (Sauerborn) Ecology and Agroecosystems	◐ 4403-530 (Müller, J.) Natural Resource (Water and Soil) Management ..	◐ 3202-420 (Fangmeier) Global Change Issues	◐ 3003-410 (Schöne) Food Safety and Quality Chains (February 7-17, 6 hours per day)	◐ 3301-460 (Müller, T.) Exercises in Plant Nutrition (after B5)
	◐ 3202-430 (Fangmeier) Air Pollution and Air Pollution Control		◐ 4902-420 (Brockmeier) International Food and Agricultural Trade (in 12/13!)			
M. Sc. EnvEuro (first year and elective modules of second year)	○ 4402-440 (Jungbluth) Agricultural Production and Residues	○ 3202-410 (Fangmeier) Ecotoxicology and Environmental Analytics	● 3103-440 (Streck) Matter Cycling in Agro-Ecosystems	◐ 3803-450 (Asch) Crop Production Affecting the Hydrological Cycle	◐ 3004-410 (Trempp) Inland Water Ecosystems	
	○ 3202-430 (Fangmeier) Air Pollution and Air Pollution Control	○ 3802-410 (Sauerborn) Ecology and Agroecosystems	○ 4403-530 (Müller, J.) Natural Resource (Water and Soil) Management ..	○ 4602-460 (Hölzle) Environmental Microbiology, Parasitology ...		
	○ 4904-460 (Berger) Farm System Modelling			◐ 3202-420 (Fangmeier) Global Change Issues		
	○ 4901-420 (Zeller) Poverty and Dev. Strategies			◐ 4904-430 (Berger) Land Use Economics		
	○ 3101-410 (Stahr) Trop. Soil and Land Evaluation					

Blocked Modules Summer Semester 2012

02.09.2011

● = Compulsory ◐ = Semi-elective ○ = Elective

Study Course	Period	6 (17 days)	7 (17 days)	8 (17 days)	9 (17 days)	10 (17 days)	by Arrangement
		02.04. - 26.04.2012	27.04. - 23.05.2012	24.05. - 25.06.2012	26.06. - 19.07.2012	20.07. - 13.08.2012	
M. Sc. AgEcon			● 4101-410 (Lippert) Environmental and Resource Economics	● 4201-410 (Grethe) Agricultural and Food Policy	◐ 4903-500 (Birner) Policy Processes in Agriculture and Natural Resource Management	○ 4902-430 (Brockmeier) Food and Nutrition Security	
M. Sc. AgriTropics		● 3803-470 (Asch) Interdisciplinary Practical Science Training (AgriTropics only!)	○ 4901-430 (Zeller) Rural Development Policy and Institutions	○ 4201-410 (Grethe) Agricultural and Food Policy	◐ 4902-420 (Brockmeier) International Food and Agricultural Trade	○ 4902-430 (Brockmeier) Food and Nutrition Security	
			○ 3801-430 (Cadisch) Integrated Agricultural Production Systems	○ 3802-420 (Sauerborn) Biodiversity, Plant and Animal Gen. Resources	○ 4403-470 (Müller, J.) Renewable Energy f. Rural Areas	○ 3803-430 (Asch) Ecophysiology of Crops in the T+S	
			○ 4801-410 (Valle Zárate) Genetic Resources and Animal Husbandry Systems	○ 4403-550 (Müller, J.) Postharvest Technology of Food and Bio-Based Prod.	○ 4802-430 (Focken) Integration of Aquacult. in Agricult. Farm. Systems	○ 4602-450 (Hölzle) Food Safety a. Drinking Water Quality related to Zoonoses in the T+S	
M. Sc. Crop Sciences		○ 4407-430 (Griepentrog) Precision Farming		◐ 3602-460 (Gerhards) Information Technologies and Expert Systems ..		○ 3603-500 (Zebitz) Exercises in Biological Pest Control	
M. Sc. EnviroFood		◐ 3102-440 (Kandeler) Environmental Pollution and Soil Organisms	● 3103-450 (Streck) Spatial Data Analysis with GIS	◐ 3802-420 (Sauerborn) Biodiversity, Plant and Animal Gen. Resources	● 3103-460 (Streck) Environmental Science Project		
				◐ 4403-550 (Müller, J.) Postharvest Technology of Food & Bio-Based Prod.	◐ 4403-470 (Müller, J.) Renewable Energy for Rural Areas		
M. Sc. EnvEuro (first year)		◐ 3102-440 (Kandeler) Environmental Pollution and Soil Organisms	● 3103-450 (Streck) Spatial Data Analysis with GIS	● 3802-420 (Sauerborn) Biodiversity, Plant and Animal Gen. Resources	● 3103-460 (Streck) Environmental Science Project		
				● 4201-410 (Grethe) Agricultural and Food Policy	◐ 4403-470 (Müller, J.) Renewable Energy for Rural Areas		
M. Sc. OrganicFood						● 4801-460 (Valle Zárate) Organic Livestock Farming and Products	
M. Sc. Saiwam (Hohenheim)		● 3101-520 (Stahr) Interdisciplinary Study Project unblocked!	● 3103-450 (Streck) Spatial Data Analys. with GIS	○ 3101-460 (Stahr) Mapping Course ...	● 4802-430 (Focken) Integration of Aquaculture in Agricult. Farming Systems	◐ 4903-470 (Birner) Qualitative Research Methods in Rural Development Studies	
			● 4901-430 (Zeller) Rural Dev. Policy and Instit.				

Please register 3 weeks before the respective block at the responsible institute.

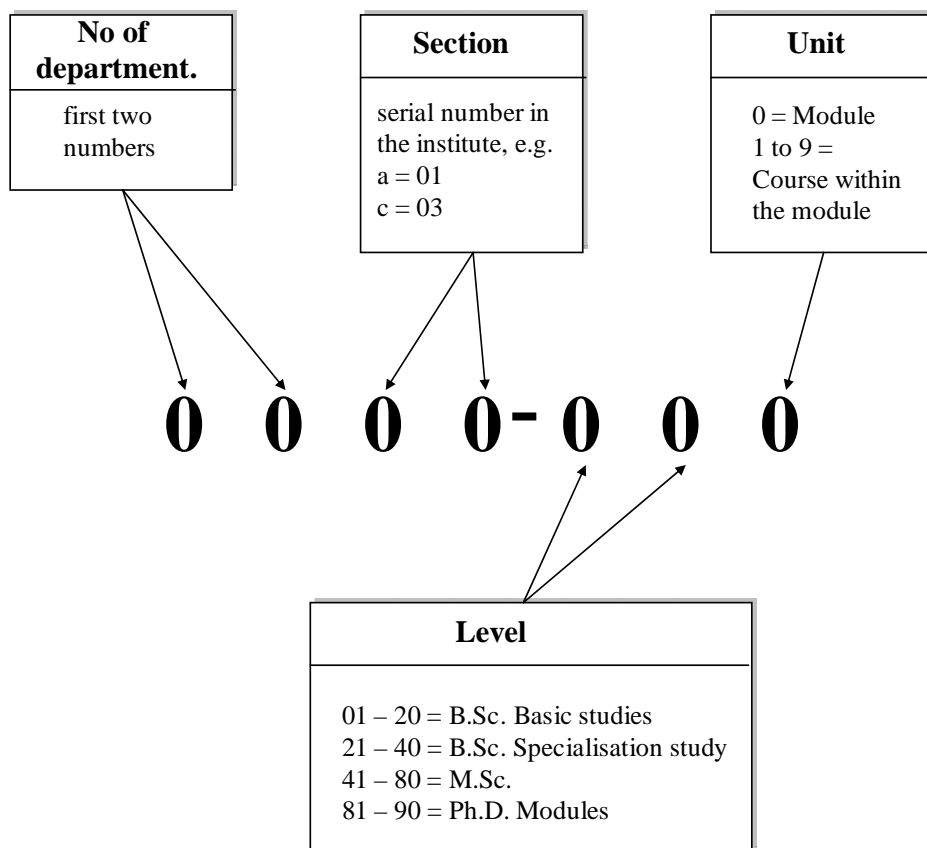
Unblocked Modules taught in English at the Faculty of Agricultural Sciences

● = Pflicht/Compulsory ◐ = Wahlpflicht/Semi-elective ○ = Wahl/Elective

AgEcon	Agri-Tropics	Crop Sciences	EnvEuro	Enviro-Food	Organic-Food	Unblocked Modules in Winter Semester (October - February)
○	○	○	◐	◐	○	1201-410 (Wulfmeyer) Remote Sensing
-	-	-	●	-	-	3005-410 (Fangmeier) Environmental Management in Europe (<i>for EnvEuro only!</i>)
○	○	○		○	○	3101-450 (Stahr) Major Pedological Field Trip (English + German)
○	○	○	○	○	○	3102-420 (Kandeler) Project in Soil Sciences (English + German)
○	○	○	○	○	○	3102-450 (Kandeler) Molecular Soil Ecology
○	○	○		○	○	3301-440 (Müller, T.) Soil Fertility and Fertilisation in Organic Farming
○	○	○	○	○	○	3301-450 (Müller, T.) Fertilisation and Appl. Soil Chemistry in the T+S
○	○	◐		○	○	3302-450 (Neumann) Plant Symbioses for Nutrient Acquisition
○	○	◐		○	○	3302-460 (Ludewig) Plant Quality
○	○	●		○	○	3401-470 (Claupein) Crop Physiology
○	●	○	●	○	○	3402-420 (Piepho) Quantitative Methods in Biosciences
○	○	○		○	○	3405-450 (Zikeli) Problems and Perspectives of Organic Farming (not in WS 11/12!)
○	○	○		○	●	3405-460 (Zikeli) Processing and Quality of Organic Food
○	○	○		○	●	3405-470 (Zikeli) Organic Food Systems and Concepts
○	○	◐		○	○	3501-470 (Melchinger) Selection Theory
		●				3502-440 (Schmid) Methods of Scientific Working for Crop Sciences
○	○	◐		○	○	3502-450 (Schmid) Population and Quantitative Genetics
○	○	◐		○	○	3504-430 (Kruse) Seed Research
○	○	◐		○	○	3601-450 (Vögele) Phytopathology
○	○	◐		○	○	3602-450 (Gerhards) Molecular Aspects of Plant Protection
○	○	◐		○	○	3603-480 (Zebitz) Entomology
○	○	◐		○	○	3603-470 (Zebitz) Ecology of Insects
◐	◐	◐		◐	●	4101-430 (Dabbert) Socioeconomics of Organic Farming (<i>replaced by 4201-440!</i>)
○	○	○	◐	●	●	4201-440 (Grethe) Economics and Environmental Policy
○	○	○		○	●	4303-440 (Bellows) Social Conditions of Organic and Sustainable Agriculture
○	○	○	○	○	○	4303-490 (Bellows) Ethics of Food and Nutrition Security
○	○	○	◐	◐	○	4406-410 (Kranert) Waste Management and Waste Techniques
◐	○	○		○	○	4904-410 (Berger) Agricultural Economics Seminar
AgEcon	Agri-Tropics	Crop Sciences	EnvEuro	Enviro-Food	Organic-Food	Unblocked Modules in Summer Semester (April - July)
-	-	-	◐	-	-	3005-420 (Fangmeier) Climate Change Impacts, Adaptation a. Mitigation (<i>EnvEuro !</i>)
○	○	○	○	○	○	3101-430 (Stahr) Interdisciplinary Advanced Soil Science Project (<i>English + German</i>)
○	○	○	○	○	○	3101-440 (Stahr) Soil Genesis, Classification and Geography (<i>English + German</i>)
○	○	○	○	○	○	3101-450 (Stahr) Major Pedological Field Trip (<i>English + German</i>)
○	○	○	○	○	○	3102-420 (Kandeler) Project in Soil Sciences (<i>English + German</i>)
○	○	○	◐	○	○	3401-450 (Claupein) Conservation Agriculture
○	○	○		○	●	3401-460 (Claupein) Organic Plant Production
○	○	●		○	○	3402-430 (Piepho) Bioinformatics
○	○	○		○	○	3405-450 (Zikeli) Problems and Perspectives of Organic Farming
○	○	○		○	●	3405-490 (Zikeli) Project in Organic Agriculture and Food Systems
○	○	◐		○	○	3501-450 (Melchinger) Breeding Methodology
○	○	○		○	○	3603-420 (Zebitz) Crop Protection in Organic Farming
		○		○	○	3603-490 (Zebitz) Biological Pest Control
○	○	◐		○	○	3703-430 (Wünsche) Crop – Environment Interactions
●	○	○		○	○	4202-420 (Becker, T.) Microeconomics
○	○	○		○	●	4202-440 (Becker, T) Markets and Marketing of Organic Food
◐	○	○		◐	○	4303-470 (Bellows) Gender, Nutrition, and Right to Food
○	○	○		◐	○	4303-480 (Bellows) Global Nutrition
-	●	-	-	-	-	4903-460 (Birner) Methods in Interdisciplinary Collaboration (<i>for AgriTropics only!</i>)

Unblocked modules will usually be taught in the morning. While working out your personal time-table, please be aware of the following facts: the morning is assigned for the personal preparation of the blocked modules too and the block periods B5 and B10 will have a relevant overlapping with the first examination period of the unblocked modules!

Explanation of Module Code



Lecture Periods

WS 11/12	First day of <u>un</u>-blocked modules:	(41. KW) Monday, 10.10.2011
	First day of blocked modules:	(42. KW) Monday, 17.10.2011
	Last day of <u>un</u>-blocked modules:	(5. KW) Saturday, 04.02.2012
	Last day of blocked modules:	(9. KW) Tuesday, 28.02.2012
SS 12	First day of blocked modules:	(14. KW) Monday, 02.04.2012
	First day of <u>un</u>-blocked modules:	(15. KW) Tuesday, 10.04.2012
	Last day of <u>un</u>-blocked modules:	(29. KW) Saturday, 21.07.2012
	Last day of blocked modules:	(33. KW) Monday, 13.08.2012

Free of lectures: All Saints' Day: 01.11.2011, Christmas holidays: 19.12.2011 – 07.01.2012 (blocks: 23.12.11 – 07.01.12), Easter holidays: 06. – 09.04.2012, Labour Day: 01.05.2012, Ascension Day: 17.05.2012, Pentecost holidays: 29.05.2012 – 02.06.2012 (except excursions), Feast of Corpus Christi: 07.06.2012. The "Dies Academicus" (date not yet known!) will be free of lectures too!

Examination periods in winter semester 2011/12

B.Sc. and M.Sc. period 1: calendar week 6 to 8
B.Sc. and M.Sc.: period 2: calendar week 12 to 14
Deadline for the registration for exams: see notice-board of examination office

Examination periods in summer semester 2012

B.Sc. and M.Sc. period 1: calendar week 30 to 32
B.Sc. and M.Sc.: period 2: calendar week 40 to 41
Deadline for the registration for exams: see notice-board of examination office

A registration form is available at the examination office.

Questions concerning the examination regulations, the study and examination plan, withdrawal or transcripts of records are answered at the examination office and the exact dates of the module examinations are posted at the online notice-board of the examination office at: (<https://www.uni-hohenheim.de/pruefung.html?&L=1>).