FB09

JUSTUS-LIEBIG-UNIVERSITÄT GIESSEN

Special Regulations for the Bachelor's and Master's degree programmes of the Faculty 09 - Agricultural Sciences, Nutritional Sciences and Environmental Management - of Justus Liebig University Giessen

From 12.06.2019

This is a translation of the "Special Regulations for Agricultural Sciences, Nutritional Sciences and Environmental Management". The English translation serves solely for purposes of information. The German language version of the Special Regulations is the legally binding version.

These regulations are valid from the winter semester 2019/20. At the same time the Special Regulations from 26 November 2014, which was last amended by resolution from 20 June 2018 (MUG 7.35.09 No. 1 / No. 2 of 10.10.18) shall cease to apply.

On the basis of section 44 (1) of the Hessian Higher Education Act of 14 December 2009, the Faculty Council of Faculty 09 - Agricultural Sciences, Nutritional Sciences and Environmental Management - adopted the following resolution on 12 June 2019.

Contents

Section I: General Information

§ 1 (to § 1 AllB) Scope

In addition to the General Regulations for Bachelor's and Master's programmes of the Justus Liebig University of Giessen of 20 February 2019 (AllB = Allgemeine Bestimmungen), these regulations govern the studies and examinations in the Bachelor's and Master's programmes of the Faculty 09.

§ 2 (to § 3 AIIB) Academic Degrees

(1) Upon successful completion of a Bachelor's examination, the faculty awards the degree "Bachelor's of Science", shortened "B.Sc.".

(2) Upon successful completion of a Master's examination, the faculty awards the degree "Master's of Science", shortened "M.Sc.".

(3) In the M.Sc. Transition Management programme, the Justus Liebig University Giessen (JLU) and the Kazan Federal University (KFU), Russia, will award the joint Master's degree in "Transition Management" (JLU) and "General and Strategic Management" (KFU) in their own certificates as part of a double Master's programme based on the agreements between the two universities (Appendix 6).

§ 3 (to § 4 AllB) Commencement of Studies

(1) The Bachelor's programmes can only be started in the winter semester.

(2) The Master's programmes Agrobiotechnology, Insect Biotechnology and Bioresources, and Transition Management can only be started in the winter semester, the other Master's programmes in the winter or summer semester.

§ 4 (to § 5 AllB) Admission to the Master's degree programmes

(1) The prerequisite for admission to the Master's programme is a relevant academic degree which is either listed in Appendix 3 or has been classified by the examination board as equivalent to the study programmes listed there.

(2) An admissions committee shall be appointed by the examination board for each course of study in order to examine the requirements pursuant to subsection 1. It shall consist of two professors. The respective Admissions Committee examines the applications received and prepares a proposal for a resolution for the Examination Committee. The Examination Board shall decide whether the requirements set out in subsection 1 have been met.

(3) Very good English language skills are required in order to be admitted to an English-language Master's programme in the department. These are documented by one of the following certificates:

a) TOEFL-Test ITB (internet-based test) with at least 80 points or IELTS-Test with at least grade 6 in the academic test;
b) Proof of obtaining a local higher education entrance qualification in one of the following countries: Australia, Ireland, Canada, New Zealand, USA, United Kingdom, South Africa;
c) Proof of a Bachelor's degree in English;
d) Proof of the "UNIcert II" certificate.

The Examination Board decides on the recognition of other language certificates.

Section II: Studies

§ 5 (to § 6 AllB) Workload and Standard Period of Study

(1) The Bachelor's programme has a standard period of study of six semesters and a total of 180 CP.

(2) The Master's programme has a standard period of study of four semesters and a scope of 120 CP.

§ 6 (to § 7 AllB) Structure of the Bachelor's study programme

(1) The study plan (Appendix 1a) provides students with information on how to plan their studies.

(2) Four courses of study with a Bachelor's of Science degree are offered:

1. Agricultural Sciences
2. Nutritional Sciences
3. Nutritional Sciences and Home Economics
4. Environmental Management

(3) The Bachelor's degree consists of:

1. 15 core modules,
2. 13 profile modules and
3. Bachelor's thesis

(4) The core competence is conveyed by the following modules:

1. Agricultural Sciences B.Sc.

- Introductory Chemical Practical Training
- Biology
- Economics and Business Administration I
- Mathematics and Statistics
- Basics in Ecology and Soil Science
- Farm Production Economics
- Politics and Markets of Agricultural and Nutritional Sciences
- Crop Production
- Animal Nutrition
- Plant Nutrition
- Phytomedicine
- Animal Husbandry and Farm Animal Ecology
- Agricultural Engineering I
- Animal Breeding
- Genetics and Plant Breeding

2. Nutritional Sciences B.Sc.

- Basic Chemistry Practical
- Biology
- Economics and Business Management I
- Mathematics and Statistics

- Biochemistry I
- Anatomy and Physiology I
- Nutritional Physiology
- Plant-based Food
- Human Food of Animal Origin
- Human Nutrition
- General Chemistry
- Practical Training in Nutritional Sciences
- Pathological Biochemistry
- Physics
- Evaluation of Nutritional Studies

3. Nutritional Sciences and Home Economics B.SC.

- Introductory Chemical Practical Training
- Biology
- Economics and Business Administration I
- Mathematics and Statistics
- Biochemistry I
- Anatomy and Physiology
- Nutritional Physiology
- Edible Plants
- Human Food of Animal Origin
- Hunan Nutrition
- Politics and Markets in Agriculture and Nutrition
- Production Management in the Nutrition Industry
- Public Health Nutrition
- Consumer Policy
- Consumer and Markets

4. Environmental Management B.Sc.

- Chemistry Practical Training
- Biology
- Economics and Business Administration I
- Mathematics and Statistics
- Physics
- Fundamentals of Ecology and Soil Science
- General and Molecular Microbiology
- Applied and Environmental Microbiology
- Soil and Landscape Ecology
- Sustainable Cycles and Waste Management
- Landscape Water Resources

- Agriculture and the Environment
- Management of Nature and Landscape
- Environmental Pollutants
- Environmental Economics and Environmental Communication

§ 7 (to § 7 AllB) **Structure of the Master's programme**

(1) The study plan (Appendix 1b) provides students with information on how to plan their studies.

(2) Ten courses of study with a Master's of Science degree are offered:

1. Agricultural and Resource Economics
2. Agrobiotechnology (taught in English)
3. Food Economics
4. Nutritional Sciences
5. Insect Biotechnology and Bioresources (taught in English)
6. Crop Sciences
7. Livestock Sciences
8. Home Economics and Nutritional Sciences
9. Transition Management (taught in English)
10. Environmental Sciences

(3) The Master's programme consists of:

1. regarding the Master's programmes 1 and 3 to 10:
    a) 8 core modules,
    b) 8 profile modules and
    c) Master's thesis
2. regarding the Master's programme 2:
    a) 8 core modules,
    b) 6 profile modules,
    c) industrial internship and
    d) Master's thesis

(4) The core competence is conveyed by the following modules:

1. Agricultural and Resource Economics M.Sc.

- Applied Econometrics
- Theory and Practice of Economic Development
- International Agricultural and Food Policy
- Land-use Modelling
- Managerial Economics in the Agro – Food Industry
- Resource Economics, Competitiveness and Agri - environmental policy
- Risk Management and Decision Support Mode
- Economic Development and World Agricultural Markets

2. Agrobiotechnology M.Sc.

- Animal Nutrition and Feed Science
- Biostatistics and Experimental Design
- Biotechnology and Genomics
- Microbial Food Biotechnology
- Molecular Phytopathology
- Plant Protection and Bioengineering
- Risk Assessment, Biosafety and Patent Law
- Special Biochemistry II
- Industrial Internship

3. Food Economics M.Sc.

- Applied Econometrics
- International Food- and Agricultural Policy
- Food Quality: Coordination, Decision-making and institutions
- Advanced Market Analysis
- Organisation Management in the Agricultural and Food Business
- Process engineering in food and service enterprises
- Management in the Agro-Food Industry
- Corporate Communication

4. Nutritional Sciences M.Sc.

- Nutrition and Metabolism
- Health Relevant Foods and Food Ingredients
- General Food Science
- Research Methods in Nutrition
- Pathophysiology and Nutritional Medicine
- Laboratory Course in Nutritional Physiology
- Special Biochemistry I
- Special Human Nutrition I

5. Insect Biotechnology and Bioresources M.Sc.

- Biostatistics and Experimental Design
- Natural Product Chemistry
- Entomology I
- Insect Biotechnology and Integrated Pest Management
- Entomology II
- Food Technology
- Bioprocess Engineering I
- Bioresources for Natural Product Discovery

6. Crop Science M.Sc.

- Applied Statistics
- Biochemistry in Plant Production
- Biological and Chemical Crop Protection

- Nutritional Physiology of Agricultural Crops
- Sustainable Agroecosystems
- Molecular Phytopathology
- Plant Breeding and Seed Science
- Cultivation Techniques in Agronomy

7. Livestock Sciences M.Sc.

- Agricultural Technology
- Physiology of Performance
- Molecular Animal Breeding and Biotechnology
- Laboratory Course Nutrition Physiology of Animals
- Special Nutrition Physiology
- Animal Nutrition, Product Quality and Environment
- Behavior and Housing of Farm Animals
- Breeding Assessment and Breeding Strategy

8. Nutritional Sciences and Home Economics M.Sc.

- Household, family and gender theories
- Economics of Care I: Performance and time management
- Economics of Care II: Financial management
- Internship, nutritional physiology
- Process engineering in food companies and service providers
- Special Human Nutrition I
- Statistics and epidemiology
- Theories and methods of social and consumer research

9. Transition Management M.Sc.

- Empirical Research Methods
- Law in Transition
- Transition in Practice
- Theory and Practice of Economic Development
- Power and Democracy
- Economics, Organization and Management in Agriculture and Food Industries
- Transition and Integration Economics
- Global Food Markets

10. Environmental Sciences M.Sc.

- Applied Statistics
- Soil Conservation and Decontamination
- Microbial Ecology
- Ecology of Agricultural Landscapes
- Quantitative Hydrology
- Resource Economics, Sustainability and Environmental Management
- Stocktaking of Soil and Site Evaluation for Land Use
- Environmental Chemistry

§ 8 (to § 8 AIIB) Modules

(1) The 13 profile modules shall be selected from the catalogue contained in appendix 1a or 1b of these regulations. Up to four core modules may be chosen as profile modules from the core module catalogue of another Bachelor's or Master's degree programme of the faculty 09. Profile modules may be chosen from courses offered by other faculties of the JLU or other universities as far as their scope and study-accompanying examination option corresponds to the modules in these regulations. The selection of courses from other faculties requires the approval of the examination board.

(2) In the Bachelor's programme only modules at Bachelor's level can be completed, in the Master's programme only modules at Master's level.

(3) One of the modules in the Bachelor's programme may consist of examined and graded courses in the field of Professional and Interdisciplinary Skills (AfK) to the extent of 6 CP.

(4) In the Master's programme, certain module combinations may be identified as a specialization in the diploma in accordance with Appendix 5.

(5) Students must create a study and examinations schedule with their choice of profile modules. The study and examination schedule list the profile modules and their respective allocation by semester. In order to set up a study and examinations schedule the student can, if desired, arrange a consultation appointment with the degree programme coordinator. The study and examinations schedule may be changed by the student. Modules listed in the study and examinations schedule with completed examinations and modules which are registered for the exam without the possibility to withdraw (§12 (2)) cannot be removed from the study and examinations schedule. This means that profile modules can no longer be changed after having failed.

(6) Students may sit examinations in modules other than those they are required to take during their course of study. Credits from extracurricular courses do not count towards the formation of the overall grade. Upon successful completion of an additional module, the respective results are to be listed in a separate certificate.

§ 9 (to § 9 AIIB) Modules

(1) Students register for modules in the previous semester. Students in their first semester can register for modules at the beginning of the lecture period. (2) In modules with restricted capacity the places available are allocated in accordance to the students' course of study plans (§ 8 (5)). In this procedure, students in advanced semesters are considered first. In case students have the same number of semesters and the module capacity offers a smaller number of places selection is made by the drawing of lots.

§ 10 (to § 10 AIIB) Internships

(1) Students may choose module BP 144 or MP 196 for their study and examinations schedule. With this choice the internship is mandatory. However, the internship has to be carried out independently from other modules and from the Bachelor's Thesis.

(2) Suitable companies or organizations for the internship who guarantee qualified supervision of the students are from the fields of Agricultural sciences, Nutritional sciences, Home Economics and Nutritional Sciences and Environmental Sciences according to the chosen course of study. The companies and organizations have to be considered qualified and have to be approved in advance by the Internship Office of the Faculty 09. In case of doubt, the Examination Board decides on the suitability.

(3) The minimum duration of the internship shall be 9 weeks. The duration of the daily work time complies with the conditions of the individual company or organization. Times of absence have to be made up, also if they are due to illness. The internship may be carried out in at maximum two different companies or organizations. In this case one part shall have a duration of at least four weeks.

(4) In order to have the internship recognized, the student shall submit the following documents to the internship office for each section:

a) a qualified internship certificate of the company or institution stating the period of the internship and the tasks and activities carried out by the student

b) the internship report (reflection paper) on the tasks, activities, knowledge and skills acquired during the traineeship, which must be endorsed as accurate by the company.

§ 11 (to § 18 Paragraph 7, § 23 and § 24 AIIB) Modes of Examination

(1) Further possible forms of examination in addition to the forms of examination mentioned in the General Regulations are written examination, oral examination and seminar paper:

- speech (oral presentation of the results, possibly supported by a presentation)

- written essay (text document that comprehensively explains the question to be answered)

- working on tasks (detailed, complete and correct presentation of the required content)

- project work (preparation of papers or documents on a specific task, e.g. internship report, excursion report, laboratory protocol, herbarium).

(2) Examinations include the answering of a task or several questions. The exam takes a minimum of 45 minutes and a maximum of 90 minutes.

(3) Oral examinations shall be conducted by two examiners as the examination of an individual or as a group examination. The duration of an oral examination shall at least be 15 minutes and at maximum 30 minutes per examinee. In case of group examinations each examinee shall be examined this time-span.

§ 12 (to § 17 Paragraph 3 AIIB) Prerequisites

(1) Modules or parts of modules which are held as lectures and tutorials do not require attendance.

(2) In modules or parts of modules which are carried out as seminars, internships or projects, regular attendance is a prerequisite of your examination. Regular participation is always a given if at least half of the course dates have been attended and no more than two classes have been missed without proper justification. In the case of further absences due to no fault of the student, the teacher shall decide whether and in what way the missed classes can be made up for: compensatory assessment or by attending other classes.

(3) Differing regulations, which further reduce compulsory attendance, can be made by the teacher in accordance with the module and agreed at the first module session.

§ 13 (to § 19 AIIB) Repeat Examinations

(1) If the first repeat examination is taken in the second examination period according to § 17 (1) and is not passed the student may apply for a second repeat examination after she/he has again participated in the module. The examination will then be taken in the following first examination period. This application has to be submitted to the examination office at the latest 10 days before the date of the third examination period.

(2) For the last repeat of an examination the person responsible for the module and the examinee may agree on a different mode of examination.

§ 14 Bachelor’s and Master’s thesis

(1) The Bachelor’s or Master’s study programme is considered to be passed if all modules have been awarded the grade "sufficient" or better.

(2) The overall grade results from the average grades awarded for all modules completed in accordance with § 6 (3) or § 7 (3). For this, the achieved grades are multiplied by the corresponding module credit points and its sum is divided by the total of all credits. The achieved credits for the Bachelor’s or Master’s thesis are weighted with the factor 2.

(3) Additionally tested modules pursuant to § 8 (6) shall not be included in the calculation of the overall grade.

§ 15 (to § 21 AIIB) Thesis

(1) The thesis consists of a written component and an oral component (colloquium). The thesis shall demonstrate that the candidate is capable of independently solving a clearly defined problem from within the relevant field of study by the application of scholarly methods within a certain period of time.

(2) Those students may be admitted to the Bachelor's thesis who can verify that they have successfully completed ten core competence modules and five profile modules. The Master's thesis can be registered at the earliest when six core modules have been completed. Thesis title and date of issuance shall be recorded by the examination office.

(3) The candidate is given the opportunity to suggest a topic. Upon request, the Chair of the Board of Examiners shall ensure that the candidate receives a topic within one month.

(4) The period allowed for preparing the Bachelor's or Master's thesis is six months. The topic must be narrowed down that it can be fully processed within a period of 360 hours for a Bachelor's thesis and a workload of 720 hours for a Master's thesis.

§ 17 (to § 21 AIIB) Thesis – Oral Part and Overall Assessment

(1) The thesis is evaluated by two examiners according to § 18 (2) HHG (Hessian Higher Education Act). One of the examiners has to be a professor.

(2) If the written part of the thesis was assessed with a grade of at least "sufficient", then the student shall present the essential results employed in his/her thesis in a colloquium. The colloquium shall be conducted no later than six weeks after the assessment of the written thesis has been communicated to the student. The examiners shall be the two scholars who assessed and graded the thesis according to § 18 (2) HHG.

(3) The duration of the colloquium shall be at least 20 minutes and no more than 30 minutes for Bachelor's students. For Master's students the colloquium shall be at least 30 minutes and shall not exceed 45 minutes. The date of the colloquium is determined by the examiners.

(4) The colloquium may be repeated once if graded "fail". This case does not permit the rewriting of the thesis.

(5) Members and affiliates of the university are permitted to attend the colloquium. If the presentation is disrupted, the Examining Committee may exclude the public.

(6) The overall grade of the thesis is determined as the average obtained from grades of the written thesis and the colloquium. The grade of the written Bachelor's thesis shall, however, be counted twice and the grade of the colloquium be counted single. The grade of the written Master's thesis shall, however, be counted thrice and the grade of the colloquium be counted single. The thesis is deemed to be "passed" if the written thesis and the colloquium are each awarded a grade of at least "sufficient".

§ 18 (to § 25 AIIB) Examination Periods and Deadlines

1) Examinations concluding modules shall be conducted within the stipulated examination periods. There are three examination periods:

1. As a general rule, the first examination period is in the last week of the lecture period and in the first week of the lecture-free period of a semester.

2. The second examination period is in the week prior to commencement of the lecture period of the following semester.

3. The third examination period is in the sixth week after lectures have commenced in the following semester.

(2) The students may sit their module-concluding examinations in the first or second examination period. The third examination period is only for re- and repeat examinations. The examination periods shall be determined by the Board of Examiners.

(3) The registration deadlines for the examinations are set by the Board of Examiners and are announced by the Examination Office. In the case of block modules or the provision of partial credit, the registration deadlines may be shortened or postponed by the Board of Examiners.

(4) Withdrawal from an initial registration is possible within the registration period without giving reasons. Withdrawal is not possible in the case of re- and repeat examinations.

§ 19 (to § 27 AIIB) Recognition of Academic Achievements

(1) If study and examination achievements are recognized for lateral entrants, the grades – insofar as the grading systems are comparable – must be adopted and included in the calculation of the overall grade in accordance with the examination regulations. In the case of incomparable grading systems, the note ”passed” is applied. A mark of recognition shall be included in the certificate.

§ 20 Implementation of Regulations

These regulations are valid from the winter semester 2019/20. At the same time the Special Regulations from 26 November 2014, which was last amended by resolution from 20 June 2018 (MUG 7.35.09 No. 1 / No. 2 of 10.10.18), shall cease to apply. Likewise, the Special Regulations for Transition Management M.Sc. from 31 March 2011, which was last amended by resolution from 24 January 2018, shall cease to apply (MUG 7.36.09 No. 4).

Giessen, 7 August 2019
Prof. Dr. Joybrato Mukherjee
President of Justus Liebig University Giessen

Appendix 1a: Study Course Plan for Bachelor’s degrees

Appendix 1b: Study Course Plan for Master’s degrees

Appendix 2a: Bachelor’s Module Directories

Appendix 2b: Master’s Module Directories

Appendix 3: Relevant Master’s degree programmes

Appendix 4: Master’s Specialisations

Appendix 5: Agreement on double degree academic programme

Appendix 1a: Study and Examinations Schedule Bachelor

Ideal Module Schedules

Bachelor Agricultural Sciences

1. Sem.	**Biology** (BK 002) 6 CP	**Economics and Business ManagementI** (BK 003) 6 CP	**Mathematics and Statistics** (BK 005) 6 CP	**Ecology and Soil Science** (BK 039) 6 **CP**	**Agricultural Engineering I** (BK 050) 6 CP	**30 CP**
2. Sem.	**Operational Production Management** (BK 008) 6 CP	**Policy and Markets in the Agricultural and Food Economy** (BK 014) 6 CP	**Animal breeding** (BK 046) 6 CP	**Genetics and Plant Breeding** (BK 047) 6 CP	**Introductory Chemistry Laboratory Course** (BK 001) 6 CP	**30 CP**
3. Sem.	**Crop Production** (BK 021) 6 CP	**Animal Nutrition** (BK 022) 6 CP	**Plant Nutrition** (BK 024) 6 CP	**Plant Pathology** (BK 025) 6 CP	**Profile Module** 6 CP	**30 CP**
4. Sem.	**Housing and Ecology of Farm Animals** (BK 026) 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**30 CP**
5. Sem.	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**30 CP**
6. Sem.	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Bachelor-Thesis** 12 CP		**30 CP**

Bachelor Nutritional Sciences

1. Sem.	**Biology** (BK 002) 6 CP	**Economics and Business Management I** (BK 003) 6 CP	**Mathematics and Statistics** (BK 005) 6 CP	**Anatomy and Physiology I** (BK 007) 6 CP	**General Chemistry** (BK 028) 6 CP	**30 CP**
2. Sem.	**Biochemistry I** (BK 006) 6 CP	**Physics** (BK 031) 6 CP	**Evaluation of Nutritional Studies** (BK 032) 6 CP	**Chemistry Laboratory Course** (BK 043) 6 CP	**Human Food of Animal Origin** (BK 012) 6 CP	**30 CP**
3. Sem.	**Nutritional Physiology** (BK 010) 6 CP	**Plant-based Food** (BK 011) 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**30 CP**
4. Sem.	**Human Nutrition** (BK 013) 6 CP	**Pathobiochemisty** (BK 030) 6 CP	**Practical Course in Food Sciences** (BK 029) 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**30 CP**
5. Sem.	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profil Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**30 CP**
6. Sem.	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Bachelor-Thesis** 12 CP		**30 CP**

Bachelor Nutritional Sciences and Home Economics

1. Sem.	**Introductory Chemistry Laboratory Course** (BK 001) 6 CP	**Biology** (BK 002) 6 CP	**Economics and Business Management I** (BK 003) 6 CP	**Mathematics and Statistics** (BK 005) 6 CP	**Food and Society** (BK 054) 6 CP	**30 CP**
2. Sem.	**Biochemistry I** (BK 006) 6 CP	**Family and Society** (BK 044) 6 CP	**Anatomy and Physiologie I** (BK 007)	**Production and Operations Management in the Food Economy** (BK 020) 6 CP	**Human Food of Animal Origin** (BK 012) 6 CP	**30 CP**
3. Sem.	**Economics of the Private Household** (BK 009) 6 CP	**Nutritional Physiology** (BK 010) 6 CP	**Plant-based Food** (BK 011) 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**30 CP**
4. Sem.	**Human Nutrition** (BK 013) 6 CP	**Policy and Markets in the Agricultural and Food Economy** (BK 014) 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**30 CP**
5. Sem.	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**30 CP**
6. Sem.	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Bachelor-Thesis** 12 CP		**30 CP**

Bachelor Environmental Management

1. Sem.	**Introductory Chemistry Laboratory Course** (BK 001) 6 CP	**Biology** (BK 002) 6 CP	**Economics and Business Management I** (BK 003) 6 CP	**Ecology and Soil Science** (BK 039) 6 **CP**	**Mathematics and Statistics** (BK 005) 6 CP	**30 CP**
2. Sem.	**Physics** (BK 031) 6 CP	**Soil and Landscape Ecology** (BK 035) 6 CP	**Basics in Landscape Hydrology** (BK 037) 6 CP	**Agriculture and Environment** (BK 038) 6 CP	**Sustainability Communication** (BK 055) 6 CP	**30 CP**
3. Sem.	**General and Molecular Mikrobiology** (BK 033) 6 CP	**Applied and Environmental Microbiology** (BK 034) 6 CP	**Recycling and Waste Management** (BK 036) 6 CP	**Pollutants in the Environment** (BK 041) 6 CP	**Profile Module** 6 CP	**30 CP**
4. Sem.	**Nature and Landscape Management** (BK 049) 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**30 CP**
5. Sem.	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**30 CP**
6. Sem.	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Bachelor-Thesis** 12 CP		**30 CP**

Appendix 1b: Study and Examinations Schedule Master

Ideal Module Schedules

Master Agrobiotechnology

1. Sem.	**Biostatistics and Experimental Design** (MK 002) 6 CP	**Plant Protection and Bioengineering** (MK 015) 6 CP	**Molecular Phytopathology** (MK 057) 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	30 CP
2. Sem.	**Special Biochemistry II** (MK 011) 6 CP	**Biotechnology and Genomics** (MK 016) 6 CP	**Microbial-Food-Biotechnology** (MK 018) 6 CP	**Animal Nutrition and Feed Science** (MK 007) 6 CP	**Profile Module** 6 CP	30 CP
3. Sem.	**Risk Assessment, Biosafety and Patent Law** (MK 013) 6 CP	**Industrial Internship** (MK 019) 12 CP		**Profile Module** 6 CP	**Profile Module** 6 CP	30 CP
4. Sem.	**Profile Module** 6 CP	**Master Thesis** 24 CP				30 CP

Master Insect Biotechnology and Bioresources

1. Sem	**Natural Product Chemistry** (MK 087) 6 CP	**Entomology I** (MK 088) 6 CP	**Insect Biotechnology and Integrated Pest Management** (MK 089) 6 CP	**Biostatistics and Experimental Design** (MK 002) 6 CP	**Profile Module** 6 CP	30 CP
2. Sem	**Entomology II** (MK 091) 6 CP	**Food Technology** (MK 092) 6 CP	**Bioprocess Engineering** (MK 093) 6 CP	**Bioresources for Natural Product Discovery** (MK 090) 6 CP	**Profile Module** 6 CP	30 CP
3. Sem	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	30 CP
4. Sem.	**Profile Module** 6 CP	**Master Thesis** 24 CP				30 CP

Master Transition Management

1. Sem	**Empirical Research Methods** (MK 068) 6 CP	**Law in Transition** (MK 101) 6 CP	**Theory andPractice of Economic Development** (MK 067) 6 CP	**Power and Democracy** (MK 103) 6 CP	**Profile Module** 6 CP	30 CP
2. Sem	**Transition in Practice** (MK 100) 6 CP	**Global Food Markets** (MK 102) 6 CP	**Economics, Organization and Management in Agriculture and Food Industries** (MK 070) 6 CP	**Transition and Integration Economics** 6 CP	**Profile Module** 6 CP	30 CP
3. Sem	**Internship** or **Profile Module** 6 CP		**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	30 CP
4. Sem.	**Profile Module** 6 CP	**Master Thesis** 24 CP				30 CP

Master Agricultural and Resource Economics

1. Sem	**Applied Econometrics** (MK 003) 6 CP	**Risk Management and Decision Support Models** (MK 084) 6 CP	**Organizational Economics in the Agro-Food Industry** (MK 050) 6 CP	**International Agricultural and Food Policy** (MK 097) 6 CP	**Theory and Practice of Economic Development** (MK 067) 6 CP	30 CP
2. Sem	**Managerial Economics in the Agro-Food Industry** (MK 001) 6 CP	**Resource Economics, Competiveness and Agro-Environmental Policy** (MK 083) 6 CP	**Land-use Modelling** (MK 85) 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	30 CP
3. Sem	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	30 CP
4. Sem.	**Profile Module** 6 CP	**Master Thesis** 24 CP				30 CP

Master Crop Sciences

1. Sem.	**Plant Breeding and Seed Science** (MK 056) 6 CP	**Molecular Phytopathology** (MK 057) 6 CP	**Nutritional Physiology of Agricultural Crops** (MK 058) 6 CP	**Biochemistry in Plant Producton** (MK 059) 6 CP	**Applied Statistics** (MK 062) 6 CP	30 CP
2. Sem.	**Sustainable Agroecosystems** (MK 096) 6 CP	**Cultivation Techniques in Agronomy** (MK 061) 6 CP	**Biological and Chemical Crop Protection** (MK 063) 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	30 CP
3. Sem.	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	30 CP
4. Sem.	**Profile Module** 6 CP	**Master Thesis** 24 CP				30 CP

Master Food Economics

1. Sem	**Applied Econometrics** (MK 003) 6 CP	**Corporate Communication** (MK 049) 6 CP	**Organizational Economics in the Agro-Food Industry** (MK 050) 6 CP	**Process Engieering in Food and Service Enterprises** (MK 053) 6 CP	**International Agricultural and Food Policy** (MK 097) 6 CP	30 CP
2. Sem	**Managerial Economics in the Agro-Food Industry** (MK 001) 6 CP	**Food Quality: Coordination, Decision-making and Institutions** (MK 039) 6 CP	**Market Analysis** (MK 045) 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	30 CP
3. Sem	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	30 CP
4. Sem.	**Profile Module** 6 CP	**Master Thesis** 24 CP				30 CP

Master Nutritional Sciences

1. Sem	**Special Biochemistry I** (MK 020) 6 CP	**Special Human Nutrition** (MK 024) 6 CP	**Laboratory Course in Nutritional Physiology** (MK 028) 6 CP	**Nutrition and Metabolism** (MK 042) 6 CP	**Profile Module** 6 CP	30 CP
2. Sem	**General Food Science** (MK 032) 6 CP	**Pathophysiology and Nutritional Medcine** (MK 037) 6 CP	**Research Methods in Nutrition** (MK 047) 6 CP	**Applied Nutrition Medicine** (MK 104) 6 CP	**Profile Module** 6 CP	30 CP
3. Sem	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	30 CP
4. Sem.	**Profile Module** 6 CP	**Master Thesis** 24 CP				30 CP

Master Livestock Sciences

1. Sem.	**Laboratory Course Nutrition Physiology of Animals** (MK 005) 6 CP	**Breeding Assessment and Breeding Strategy** (MK 025) 6 CP	**Molecular Animal Breeding and Biotechnology** (MK 021) 6 CP	**Behaviour and Housing of Farm Animals** (MK 029) 6 CP	**Physiology of Performance** (MK 033) 6 CP	30 CP
2. Sem.	**Agricultural Technology** (MK 008) 6 CP	**Animal Nutrition, Product Quality and Environment** (MK 043) 6 CP	**Special Nutritional Physiology** (MK 048) 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	30 CP
3. Sem	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	30 CP
4. Sem.	**Profile Module** 6 CP	**Master Thesis** 24 CP				30 CP

Master Nutritional Sciences and Home Economics

1. Sem.	**Theories and Methods of Social and Consumer Research** (MK 075) 6 CP	**Home Economics: Production and Time Management** (MK 072) 6 CP	**Laboratory Couse in Nutritional Physiology** (MK 028) 6 CP	**Special Human Nutrition** (MK 024) 6 CP	**Process Engineering in Food and Service Enterprises** (MK 053) 6 CP	30 CP
2. Sem.	**Theories and Concepts of Gender, Household and Family** (MK 078) 6 CP	**Home Economics: Financial Management** (MK 073) 6 CP	**Statistics and Epidemiology** (MK 077) 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	30 CP
3. Sem	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	30 CP
4. Sem.	**Profile Module** 6 CP	**Master Thesis** 24 CP				30 CP

Master Environmental Sciences

1. Sem.	**Applied Statistics** (MK 062) 6 CP	**Soil Conservation and Decontamination** (MK 027) 6 CP	**Quantitative Hydrology** (MK 031) 6 CP	**Environmental Chemistry** (MK 036) 6 CP	**Profile Module** 6 CP	30 CP
2. Sem.	**Soil Inventory and Site Evaluation for Land Use** (MK 51) 6 CP	**Ecology of Agricultural Landscapes** (MK 041) 6 CP	**Microbial Ecology** (MK 046) 6 CP	**Resource Economics, Sustainability and Environmental Management** (MK 080) 6 CP	**Profile Module** 6 CP	30 CP
3. Sem.	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	**Profile Module** 6 CP	30 CP
4. Sem.	**Profile Module** 6 CP	**Master Thesis** 24 CP				30 CP

Appendix 2a: Module Directory Bachelor

See “Module directory of Bachelor Courses”

Appendix 2b: Module Directory Master

See “Module directory of Master Courses”

Appendix 3: Approved Bachelor programs acknowledged for Master courses

The faculty 09 defines approved degree courses as precondition for the admission to the master degree courses.

M.Sc. Agrar- und Ressourcenökonomie (Agricultural and Resource Economics)
Einschlägige B.Sc.: - Agrarwirtschaft
- Agrarwissenschaften
- Landwirtschaft
- Nachwachsende Rohstoffe und Bioernergie
- Ökologische Landwirtschaft
- Umweltmanagement

M.Sc. Agrobiotechnology
Einschlägige B.Sc.: - Agrarbiologie
- Agrarwissenschaften
- Biologie
- Biotechnologie

M.Sc. Ernährungsökonomie (Food Economics)
Einschlägige B.Sc.: - Ernährungswissenschaften
- Ernährungs- und Lebensmittelwissenschaften
- Ernährungs- und Versorgungsmanagement
- Ökotrophologie

M.Sc. Ernährungswissenschaften (Nutritional Sciences)
Einschlägiger B.Sc.: Ernährungswissenschaften

M.Sc. Insect Biotechnology and Bioresources
Einschlägige B.Sc.: - Agrarwissenschaften
- Biologie
- Biotechnologie
- Chemie
- Lebensmittelchemie

M.Sc. Nutzpflanzenwissenschaften (Crop Sciences)
Einschlägige B.Sc.: - Agrarbiologie
- Agrarwirtschaft
- Agrarwissenschaften
- Gartenbau
- Landwirtschaft
- Nachwachsende Rohstoffe und Bioenergie
- Ökologische Landwirtschaft
- Umweltmanagement

M.Sc. Nutztierwissenschaften (Livestock Sciences)
Einschlägige B.Sc.: - Agrarbiologie
- Agrarwirtschaft
- Agrarwissenschaften
- Landwirtschaft

M.Sc. Ökotrophologie (Nutritional Sciences and Home Economics)

Einschlägige B.Sc.: - Catering und Hospitality Services
- Ernährung und Lebensmittelwissenschaften
- Ernährungsmanagement und Diätetik
- Ernährungswissenschaften
- Ernährungs- und Versorgungsmanagement
- Ökotrophologie

M.Sc. Transition Management
Einschlägige B.Sc.: - Agrarwissenschaften
- Ernährungswissenschaften
- Ökotrophologie
- Umweltmanagement
- Wirtschaftswissenschaften- Rechtswissenschaften
- Sozial- und Politikwissenschaften

M.Sc. Umweltwissenschaften (Environmental Sciences)
Einschlägige B.Sc.: - Agrarwissenschaften
- Biogeowissenschaften
- Geoökologie
- Ökosystemmanagement
- Umweltgeowissenschaften
- Umweltmanagement
- Umweltnaturwissenschaften
- Umweltwissenschaften

Appendix 4: Main Area of Study Master

Main Areas of Study in the Master degree course Crop Sciences

a) The Main Area of Study **Plant Breeding** is shown if the following profile modules are chosen:

1. Plant Breeding and Seed science II
2. Plant Breeding: Special Topics of Resistance and Quality Breeding
3. Population Genetics
4. Bioinformatics

b) The Main Area of Study **Plant Nutrition** is shown if the following profile modules are chosen:

1. Fertilizers and Nutrient Dynamics in Soils
2. Ecophysiology and Yield Physiology of Plant Nutrition
3. Soil Salinity and Salt Resistance of Crop Plants
4. Microorganisms in Biogeochemical Cycles

c) The Main Area of Study **Plant Protection** is shown if the following profile modules are chosen:

1. Plant Protection and Bioengineering
2. Plant-Microbe Interactions
3. Insect Biotechnology and Integrated Pest Management
4. Biotechnology for Pest Control

d) The Main Area of Study **Plant Production Systems** is shown if the following profile modules are chosen:

1. Food Systems
2. Ökonomik und Produktion von Bioenergie
3. Praxisseminar Betriebsanalyse und Produktionsplanung im landwirtschaftlichen Betrieb
4. Qualitätssicherung und -beurteilung pflanzlicher Nahrungsrohstoffe

Main Areas of Study in the Master degree course Nutritional Sciencs and Home Economics

The Main Area of Study **Management of Care and Health Service Institutions** is shown if the following profile modules are chosen:

1. Aspects of Controlling and Quality Management of Care and Health Service Institutions
2. Managing Care and Sustenance in the Network of Households and Services
3. Risk Management and Decision Support Models
4. Demoscopic Market Research

Main Areas of Study in the Master degree course Environmental Science

a) The Main Area of Study **Landscape Ecology and Nature Preservations** is shown if the following profile modules are chosen:

1. Renaturation Ecology and Landscape Development
2. Project in Landscape Ecology
3. Project Studies Soil Functions
4. Landscape Analysis with GIS

b) The Main Area of Study **Ecotoxicology** is shown if the following profile modules are chosen:

1. Environmental Analysis
2. Ecotoxicology
3. Microorganisms in Biogeochemical Cycles
4. Risk Assessment of Pesticides

c) The Main Area of Study **Resource Management** is shown if the following profile modules are chosen:

1. Material Flow Analysis and Management
2. Models of Environmental Processes
3. Economy of Rural Institutions
4. Natural Resoruces and Ecosystem Services