WEIHENSTEPHAN · TRIESDORF
University of Applied Sciences

# MODULE DESCRIPTION FOR THE COURSE OF STUDY

## Master Farm Management WiSe 2021/22
## Department of
## Agriculture, Food, and Nutrition

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## PRACTICAL TIME

| | |
|---|---|
| **Module number** | 392211010 |
| **EC-points** | 25.0 |
| **Weight for overall grade** | 0.0 |
| **Recommended semester of study** | 1 |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | Prof. Dr. Ralf Schlauderer |
| **Lecturers involved** | Franziska Rupp<br>Anette Schindler<br>Michael Schneider<br>Iryna Tröster |

### Competency objectives of the module

After completion of the module, students are able to understand important reasons of management desicions in agricultural businesses and to transfer that knowledge to future situations.
Students know the content and meaning of production techniques in crop and animal production as well as the functioning of agricultural production facilities and agricultural machines. Through this knowledge, students are able to understand and evaluate technical and organisational interrelations of the production process. They can deduce and evaluate the economic viability of single production processes and the economic sucess of entire businesses from economic indicators. They are able to understand the socio-economic environment of a business relating to its meaning for the development of agricultural production and rural areas.

### Contents of the module

### Requirements for participation
no requirements for participation

### Examinations

392211010 Practical Time
Exam form: Internship

### Courses with workload

392211010A Agricultural Internship
Teaching form: Internship | 0.0 SHPW | Contact study 560.00 h | Self-study 15.00 h

392211010B Courses
Teaching form: Internship | 5.0 SHPW | Contact study 75.00 h | Self-study 70.00 h

**Usability of the module in the following degree programs**

Master Farm Management

## PRACTICAL COURSES

| | |
|---|---|
| **Module number** | 392211020 |
| **EC-points** | 5.0 |
| **Weight for overall grade** | 0.0 |
| **Recommended semester of study** | 1 |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | N.N. |
| **Lecturers involved** | N.N. |

**Competency objectives of the module**

**Contents of the module**

**Requirements for participation**
no requirements for participation

**Examinations**

392211020 Practical Courses
Exam form: Written examination

**Courses with workload**

**Usability of the module in the following degree programs**

Master Farm Management

## BUSINESS MANAGEMENT

| | |
|---|---|
| **Module number** | 392212010 |
| **EC-points** | 5.0 |
| **Weight for overall grade** | 1.0 |
| **Recommended semester of study** | 2 |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | Prof. Dr. Ralf Schlauderer |
| **Lecturers involved** | N.N. |

**Competency objectives of the module**

After completion of the module, students are able to apply the most important methods of determining optimized business organisation. Students can evaluate important management techniques and elements of personnel management in view of farm management as well as their influence on farm sucess by means of practical sample applications.

**Contents of the module**
- Understanding basic economic terminology;
- Business owner and farm manager responsibilities;
- Major production factors in agriculture and their costs;
- Land use and costs of land;
- Depreciable fixed asset costs (machinery, buildings);
- Determining the capital requirement for current and livestock assets;
- Basic aspects of labour planning and costs of labour;
- Fundamental theory of production;
- Cost and output of agricultural enterprises;
- Introduction to multi-periodical investment calculations

**Requirements for participation**
no requirements for participation

**Examinations**

392212010 Business Management
Exam form: Written examination

**Courses with workload**

392212010A Business Management
Teaching form: Seminar-based tuition | 3.0 SHPW | Contact study 45.00 h | Self-study 60.00 h

392212010B Applying business management
Teaching form: Exercise | 1.0 SHPW | Contact study 15.00 h | Self-study 30.00 h

**Usability of the module in the following degree programs**

Master Farm Management

## PRODUCTION ECONOMICS SEMINAR

| | |
|---|---|
| **Module number** | 392212020 |
| **EC-points** | 5.0 |
| **Weight for overall grade** | 1.0 |
| **Recommended semester of study** | 2 |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | Prof. Dr. Johannes Holzner |
| **Lecturers involved** | N.N. |

**Competency objectives of the module**

After completion of the module, students are able to characterize and economically evaluate farm entrprises in animal and crop production. They are also able to critically assess their findings in the context of overall economic and social developments.
Students are able to independently translate and apply their learnt methods to new applications as well as evaluate the impact of external influencing factors on the economic viability of production processes.

**Contents of the module**

• Introduction to methods for assessing farm enterprises;
• Financial analysis of crop production enterprises (cash crops, feeding crops, grassland, pasture land); including discussing technical production aspects;
• Finncial analysis of livestock production enterprises (dairy cow, cattle rearing and fattening, piglet production, poultry, etc.); including discussing technical production aspects;
• Determining the capital requirement for current assets for various farm enterprises
• Determining cost covering minimum prices for major crop and livestock products in long rund and short run scenarios
• Determining factor remuneration (return on capital, labour land) for major crop and livestock enterprises in long rund and short run scenarios
• Analysing the financial viability of changes in intensity in crop and livestock production enterprises
• Analysing the financial viability of investments in crop and livestock production enterprises

**Requirements for participation**

no requirements for participation

**Examinations**

392212020 Production Economics Seminar
Exam form: Written examination

392212020-StA Production Economics Seminar StA
Exam form: undefined

**Courses with workload**

392212020A Production Economics Seminar
Teaching form: Seminar-based tuition | 3.0 SHPW | Contact study 45.00 h | Self-study 15.00 h

392212020B Course: Production Economics Seminar
Teaching form: Seminar | 2.0 SHPW | Contact study 30.00 h | Self-study 30.00 h

392212020C Coursework: Production Economics Seminar
Teaching form: Project seminar | 0.0 SHPW | Contact study 0.00 h | Self-study 30.00 h

**Usability of the module in the following degree programs**

Master Farm Management

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## CORPORATE MANGEMENT AND CONTROLLING

| | |
|---|---|
| **Module number** | 392212030 |
| **EC-points** | 5.0 |
| **Weight for overall grade** | 1.0 |
| **Recommended semester of study** | 2 |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | Prof. Dr. Ralf Schlauderer |
| **Lecturers involved** | N.N. |

**Competency objectives of the module**

After completion of the module, students are able to analyse organistational and HR structures in agricultural and agri-business companies and develop concepts for organisational and human resource management. Students can assess the current capital of farms of different legal frameworks and analyse the balance of accounts as well as bookings of current accounting transactions. They are able to analyse annual balance sheets, deduce operational figures and calculate an operational cost and performance accounting to develop a controlling system for a business.

**Contents of the module**

• Legal business structures
• Developing organisational and HR management concepts within agricultural as well as agri-business enterprises
• Specific aspects in HR management: motivational theories, group processes and conflicts, leadership, salary structures
• Basic accounting techniques considering business analytics( inventary check, balance sheet, etc.)
• Structure: annual report and annual analysis;
• Cost accounting; controlling and planning
• Efficiency metrics concerning profitability, stability and liquidity

**Requirements for participation**

no requirements for participation

**Examinations**

392212030 Corporate Management and Controlling
Exam form: Written examination

**Courses with workload**

392212030A Corporate Management and Controlling
Teaching form: Seminar-based tuition | 3.0 SHPW | Contact study 45.00 h | Self-study 60.00 h

392212030B Applying Corporate Management and Controlling
Teaching form: Exercise | 1.0 SHPW | Contact study 15.00 h | Self-study 30.00 h

**Usability of the module in the following degree programs**

Master Farm Management

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## COMPUTER SCIENCE FOR BUSINESS AND EMPIRICAL SOCIAL RESEARCH

| | |
|---|---|
| **Module number** | 392212040 |
| **EC-points** | 5.0 |
| **Weight for overall grade** | 1.0 |
| **Recommended semester of study** | 2 |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | Prof. Dr. Johannes Holzner |
| **Lecturers involved** | Dr. Aram Aristakesyan<br>Katja Krauter<br>Christian Schuh<br>Dr. Heinz-Peter Wolff |

**Competency objectives of the module**

After completion of the module, students are able to efficiently use electronic data processing systems as instruments for the rationalisation of operational processes such as administration, planning and controlling and as a way of gaining and sharing information.
The students are familiar with methodological procedures of applied empirical social research and are able to design and implement problem-oriented concepts for data collection and interpreting results.

**Contents of the module**
Computer science for business:
• MS Word: editing and formatting texts, structuring texts, automatic formatting and numbering, creating glossarys
• Power Point: designing presentations, animating text as well as graphic elements
• MS Excel: table formatting, conditional formatting and data validation, using worksheet function (basic mathematical functions, text and date functions, logical functions, lookup and reference functions, conditional functions, financial mathematical functions), creating complex tables for economic analyses, sensitivity analyses (what-if scenarios), designing diagrams, data base analyses

Emprical Social Research:
• Introduction to the importance of empirical social research; basic empirical social research questions
• Technical and behavioural aspects of collecting empirical data and information;
• Information collection approaches and related potentials for generalizing results
• Statistical tools for descriptive and inductive analyses of empirical data
• Planning and implementation of sampling plans and related analytical concepts
• Practical statistical data analysis in MS Excel: statistical worksheet functions, frequency, correlation, filtering operations, designing pivot tables (cross tables)

**Requirements for participation**
no requirements for participation

**Examinations**

392212040 Computer Science for Business and Empirical Social Research
Exam form: Written examination

392212040-StA Computer Science for Business and Empirical Social Research StA
Exam form: undefined

**Courses with workload**

392212040A Computer Science for Business
Teaching form: Seminar-based tuition | 3.0 SHPW | Contact study 45.00 h | Self-study 30.00 h

392212040B Empirical Social Reseach Methods
Teaching form: Seminar-based tuition | 2.0 SHPW | Contact study 30.00 h | Self-study 30.00 h

392212040C Coursework: Empirical Social Research
Teaching form: Project seminar | 0.0 SHPW | Contact study 0.00 h | Self-study 15.00 h

**Usability of the module in the following degree programs**

Master Farm Management

## CORPORATE PLANNING

| | |
|---|---|
| **Module number** | 392212050 |
| **EC-points** | 5.0 |
| **Weight for overall grade** | 1.0 |
| **Recommended semester of study** | 2 |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | Prof. Dr. Ralf Schlauderer |
| **Lecturers involved** | N.N. |

**Competency objectives of the module**

After completing the module, students understand basic economic relationships at whole farm level, are able to analyze the financial efficiency at whole farm level, and make key decisions for farm development using different planning methods.

**Contents of the module**

• Farm planning - general economic principles and its workflow
• Farm data collection
• Whole farm efficiency analysis.
• Overview of major farm planning methods;
• Farm business optimisation planning using programme planning II
• Whole-farm budgeting using programme planning I
• Introduction to Linear programming (simplex algorithm) for farm business planning
• Basic financing concepts
• Introduction to multi-period investment calculation

**Requirements for participation**

no requirements for participation

**Examinations**

392212050 Corporate Planning
Exam form: Written examination

**Courses with workload**

392212050A Corporate Planning
Teaching form: Seminar-based tuition | 3.0 SHPW | Contact study 45.00 h | Self-study 60.00 h

392212050B Seminar: Corporate Planning
Teaching form: Seminar | 1.0 SHPW | Contact study 15.00 h | Self-study 30.00 h

**Usability of the module in the following degree programs**

Master Farm Management

## AGRICULTURAL POLICY SEMINAR

| | |
|---|---|
| **Module number** | 392213010 |
| **EC-points** | 5.0 |
| **Weight for overall grade** | 1.0 |
| **Recommended semester of study** | 3 |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | Prof. Dr. Johannes Holzner |
| **Lecturers involved** | N.N. |

**Competency objectives of the module**

After successful completion of the module, students will be able to categorize agricultural policy within general economic and political contexts, as well as evaluate the institutional implementation of agro-political strategies and their goal-oriented application in order to influence the agricultural sector. This includes comparative discussions surrounding agro-political goal systems, the introduction to and analysis of agro-political decision-making bodies, as well as an overview of the most significant instruments navigating agricultural policy within European and international contexts.

**Contents of the module**

- Reasons and goals of independent agricultural policy
- Agencys, institutions and funding of agricultural policy; the agricultural sector seen in economic context
- Developments and state of affairs of selected agricultural markets; basics of division of labour and international trade
- National agricultural policy; market adjustments and effectiveness of market political instruments
- Agro-structural policy, policy for the development of rural regions
- Environmental connections of agricultural production, Agro-environmental policy

**Requirements for participation**

no requirements for participation

**Examinations**

392213010 Agricultural Policy Seminar
Exam form: Written examination

**Courses with workload**

392213010A Agricultural Policy Seminar
Teaching form: Seminar-based tuition | 4.0 SHPW | Contact study 60.00 h | Self-study 90.00 h

**Usability of the module in the following degree programs**

Master Farm Management

## INTERNATIONAL AGRICULTURAL MARKETING STRATEGIES

| | |
|---|---|
| **Module number** | 392213020 |
| **EC-points** | 5.0 |
| **Weight for overall grade** | 1.0 |
| **Recommended semester of study** | 3 |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | Prof. Dr. Ralf Schlauderer |
| **Lecturers involved** | N.N. |

**Competency objectives of the module**

After completion of the module, students are able to draft and finalise marketing strategies and implement them practically using methods of market development and market operation (especially in an international context).
In detail, this means:
- The students, using practical examples, learn how to professionally research markets, customers and competitors, and how to subsequently assess that information from an international corporation perspective.
- By contrasting these findings with the strengths and weaknesses of specific corporations, they identify market opportunities and risks and infer growth strategies from those.
- The students can apply the instruments of the marketing-mix (product, pricing, distribution and communication policy) in concrete situations in an international environment
- Through project-based study, the students apply the contents of the course to problems typical for their home countries.

**Contents of the module**
Strategic marketing:
• Situation analysis
• Environment analysis
• Market analysis
• Competitor analysis
• Target audience analysis
• Analysing your own company
• SWOT analysis
• Customer and target audience analysis
• Marketing conception
• Marketing goals
• Marketing strategies
• Budgeting marketing
• Marketing controlling

Operative Marketing / The Marketing Mix:
• Product policy

• Price and contracting policy
• Distribution policy, B2B marketing
• Communication policy
• Marketing planning

**Requirements for participation**
no requirements for participation

**Examinations**

392213020 International Agricultural Marketing Strategies
Exam form: Written examination

392213020-StA International Agricultural Marketing Strategies StA
Exam form: undefined

**Courses with workload**

392213020A International Agricultural Marketing Strategies
Teaching form: Seminar-based tuition | 3.0 SHPW | Contact study 45.00 h | Self-study 60.00 h

392213020B Coursework: International Agricultural Marketing Strategies
Teaching form: Project seminar | 1.0 SHPW | Contact study 15.00 h | Self-study 30.00 h

**Usability of the module in the following degree programs**

Master Farm Management

## PROJECT PLANNING AND PROJECT EVALUATION

| | |
|---|---|
| **Module number** | 392214010 |
| **EC-points** | 5.0 |
| **Weight for overall grade** | 1.0 |
| **Recommended semester of study** | 4 |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | Prof. Dr. Johannes Holzner |
| **Lecturers involved** | N.N. |

**Competency objectives of the module**

After successfully completing the module, students are familiar with the project approach, its elements and conceptual planning stages, as well as evaluation methods according to current international standards and know how to use and apply those methods within basic projects.

**Contents of the module**

- Programme Concept, Project Concept and Project Cycle Management
- Project finding, result model, stakeholder map and delimitation of action area
- Application of the LogFrame approach
- Pre-feasibility and feasibility study
- Scheduling activities (CPM), staff, materials and funding
- Creating and applying an Evaluation Matrix
- Consideration of OECD Evaluation criteria and MDGs
- Approaches for economic and financial evaluation
- Tools for "qualitative" and soft evaluation topics

**Requirements for participation**

no requirements for participation

**Examinations**

392214010 Project Planning and Project Evaluation
Exam form: Written examination

392214010-TN Project Planning and Project Evaluation TN
Exam form: undefined

**Courses with workload**

392214010A Project Planning and Project Evaluation
Teaching form: Seminar-based tuition | 2.0 SHPW | Contact study 36.00 h | Self-study 60 h

392214010B Seminar: Project Planning
Teaching form: Seminar | 2.0 SHPW | Contact study 24 h | Self-study 30 h

**Usability of the module in the following degree programs**

Master Farm Management

## INTERNSHIP

| | |
|---|---|
| **Module number** | 392214020 |
| **EC-points** | 5.0 |
| **Weight for overall grade** | 1.0 |
| **Recommended semester of study** | 4 |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | N.N. |
| **Lecturers involved** | N.N. |

**Competency objectives of the module**

**Contents of the module**

**Requirements for participation**
no requirements for participation

**Examinations**

392214020 Internship
Exam form: Student research project | 8 weeks

**Courses with workload**

**Usability of the module in the following degree programs**

Master Farm Management

## IN-DEPTH STUDY PROJECT

| | |
|---|---|
| **Module number** | 392213130 |
| **EC-points** | 5.0 |
| **Weight for overall grade** | 1.0 |
| **Recommended semester of study** | 3 |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | every semester |
| **Module responsible** | Prof. Dr. Ralf Schlauderer |
| **Lecturers involved** | Carsten Hümmer<br>Christian Schuh<br>Iryna Tröster |

**Competency objectives of the module**

After completing the module, students are able to gather necessary data from farms for farm development planning, analyze the financial efficiency at whole farm level, analyze alternative farm organization development options, develop financing plans for investments and present the results in a consultancy report.

**Contents of the module**

• On-farm data collection for farm development measures
• Application of comparative gross margin calculations for farm planning and consulting
• Analysis of weaknesses of agricultural business and development/analysis of possible improvement measures
• Financial planning for investments
• Development of business plans for farming and agri-business companies

**Requirements for participation**

no requirements for participation

**Examinations**

392213130 In-depth study project
Exam form: Student research project | 12 weeks

**Courses with workload**

392213130A In-depth study project
Teaching form: Seminar-based tuition | 2.0 SHPW | Contact study 30.00 h | Self-study 120.00 h

392213130B Coursework (study project)
Teaching form: Project seminar | 2.0 SHPW | Contact study 30.00 h | Self-study 45.00 h

**Usability of the module in the following degree programs**

Master Farm Management

## MANAGEMENT CONSULTING

| | |
|---|---|
| **Module number** | 392213140 |
| **EC-points** | 5.0 |
| **Weight for overall grade** | 1.0 |
| **Recommended semester of study** | 3 |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | Prof. Dr. Johannes Holzner |
| **Lecturers involved** | Dr. Michael Tröster |

**Competency objectives of the module**

After completion of the module, students are familiar with and able to apply optimization methods within agricultural production and agro-business environments. They can implement their results into organisational concepts, link them to marketing concepts, and ultimately convey and present them using consultation methods and techniques.

**Contents of the module**

- linear programming for farm planning: basics;
- applying linear programming basics to optimize farms within practical business consultancy frameworks;
- specific aspects surrounding the development of organisational and marketing concepts for agribusiness and agricultural production enterprises;
- applying multi-periodical investment calculations in selected fields;
- practical aspects of consultancy methodology and presentation of findings in view of consulting agribusiness as well as agricultural production enterprises

**Requirements for participation**

no requirements for participation

**Examinations**

392213140 Management Consulting
Exam form: Written examination

392213140-StA Management Consulting StA
Exam form: undefined

**Courses with workload**

392213140A Management Consulting
Teaching form: Seminar-based tuition | 2.0 SHPW | Contact study 30.00 h | Self-study 30.00 h

392213140B Management Consulting Seminar
Teaching form: Seminar | 1.0 SHPW | Contact study 15.00 h | Self-study 30.00 h

392213140C Coursework: Management Consulting
Teaching form: Seminar | 1.0 SHPW | Contact study 15.00 h | Self-study 30.00 h

**Usability of the module in the following degree programs**

Master Farm Management

## IN-DEPTH STUDY PROJECT

| | |
|---|---|
| **Module number** | 392213230 |
| **EC-points** | 5.0 |
| **Weight for overall grade** | 1.0 |
| **Recommended semester of study** | 3 |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | N.N. |
| **Lecturers involved** | N.N. |

**Competency objectives of the module**

After completing the module, students are able to gather necessary data from farms for farm development planning, analyze the financial efficiency at whole farm level, analyze alternative farm organization development options, develop financing plans for investments and present the results in a consultancy report.

**Contents of the module**

• On-farm data collection for farm development measures
• Application of comparative gross margin calculations for farm planning and consulting
• Analysis of weaknesses of agricultural business and development/analysis of possible improvement measures
• Financial planning for investments
• Development of business plans for farming and agri-business companies

**Requirements for participation**

no requirements for participation

**Examinations**

392213230 In-depth study project
Exam form: Student research project | 12 weeks

**Courses with workload**

**Usability of the module in the following degree programs**

Master Farm Management

## AGRICULTURAL-ENGINEERING CONSULTING

| | |
|---|---|
| **Module number** | 392213240 |
| **EC-points** | 5.0 |
| **Weight for overall grade** | 1.0 |
| **Recommended semester of study** | 3 |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | Prof. Dr. Ulrich Groß |
| **Lecturers involved** | N.N. |

**Competency objectives of the module**

After completing this module, students are able to analyse, compare and assess mechanisation processes in grain crop production, both from an economic and from a technical perspective. Taking into consideration the varying frameworks provided by different locations, students are able to develop agricultural mechanisation concepts, assess them economically, and convey and present those concepts employing professional consulting techniques.

**Contents of the module**

combine harvesting; soil management / soil management systems; straw management and managing stubble; seed bed preparations; seeding: grain seeding, single seed; machinery combinations; Precision Farming, Post-harvest technologies
economic aspects in fam mechanisation: stastic and multi-periodical investment calculations; economically comparing alternative land use management systems.

**Requirements for participation**

no requirements for participation

**Examinations**

392213240 Agricultural-engineering Consulting
Exam form: Written examination

392213240-StA Agricultural-engineering Consulting StA
Exam form: undefined

**Courses with workload**

392213240A Seminar: Agricultural Engineering
Teaching form: Seminar-based tuition | 3.0 SHPW | Contact study 45.00 h | Self-study 60.00 h

392213240B Seminar: Economic Planning
Teaching form: Seminar | 1.0 SHPW | Contact study 15.00 h | Self-study 30.00 h

**Usability of the module in the following degree programs**

Master Farm Management

## IN-DEPTH STUDY PROJECT

| | |
|---|---|
| **Module number** | 392213330 |
| **EC-points** | 5.0 |
| **Weight for overall grade** | 1.0 |
| **Recommended semester of study** | 3 |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | N.N. |
| **Lecturers involved** | N.N. |

**Competency objectives of the module**
After completing the module, students are able to gather necessary data from farms for farm development planning, analyze the financial efficiency at whole farm level, analyze alternative farm organization development options, develop financing plans for investments and present the results in a consultancy report.

**Contents of the module**
• On-farm data collection for farm development measures
• Application of comparative gross margin calculations for farm planning and consulting
• Analysis of weaknesses of agricultural business and development/analysis of possible improvement measures
• Financial planning for investments
• Development of business plans for farming and agri-business companies

**Requirements for participation**
no requirements for participation

**Examinations**

392213330 In-depth study project
Exam form: Student research project | 12 weeks

**Courses with workload**

**Usability of the module in the following degree programs**

Master Farm Management

## REGIONAL DEVELOPMENT STRATEGIES

| | |
|---|---|
| **Module number** | 392213340 |
| **EC-points** | 5.0 |
| **Weight for overall grade** | 1.0 |
| **Recommended semester of study** | 3 |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | N.N. |
| **Lecturers involved** | N.N. |

**Competency objectives of the module**

**Contents of the module**

**Requirements for participation**
no requirements for participation

**Examinations**

392213340 Regional Development Strategies
Exam form: Written examination

392213340-StA Regional Development Strategies StA
Exam form: undefined

**Courses with workload**

**Usability of the module in the following degree programs**

Master Farm Management

## IN-DEPTH STUDY PROJECT

| | |
|---|---|
| **Module number** | 392213430 |
| **EC-points** | 5.0 |
| **Weight for overall grade** | 1.0 |
| **Recommended semester of study** | 3 |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | N.N. |
| **Lecturers involved** | N.N. |

**Competency objectives of the module**
After completing the module, students are able to gather necessary data from farms for farm development planning, analyze the financial efficiency at whole farm level, analyze alternative farm organization development options, develop financing plans for investments and present the results in a consultancy report.

**Contents of the module**
• On-farm data collection for farm development measures
• Application of comparative gross margin calculations for farm planning and consulting
• Analysis of weaknesses of agricultural business and development/analysis of possible improvement measures
• Financial planning for investments
• Development of business plans for farming and agri-business companies

**Requirements for participation**
no requirements for participation

**Examinations**

392213430 In-depth study project
Exam form: Student research project | 12 weeks

**Courses with workload**

**Usability of the module in the following degree programs**

Master Farm Management

## APPLIED RESEARCH AND DEVELOPMENT PROJECTS

| | |
|---|---|
| **Module number** | 392213440 |
| **EC-points** | 5.0 |
| **Weight for overall grade** | 1.0 |
| **Recommended semester of study** | 3 |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | Prof. Dr. Johannes Holzner |
| **Lecturers involved** | N.N. |

### Competency objectives of the module

Upon successfully completing the module, students are able to independently, scientifically analyse an agro-economic, practically relevant question. They are able to identify necessary information and data, define respective sources, raise further data, and process it according to current scientific and professional standards. Students are able to grasp problem scenarios, structure those accordingly, and prepare systematic solution strategies.
Students are in a position to apply aforementioned methodological and executional competences in order to solve a set of tasks within the agricultural production and agri-business fields independently and in a goal-oriented manner, project them onto organisational concepts, and connect them with respective marketing concepts. They are familiar with applying scientific methods as well as required documentation of the results in a written report, complying with scientific standards. They are able to deal with financial constraints and time limitations, as well as with set goals regarding executing the finished product.
Students are able to integrate within the social framework of study groups within the university environment, as well as within the social and hierarchial structure of a previously unfamiliar business. Students are in a position to successfully convey and present their results supported by professional consultation techniques.

### Contents of the module

- source materials and information: research techniques, organisation, structure and analysis
- scientific reporting and presenting: methods
- communication techniques
- consultancy sessions: goals, functions and structure
- practical data evaluation

### Requirements for participation

no requirements for participation

### Examinations

392213440 Applied Research and Development Projects
Exam form: Student research project | 14 weeks

**Courses with workload**

392213440A Applied Research and Development Projects
Teaching form: Seminar | 1.0 SHPW | Contact study 15.00 h | Self-study 20.00 h

392213440B project study
Teaching form: Project seminar | 3.0 SHPW | Contact study 45.00 h | Self-study 70.00 h

**Usability of the module in the following degree programs**

Master Farm Management

## AGRICULTURAL WATER MANAGEMENT

| | |
|---|---|
| **Module number** | 830100070 |
| **EC-points** | 5.0 |
| **Recommended semester of study** | |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | N.N. |
| **Lecturers involved** | N.N. |

**Competency objectives of the module**
Upon completion of this module, the students know methods of using water for agricultural purposes, especially for irrigation on different technological levels and linked to different climatic, social and economic conditions of agricultural production. Students are familiar with irrigation technology, methods to estimate crop water requirement and strategies to optimize water use in agriculture. They are be able to plan and evaluate irrigation projects with respect to their technical set-up, as well as environmental and economic impact. Students know about the development of irrigated agriculture both in technical and social terms; the functioning of irrigation systems and related equipment; basics of water storage, lifting and transport; plant physiology related to water supply, socio-economic implications of applying modern irrigation equipment and methods. Students are able to calculate crop water requirement based on the climatic water balance; Develop irrigation strategies based on soil, crop and climate aspects; decide on appropriate technology for irrigation depending on the socioeconomic conditions; lay-out an irrigation system.

**Contents of the module**
Water resources of the world and the value of water:
Water use and water-stress world-wide, competition for water, water foot-print, Water price (access to water, irrigation projects, subsidies)

Water use in Agricultural systems:
History: The origins of water use and the development from the neolithic revolution to modern times, water use in different regions of the world under different natural and cultural conditions, technological development along with developments in agriculture and society. Irrigation and environmental impact. Water quality and effluent water from agricultural use, Salinization in irrigated agriculture.

Surface irrigation methods: Basin irrigation, Furrow irrigation:
Basin irrigation: levelling, distribution of water on the field, losses due to evaporation and deep percolation, optimization based on water application and soil type, furrow irrigation: Field preparation, field lay-out in terms of furrow spacing, inclination and length. Dealing with superficial drainage.

Pressurized irrigation: sprinkler and micro irrigation:
Sprinkler irrigation systems: Hand-set, irrigation machines, components and set-up of a micro irrigation system: Head station, penstock, emitters; testing, operation and maintenance of micro-irrigation systems; filtering, application of fertilizers (fertigation), irrigation and fertigation in protected cultivation

Automation in irrigation control:

Soil moisture monitoring, monitoring of water and nutrient status of the crop, remote sensing, sensor use, communication and sensor fusion, precision irrigation.

Irrigation demand and economics of irrigation:
Water use efficiency, Crop water productivity, cost of irrigation equipment (fixed costs), gross margin

Sustainable water use in irrigation:
Planning, evaluation of intervention policies.

The climatic water balance:
Function of water in plants, Plant physiological reactions to drought, Crop Water Requirement (CWR) modeling based on climatic water balance

Individual and group work using IT based irrigation planning software (CROPWAR, AQUACROP, ALB-irrigation planner), with regard to climatic water balance, function of water in plants, plant physiological reactions to drought, crop Water Requirement (CWR) modeling based on climatic water balance

**Requirements for participation**
English B2 level

**Examinations**

830100070 Agricultural Water Management
Exam form: Written examination | 90 minutes

**Courses with workload**

830100070A Agricultural Water Management
Teaching form: Seminar-based tuition | 3.0 SHPW | Contact study 45 h | Self-study 60 h

830100070B Agricultural Water Management Seminar
Teaching form: Seminar | 1.0 SHPW | Contact study 15 h | Self-study 30 h

**Usability of the module in the following degree programs**

Master International Master in Agricultural Management
Master Farm Management

## SEMINAR LIVESTOCK FARMING / CROP PRODUCTION

| | |
|---|---|
| **Module number** | 831900100 |
| **EC-points** | 5.0 |
| **Recommended semester of study** | |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | every semester |
| **Module responsible** | Prof. Dr. Klaus-Peter Wilbois |
| **Lecturers involved** | Prof. Dr. Jörg Rühle<br>Dr. Anne Schiborra<br>Prof. Dr. Klaus-Peter Wilbois |

**Competency objectives of the module**

After completing the module, students have a basic understanding in crop production regarding soil fertility, nutrient dynamics and fertilization, plant protection, yield physiology and environmental protection. They know the measures of a Special Production Technique in selected agricultural crops (crop management) taking into account economic and ecological aspects.

Upon completion of the module, students will be familiar with important breeds and husbandry systems of farm animals. Likewise, they are familiar with the basics of energy evaluation and can assess and compose rations for the most important farm animals.

**Contents of the module**

Crop production:

- Climatic conditions for crop production, primarily in temperate latitudes
- Parameters of soil fertility and their influence on crop production (soil type, humus, porosity, nFk, colloids, KAK…)
- Different methods of soil cultivation and assessment of the suitability of the systems for different climatic conditions
- Dynamics of important nutrients in soil and plant (forms, sources, resupply, buffering, leaching, root uptake…)
- Principles and practice of fertilization and its influence on yield physiology and quality. (Types of fertilizers, balancing, scheduling, influences on metabolism and yield structure…)
- Basics and practical measures of integrated pest management. (Pests, diseases, infection chains, crop rotation, soil tillage; Properties of important herbicides, fungicides and insecticides and their practical use…)
- Summary of individual statements and overall discussion of crop management of selected crops using current statements from experimental and extension work.
- Possibilities of crop management in organic farming.

Livestock production:

- Basics of nutrition of monogasters and ruminants
- Physiology of the ruminant digestion
- Diseases, caused by malnutrition as Ketosis, Acetosis, etc.

- Energy and nutrient evaluation for dairy cows, based on the German feed calculation system
- Selected feed stuffs and their nutritinal values
- Principle of how to preserve feed stuffs (silage, preservation by drying or by using acids)
- Practical feeding of ruminants including ration calculation
- Feed Analysis in the Lab and practical estimation of the energy content
- Practical feeding of monogasters (pigs, poultry) including ration calculation
- Cattle and pig breeds and their typical characteristics
- Housing systems for dairy cows
- Digital tools to survey feeding, housing or herd management conditions
- Principles of how to feed ruminants to prevent climate change
- Organizational forms of dairy, beef and pork production
- Breeding basics using practical examples

**Requirements for participation**
no requirements for participation

**Examinations**

831900100 Seminar in Livestock Farming / Seminar in Crop Production
Exam form: Written examination

**Courses with workload**

831900100A Crop Production Seminar
Teaching form: Seminar | 2.0 SHPW | Contact study 30.00 h | Self-study 45.00 h

831900100B Livestock Production Seminar
Teaching form: Seminar | 2.0 SHPW | Contact study 30.00 h | Self-study 45.00 h

**Usability of the module in the following degree programs**

Master Farm Management

## SEMINAR CROP PRODUCTION / AGRICULTURAL ENGINEERING

| | |
|---|---|
| **Module number** | 831900110 |
| **EC-points** | 5.0 |
| **Recommended semester of study** | |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | every semester |
| **Module responsible** | Prof. Dr. Klaus-Peter Wilbois |
| **Lecturers involved** | Prof. Dr. Klaus-Peter Wilbois<br>Paul Wittmann |

### Competency objectives of the module

After completing the module, students will be able to assign and evaluate the systematics of tractors, their construction types and application characteristics. They are familiar with tractor assemblies and their variants and can assign and evaluate components.
The students know the basic principles of the interaction between chassis and ground. They will be able to assess both the basic design and the function of essential agricultural machines.
After completion of the module, students have a basic understanding in crop production regarding soil fertility, nutrient dynamics and fertilization, plant protection, yield physiology and environmental protection. They know the measures of a special production technique in selected agricultural crops (crop management) taking into account economic and ecological aspects.

### Contents of the module

Agricultural Engineering:

- History of tractor development, types of tractors and their range of application, components of tractors and their variants;
- Engines, optimization of combustion, performance characteristics and evaluation of engines;
- Chassis and chassis components, wheel-ground interaction, tractive force and tractive power;
- Basic structure and function of selected agricultural lead machines.

Crop Production:

- Climatic conditions for crop production, primarily in temperate latitudes
- Parameters of soil fertility and their influence on crop production (soil type, humus, porosity, nFk, colloids, KAK…)
- Different methods of soil cultivation and assessment of the suitability of the systems for different climatic conditions
- Dynamics of important nutrients in soil and plant (forms, sources, resupply, buffering, leaching, root uptake…)
- Principles and practice of fertilization and its influence on yield physiology and quality. (Types of fertilizers, balancing, scheduling, influences on metabolism and yield structure…)
- Basics and practical measures of integrated pest management. (Pests, diseases, infection chains, crop rotation, soil tillage; Properties of important herbicides, fungicides and insecticides and their practical use…)

- Summary of individual statements and overall discussion of crop management of selected crops using current statements from experimental and extension work.
- Possibilities of crop management in organic farming.

**Requirements for participation**
no requirements for participation

**Examinations**

831900110 Seminar in Crop Production / Seminar in Agricultural Engineering
Exam form: Written examination

**Courses with workload**

831900110A Seminar in agricultural engineering
Teaching form: Seminar | 2.0 SHPW | Contact study 30.00 h | Self-study 45.00 h

831900110B Seminar in crop production
Teaching form: Seminar | 2.0 SHPW | Contact study 30.00 h | Self-study 45.00 h

**Usability of the module in the following degree programs**

Master Farm Management

## SEMINAR AGRICULTURAL ENGINEERING / LIVESTOCK FARMING

| | |
|---|---|
| **Module number** | 831900120 |
| **EC-points** | 5.0 |
| **Recommended semester of study** | |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | every semester |
| **Module responsible** | Prof. Dr. Jörg Rühle |
| **Lecturers involved** | Prof. Dr. Jörg Rühle<br>Dr. Anne Schiborra<br>Paul Wittmann |

**Competency objectives of the module**

Upon completion of the module, students will be familiar with important breeds and husbandry systems of farm animals. Likewise, they are familiar with the basics of energy evaluation and can assess and compose rations for the most important farm animals.

After completing the module, students will be able to classify and evaluate the systematics of tractors, their construction types and application characteristics. They are familiar with tractor assemblies and their variants and can assign and evaluate components.
The students know the basic principles of the interaction between chassis and ground. They will be able to assess both the basic structure and the function of essential agricultural guidance machines.

**Contents of the module**
Livestock Production:
- Basics of nutrition of monogasters and ruminants
- Physiology of the ruminant digestion
- Diseases, caused by malnutrition as Ketosis, Acetosis, etc.
- Energy and nutrient evaluation for dairy cows, based on the German feed calculation system
- Selected feed stuffs and their nutritinal values
- Principle of how to preserve feed stuffs (silage, preservation by drying or by using acids)
- Practical feeding of ruminants including ration calculation
- Feed Analysis in the Lab and practical estimation of the energy content
- Practical feeding of monogasters (pigs, poultry) including ration calculation
- Cattle and pig breeds and their typical characteristics
- Housing systems for dairy cows
- Digital tools to survey feeding, housing or herd management conditions
- Principles of how to feed ruminants to prevent climate change
- Organizational forms of dairy, beef and pork production
- Breeding basics using practical examples

Agricultural Mechanisation:

- History of tractor development, types of tractors and their range of application, components of tractors and their variants;
- Engines, optimization of combustion, performance characteristics and evaluation of engines;
- Chassis and chassis components, wheel-ground interaction, tractive force and tractive power;
- Basic structure and function of selected agricultural lead machines.

**Requirements for participation**
no requirements for participation

**Examinations**

831900120 Seminar in Agricultural Engineering / Seminar in Livestock Farming
Exam form: Written examination

**Courses with workload**

831900120A Seminar in livestock farming
Teaching form: Seminar | 2.0 SHPW | Contact study 30.00 h | Self-study 45.00 h

831900120B Seminar in agricultural engineering
Teaching form: Seminar | 2.0 SHPW | Contact study 30.00 h | Self-study 45.00 h

**Usability of the module in the following degree programs**

Master Farm Management

## GERMAN AS A FOREIGN LANGUAGE - INTERMEDIATE (B1 CEFR)

| | |
|---|---|
| **Module number** | 960400040 |
| **EC-points** | 5.0 |
| **Recommended semester of study** | |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | Dr. Gabriel Dorta Mendez |
| **Lecturers involved** | Thomas Bartl |

**Competency objectives of the module**

Der Kurs verfolgt folgende Kompetenzziele:
- Die Fähigkeit, einige Alltagssituationen sowie erste studien- und berufsbezogene Kommunikationssituationen in der Fremdsprache in geschriebenen und gesprochenen Kommunikationsformen zu bewältigen.
- Die Fähigkeit, kulturelle Unterschiede wahrzunehmen und dazu Stellung zu nehmen.
- Entwicklung von Lernstrategien, die der Weiterentwicklung der Sprachkenntnisse der Studierenden dienen.

**Contents of the module**

**Requirements for participation**
Teilnahme am onSET-Einstufungstest oder erfolgreicher Abschluss vom Niveau A2. 75% Anwesenheitspflicht.

**Examinations**

960400040 German as a Foreign Language - Intermediate (B1 CEFR)
Exam form: undefined

**Courses with workload**

960400040A Deutsch als Fremdsprache - Aufbaustufe 1 (B1 GeR)
Teaching form: Language course | 4.0 SHPW | Contact study 60.00 h | Self-study 120.00 h

**Usability of the module in the following degree programs**

Master Farm Management

## AGRICULTURAL OPERATING SYSTEMS / CONSULTING METHODOLOGY

| | |
|---|---|
| **Module number** | 830100050 |
| **EC-points** | 5.0 |
| **Recommended semester of study** | |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | every semester |
| **Module responsible** | Prof. Dr. Ralf Schlauderer |
| **Lecturers involved** | Dr. Bernd Müller<br>Dr. Heinz-Peter Wolff |

**Competency objectives of the module**

Upon successfully completing the module, students are in a position to comprehend definition, classification and initial layout of market and subsistence-oriented farming systems. They are familiar with the system elements that influence and determine farmers' decision-making, understand data requirements of holistic analyses of farming systems and know approaches for data acquisition even in difficult circumstances. Students are able to classify farming systems and to apply holistic analyses in order to support farmers in decision making processes.

Upon successfully completing the module, students are able to apply communication basics and methods, as well as professional consulting techniques. Within interview situations, students can adapt the roles of both consultant and client (i.e., observe, as well as reflect upon, consultations). Students recognize their own opinion frame and will have developed new behavioural repertoires.

**Contents of the module**
**Farming Systems Research:**
- development and characteristics of farming systems
- components and approaches of farming systems analyses
- resource and process analyses
- required data and approaches for classifying farming systems
- analyses of farming systems components (family, farm, household, off-farm activities)
- parameters of overall economic success for holistic evaluations of farming systems

**Consulting Methods:**
- communication and communication methodology basics
- consulting: definition and function
- basic concepts and models
- consulting approaches and the system behind consulting work
- types of communication and methodology. Goals, functions and typical consultation procedures
- constructive initial mindsets and communication techniques within non-directive interview situations
- consulting situations: cardinal errors and obstructive behaviour
- non-directive communication in professional consulting and how this is applied

- typical organisational consulting service frameworks

**Requirements for participation**
no requirements for participation

**Examinations**

830100050 Agricultural Operating Systems / Consulting Methodology
Exam form: Written examination

**Courses with workload**

830100050A Consulting Methodology
Teaching form: Seminar | 2.0 SHPW | Contact study 30.00 h | Self-study 45.00 h

830100050B Agricultural Operating Systems
Teaching form: Seminar | 2.0 SHPW | Contact study 30.00 h | Self-study 45.00 h

**Usability of the module in the following degree programs**

Master Farm Management

## AGRICULTURAL WATER MANAGEMENT

| | |
|---|---|
| **Module number** | 830100070 |
| **EC-points** | 5.0 |
| **Recommended semester of study** | |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | N.N. |
| **Lecturers involved** | N.N. |

**Competency objectives of the module**
Upon completion of this module, the students know methods of using water for agricultural purposes, especially for irrigation on different technological levels and linked to different climatic, social and economic conditions of agricultural production. Students are familiar with irrigation technology, methods to estimate crop water requirement and strategies to optimize water use in agriculture. They are be able to plan and evaluate irrigation projects with respect to their technical set-up, as well as environmental and economic impact. Students know about the development of irrigated agriculture both in technical and social terms; the functioning of irrigation systems and related equipment; basics of water storage, lifting and transport; plant physiology related to water supply, socio-economic implications of applying modern irrigation equipment and methods. Students are able to calculate crop water requirement based on the climatic water balance; Develop irrigation strategies based on soil, crop and climate aspects; decide on appropriate technology for irrigation depending on the socioeconomic conditions; lay-out an irrigation system.

**Contents of the module**
Water resources of the world and the value of water:
Water use and water-stress world-wide, competition for water, water foot-print, Water price (access to water, irrigation projects, subsidies)

Water use in Agricultural systems:
History: The origins of water use and the development from the neolithic revolution to modern times, water use in different regions of the world under different natural and cultural conditions, technological development along with developments in agriculture and society. Irrigation and environmental impact. Water quality and effluent water from agricultural use, Salinization in irrigated agriculture.

Surface irrigation methods: Basin irrigation, Furrow irrigation:
Basin irrigation: levelling, distribution of water on the field, losses due to evaporation and deep percolation, optimization based on water application and soil type, furrow irrigation: Field preparation, field lay-out in terms of furrow spacing, inclination and length. Dealing with superficial drainage.

Pressurized irrigation: sprinkler and micro irrigation:
Sprinkler irrigation systems: Hand-set, irrigation machines, components and set-up of a micro irrigation system: Head station, penstock, emitters; testing, operation and maintenance of micro-irrigation systems; filtering, application of fertilizers (fertigation), irrigation and fertigation in protected cultivation

Automation in irrigation control:

Soil moisture monitoring, monitoring of water and nutrient status of the crop, remote sensing, sensor use, communication and sensor fusion, precision irrigation.

Irrigation demand and economics of irrigation:
Water use efficiency, Crop water productivity, cost of irrigation equipment (fixed costs), gross margin

Sustainable water use in irrigation:
Planning, evaluation of intervention policies.

The climatic water balance:
Function of water in plants, Plant physiological reactions to drought, Crop Water Requirement (CWR) modeling based on climatic water balance

Individual and group work using IT based irrigation planning software (CROPWAR, AQUACROP, ALB-irrigation planner), with regard to climatic water balance, function of water in plants, plant physiological reactions to drought, crop Water Requirement (CWR) modeling based on climatic water balance

**Requirements for participation**
English B2 level

**Examinations**

830100070 Agricultural Water Management
Exam form: Written examination | 90 minutes

**Courses with workload**

830100070A Agricultural Water Management
Teaching form: Seminar-based tuition | 3.0 SHPW | Contact study 45 h | Self-study 60 h

830100070B Agricultural Water Management Seminar
Teaching form: Seminar | 1.0 SHPW | Contact study 15 h | Self-study 30 h

**Usability of the module in the following degree programs**

Master International Master in Agricultural Management
Master Farm Management

## COOPERATIVE ENTREPRENEURSHIP / AGRICULTURAL OPERATING SYSTEMS

| | |
|---|---|
| **Module number** | 830300010 |
| **EC-points** | 5.0 |
| **Recommended semester of study** | |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | Prof. Dr. Ralf Schlauderer |
| **Lecturers involved** | Dr. Heinz-Peter Wolff |

**Competency objectives of the module**

Upon successfully completing the module, students are in a position to comprehend definition, classification and initial layout of market and subsistence-oriented farming systems. They are familiar with the system elements that influence and determine farmers' decision-making, understand data requirements of holistic analyses of farming systems and know approaches for data acquisition even in difficult circumstances. Students are able to classify farming systems and to apply holistic analyses in order to support farmers in decision making processes.

Upon successfully completing the module, students are familiar with set up and structure of cooperatives, know their economic functions, and will have familiarised themselves with the necessary frameworks surrounding succesful cooperations.
They know core legal conditions, particularly cooperative laws and statutory drafts.
Students now understand the impact of capital within cooperatives and are able to develop and evaluate business models for cooperatives.

**Contents of the module**

Cooperative Entrepreneurship:
- definition and nature of cooperatives
- general conditions
- legal basics
- structure
- economic and individual benefit
- capital
- use of profit and re-investment
- business plans
- models for invoicing
- statutory drafts

Agricultural Operating Systems:
- development and characteristics of farming systems
- components and approaches of farming systems analyses
- resource and process analyses
- required data and approaches for classifying farming systems

- analyses of farming systems components (family, farm, household, off-farm activities)
- parameters of overall economic success for holistic evaluations of farming systems

**Requirements for participation**
no requirements for participation

**Examinations**

830300010 Cooperative Entrepreneurship / Agricultural Operating Systems
Exam form: Written examination

**Courses with workload**

830300010A Agricultural Operating Systems
Teaching form: Seminar | 2.0 SHPW | Contact study 30.00 h | Self-study 45.00 h

830300010B Cooperative Entrepreneurship
Teaching form: Seminar | 2.0 SHPW | Contact study 30.00 h | Self-study 45.00 h

**Usability of the module in the following degree programs**

Master Farm Management

## CONSULTING METHODOLOGY/COOPERATIVE ENTREPRENEURSHIP

| | |
|---|---|
| **Module number** | 830300020 |
| **EC-points** | 5.0 |
| **Recommended semester of study** | |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | Prof. Dr. Ralf Schlauderer |
| **Lecturers involved** | Dr. Bernd Müller |

**Competency objectives of the module**

Upon successfully completing the module, students are able to apply communication basics and methods, as well as professional consulting techniques. Within interview situations, students can adapt the roles of both consultant and client (i.e., observe, as well as reflect upon, consultations). Students recognize their own opinion frame and will have developed new behavioural repertoires.

Upon successfully completing the module, students are familiar with set up and structure of cooperatives, know their economic functions, and will have familiarised themselves with the necessary frameworks surrounding succesful cooperations.
They know core legal conditions, particularly cooperative laws and statutory drafts.
Students now understand the impact of capital within cooperatives and are able to develop and evaluate business models for cooperatives.

**Contents of the module**
Consulting Methodology:
- communication and communication methodology basics
- consulting: definition and function
- basic concepts and models
- consulting approaches and the system behind consulting work
- types of communication and methodology. Goals, functions and typical consultation procedures
- constructive initial mindsets and communication techniques within non-directive interview situations
- consulting situations: cardinal errors and obstructive behaviour
- non-directive communication in professional consulting and how this is applied
- typical organisational consulting service frameworks

Cooperative Entrepreneurship:
- definition and nature of cooperatives
- general conditions
- legal basics
- structure
- economic and individual benefit
- capital
- use of profit and re-investment

- business plans
- models for invoicing
- statutory drafts

**Requirements for participation**
no requirements for participation

**Examinations**

830300020 Consulting Methodology / Cooperative Entrepreneurship
Exam form: Written examination

**Courses with workload**

830300020A Consulting Methodology
Teaching form: Seminar | 2.0 SHPW | Contact study 30.00 h | Self-study 45.00 h

830300020B Cooperative Entrepreneurship
Teaching form: Seminar | 2.0 SHPW | Contact study 30.00 h | Self-study 45.00 h

**Usability of the module in the following degree programs**

Master Farm Management

## GERMAN AS A FOREIGN LANGUAGE - INTERMEDIATE (B1 CEFR)

| | |
|---|---|
| **Module number** | 960400040 |
| **EC-points** | 5.0 |
| **Recommended semester of study** | |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | Dr. Gabriel Dorta Mendez |
| **Lecturers involved** | Thomas Bartl |

**Competency objectives of the module**

Der Kurs verfolgt folgende Kompetenzziele:
- Die Fähigkeit, einige Alltagssituationen sowie erste studien- und berufsbezogene Kommunikationssituationen in der Fremdsprache in geschriebenen und gesprochenen Kommunikationsformen zu bewältigen.
- Die Fähigkeit, kulturelle Unterschiede wahrzunehmen und dazu Stellung zu nehmen.
- Entwicklung von Lernstrategien, die der Weiterentwicklung der Sprachkenntnisse der Studierenden dienen.

**Contents of the module**

**Requirements for participation**
Teilnahme am onSET-Einstufungstest oder erfolgreicher Abschluss vom Niveau A2. 75% Anwesenheitspflicht.

**Examinations**

960400040 German as a Foreign Language - Intermediate (B1 CEFR)
Exam form: undefined

**Courses with workload**

960400040A Deutsch als Fremdsprache - Aufbaustufe 1 (B1 GeR)
Teaching form: Language course | 4.0 SHPW | Contact study 60.00 h | Self-study 120.00 h

**Usability of the module in the following degree programs**

Master Farm Management

## AGRICULTURAL WATER MANAGEMENT

| | |
|---|---|
| **Module number** | 830100070 |
| **EC-points** | 5.0 |
| **Recommended semester of study** | |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | N.N. |
| **Lecturers involved** | N.N. |

**Competency objectives of the module**
Upon completion of this module, the students know methods of using water for agricultural purposes, especially for irrigation on different technological levels and linked to different climatic, social and economic conditions of agricultural production. Students are familiar with irrigation technology, methods to estimate crop water requirement and strategies to optimize water use in agriculture. They are be able to plan and evaluate irrigation projects with respect to their technical set-up, as well as environmental and economic impact. Students know about the development of irrigated agriculture both in technical and social terms; the functioning of irrigation systems and related equipment; basics of water storage, lifting and transport; plant physiology related to water supply, socio-economic implications of applying modern irrigation equipment and methods. Students are able to calculate crop water requirement based on the climatic water balance; Develop irrigation strategies based on soil, crop and climate aspects; decide on appropriate technology for irrigation depending on the socioeconomic conditions; lay-out an irrigation system.

**Contents of the module**
Water resources of the world and the value of water:
Water use and water-stress world-wide, competition for water, water foot-print, Water price (access to water, irrigation projects, subsidies)

Water use in Agricultural systems:
History: The origins of water use and the development from the neolithic revolution to modern times, water use in different regions of the world under different natural and cultural conditions, technological development along with developments in agriculture and society. Irrigation and environmental impact. Water quality and effluent water from agricultural use, Salinization in irrigated agriculture.

Surface irrigation methods: Basin irrigation, Furrow irrigation:
Basin irrigation: levelling, distribution of water on the field, losses due to evaporation and deep percolation, optimization based on water application and soil type, furrow irrigation: Field preparation, field lay-out in terms of furrow spacing, inclination and length. Dealing with superficial drainage.

Pressurized irrigation: sprinkler and micro irrigation:
Sprinkler irrigation systems: Hand-set, irrigation machines, components and set-up of a micro irrigation system: Head station, penstock, emitters; testing, operation and maintenance of micro-irrigation systems; filtering, application of fertilizers (fertigation), irrigation and fertigation in protected cultivation

Automation in irrigation control:

Soil moisture monitoring, monitoring of water and nutrient status of the crop, remote sensing, sensor use, communication and sensor fusion, precision irrigation.

Irrigation demand and economics of irrigation:
Water use efficiency, Crop water productivity, cost of irrigation equipment (fixed costs), gross margin

Sustainable water use in irrigation:
Planning, evaluation of intervention policies.

The climatic water balance:
Function of water in plants, Plant physiological reactions to drought, Crop Water Requirement (CWR) modeling based on climatic water balance

Individual and group work using IT based irrigation planning software (CROPWAR, AQUACROP, ALB-irrigation planner), with regard to climatic water balance, function of water in plants, plant physiological reactions to drought, crop Water Requirement (CWR) modeling based on climatic water balance

**Requirements for participation**
English B2 level

**Examinations**

830100070 Agricultural Water Management
Exam form: Written examination | 90 minutes

**Courses with workload**

830100070A Agricultural Water Management
Teaching form: Seminar-based tuition | 3.0 SHPW | Contact study 45 h | Self-study 60 h

830100070B Agricultural Water Management Seminar
Teaching form: Seminar | 1.0 SHPW | Contact study 15 h | Self-study 30 h

**Usability of the module in the following degree programs**

Master International Master in Agricultural Management
Master Farm Management

## INTERNATIONAL TRADE

| | |
|---|---|
| **Module number** | 830900050 |
| **EC-points** | 5.0 |
| **Recommended semester of study** | |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | Prof. Dr. Johannes Holzner |
| **Lecturers involved** | Dr. Henrike Burchardi<br>Prof. Dr. Johannes Holzner |

### Competency objectives of the module

After completing the module, students are able to apply strategies and marketing approaches in international trade. They have knowledge of international trade agreements as well as trade flows and can evaluate concepts for internationally operating companies in the agricultural sector.

### Contents of the module

- Commodity futures exchange
- International agreements
- WTO Agreements
- Major international markets
- Trends in international food trade
- International trends of selected major commodities
- Strategy in the Global Context
- Pros and Cons of Global Expansion
- Global Interaction vs Local Responsiveness
- Strategic Choices
- Options for Global Expansion

### Requirements for participation

no requirements for participation

### Examinations

830900050 International Trade
Exam form: Written examination

### Courses with workload

830900050A International Trade
Teaching form: Seminar-based tuition | 4.0 SHPW | Contact study 60.00 h | Self-study 90.00 h

**Usability of the module in the following degree programs**

Master Farm Management

## RENEWABLE ENERGIES

| | |
|---|---|
| **Module number** | 831800070 |
| **EC-points** | 2.0 |
| **Recommended semester of study** | |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | every semester |
| **Module responsible** | Prof. Dr. Ralf Schlauderer |
| **Lecturers involved** | Katja Krauter |

**Competency objectives of the module**

After completing the module, students are able to know the energy supply situation on a national and international level as well as the related future projections. They are familiar with different methods of energy production from renewable sources.

**Contents of the module**
- Structure and development of energy production
- Structure and development of energy consumption
- Technological comparison of different methods of energy production from renewable sources (biomass, solar radiation energy, wind energy and geothermal energy)

**Requirements for participation**
no requirements for participation

**Examinations**

831800070 Renewable Energies
Exam form: Oral examination

**Courses with workload**

831800070A Renewable Energies
Teaching form: Seminar-based tuition | 2.0 SHPW | Contact study 30.00 h | Self-study 45.00 h

**Usability of the module in the following degree programs**

Master Farm Management

WEIHENSTEPHAN · TRIESDORF
University of Applied Sciences

## SUSTAINABLE REGIONAL DEVELOPMENT

| | |
|---|---|
| **Module number** | 831900130 |
| **EC-points** | 3.0 |
| **Recommended semester of study** | 2 |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | Prof. Dr. Jennifer Gerend |
| **Lecturers involved** | N.N. |

**Competency objectives of the module**

Durch die Teilnahme an der englischsprachigen Ringvorlesung sind die Studierenden in der Lage Themen aus dem Regionalmanagement und aus der ländlichen Entwicklung auch auf internationaler Ebene zu verstehen und zu kommunizieren.
Sie können englischsprachige schriftliche Inhalte für verschiedene Zwecke erstellen, z.B. die Internetseite eines Regionalmanagements oder
einen EU-Förderantrag. Sie verfügen über grundlegende Kenntnisse in Berufsenglisch für Regionalmanager/-innen.

**Contents of the module**
Studierende beschäftigen sich in diesem Modul mit Fachenglisch für Regionalmanagement und Regionalentwicklung. Dabei geht es um internationale Beispiele der nachhaltigen Regionalentwicklung.

*Sustainable Regional Development is instructed in English.*

**Requirements for participation**
Adäquate Teilnahme an internationaler Ringvorlesung. Für eine Vertiefung der Sprachdidaktik wird zusätzlich die Belegung des Sprachkurses 860500070 empfohlen

**Examinations**

831900130 Sustainable Regional Development
Exam form: Project work

**Courses with workload**

831900130A Sustainable Regional Development
Teaching form: Seminar-based tuition | 3.0 SHPW | Contact study 30.00 h | Self-study 60.00 h

**Usability of the module in the following degree programs**

Master Climate Change Management
Master Farm Management
Master Regional Management
Master Environmental Engineering

## GERMAN AS A FOREIGN LANGUAGE - INTERMEDIATE (B1 CEFR)

| | |
|---|---|
| **Module number** | 960400040 |
| **EC-points** | 5.0 |
| **Recommended semester of study** | |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | Dr. Gabriel Dorta Mendez |
| **Lecturers involved** | Thomas Bartl |

**Competency objectives of the module**

Der Kurs verfolgt folgende Kompetenzziele:
- Die Fähigkeit, einige Alltagssituationen sowie erste studien- und berufsbezogene Kommunikationssituationen in der Fremdsprache in geschriebenen und gesprochenen Kommunikationsformen zu bewältigen.
- Die Fähigkeit, kulturelle Unterschiede wahrzunehmen und dazu Stellung zu nehmen.
- Entwicklung von Lernstrategien, die der Weiterentwicklung der Sprachkenntnisse der Studierenden dienen.

**Contents of the module**

**Requirements for participation**
Teilnahme am onSET-Einstufungstest oder erfolgreicher Abschluss vom Niveau A2. 75% Anwesenheitspflicht.

**Examinations**

960400040 German as a Foreign Language - Intermediate (B1 CEFR)
Exam form: undefined

**Courses with workload**

960400040A Deutsch als Fremdsprache - Aufbaustufe 1 (B1 GeR)
Teaching form: Language course | 4.0 SHPW | Contact study 60.00 h | Self-study 120.00 h

**Usability of the module in the following degree programs**

Master Farm Management

## AGRICULTURAL WATER MANAGEMENT

| | |
|---|---|
| **Module number** | 830100070 |
| **EC-points** | 5.0 |
| **Recommended semester of study** | |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | N.N. |
| **Lecturers involved** | N.N. |

**Competency objectives of the module**
Upon completion of this module, the students know methods of using water for agricultural purposes, especially for irrigation on different technological levels and linked to different climatic, social and economic conditions of agricultural production. Students are familiar with irrigation technology, methods to estimate crop water requirement and strategies to optimize water use in agriculture. They are be able to plan and evaluate irrigation projects with respect to their technical set-up, as well as environmental and economic impact. Students know about the development of irrigated agriculture both in technical and social terms; the functioning of irrigation systems and related equipment; basics of water storage, lifting and transport; plant physiology related to water supply, socio-economic implications of applying modern irrigation equipment and methods. Students are able to calculate crop water requirement based on the climatic water balance; Develop irrigation strategies based on soil, crop and climate aspects; decide on appropriate technology for irrigation depending on the socioeconomic conditions; lay-out an irrigation system.

**Contents of the module**
Water resources of the world and the value of water:
Water use and water-stress world-wide, competition for water, water foot-print, Water price (access to water, irrigation projects, subsidies)

Water use in Agricultural systems:
History: The origins of water use and the development from the neolithic revolution to modern times, water use in different regions of the world under different natural and cultural conditions, technological development along with developments in agriculture and society. Irrigation and environmental impact. Water quality and effluent water from agricultural use, Salinization in irrigated agriculture.

Surface irrigation methods: Basin irrigation, Furrow irrigation:
Basin irrigation: levelling, distribution of water on the field, losses due to evaporation and deep percolation, optimization based on water application and soil type, furrow irrigation: Field preparation, field lay-out in terms of furrow spacing, inclination and length. Dealing with superficial drainage.

Pressurized irrigation: sprinkler and micro irrigation:
Sprinkler irrigation systems: Hand-set, irrigation machines, components and set-up of a micro irrigation system: Head station, penstock, emitters; testing, operation and maintenance of micro-irrigation systems; filtering, application of fertilizers (fertigation), irrigation and fertigation in protected cultivation

Automation in irrigation control:

Soil moisture monitoring, monitoring of water and nutrient status of the crop, remote sensing, sensor use, communication and sensor fusion, precision irrigation.

Irrigation demand and economics of irrigation:
Water use efficiency, Crop water productivity, cost of irrigation equipment (fixed costs), gross margin

Sustainable water use in irrigation:
Planning, evaluation of intervention policies.

The climatic water balance:
Function of water in plants, Plant physiological reactions to drought, Crop Water Requirement (CWR) modeling based on climatic water balance

Individual and group work using IT based irrigation planning software (CROPWAR, AQUACROP, ALB-irrigation planner), with regard to climatic water balance, function of water in plants, plant physiological reactions to drought, crop Water Requirement (CWR) modeling based on climatic water balance

**Requirements for participation**
English B2 level

**Examinations**

830100070 Agricultural Water Management
Exam form: Written examination | 90 minutes

**Courses with workload**

830100070A Agricultural Water Management
Teaching form: Seminar-based tuition | 3.0 SHPW | Contact study 45 h | Self-study 60 h

830100070B Agricultural Water Management Seminar
Teaching form: Seminar | 1.0 SHPW | Contact study 15 h | Self-study 30 h

**Usability of the module in the following degree programs**

Master International Master in Agricultural Management
Master Farm Management

## INTERNATIONAL TRADE

| | |
|---|---|
| **Module number** | 830900050 |
| **EC-points** | 5.0 |
| **Recommended semester of study** | |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | Prof. Dr. Johannes Holzner |
| **Lecturers involved** | Dr. Henrike Burchardi<br>Prof. Dr. Johannes Holzner |

### Competency objectives of the module

After completing the module, students are able to apply strategies and marketing approaches in international trade. They have knowledge of international trade agreements as well as trade flows and can evaluate concepts for internationally operating companies in the agricultural sector.

### Contents of the module

- Commodity futures exchange
- International agreements
- WTO Agreements
- Major international markets
- Trends in international food trade
- International trends of selected major commodities
- Strategy in the Global Context
- Pros and Cons of Global Expansion
- Global Interaction vs Local Responsiveness
- Strategic Choices
- Options for Global Expansion

### Requirements for participation

no requirements for participation

### Examinations

830900050 International Trade
Exam form: Written examination

### Courses with workload

830900050A International Trade
Teaching form: Seminar-based tuition | 4.0 SHPW | Contact study 60.00 h | Self-study 90.00 h

**Usability of the module in the following degree programs**

Master Farm Management

## RENEWABLE ENERGIES

| | |
|---|---|
| **Module number** | 831800070 |
| **EC-points** | 2.0 |
| **Recommended semester of study** | |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | every semester |
| **Module responsible** | Prof. Dr. Ralf Schlauderer |
| **Lecturers involved** | Katja Krauter |

**Competency objectives of the module**

After completing the module, students are able to know the energy supply situation on a national and international level as well as the related future projections. They are familiar with different methods of energy production from renewable sources.

**Contents of the module**
- Structure and development of energy production
- Structure and development of energy consumption
- Technological comparison of different methods of energy production from renewable sources (biomass, solar radiation energy, wind energy and geothermal energy)

**Requirements for participation**
no requirements for participation

**Examinations**

831800070 Renewable Energies
Exam form: Oral examination

**Courses with workload**

831800070A Renewable Energies
Teaching form: Seminar-based tuition | 2.0 SHPW | Contact study 30.00 h | Self-study 45.00 h

**Usability of the module in the following degree programs**

Master Farm Management

WEIHENSTEPHAN · TRIESDORF
University of Applied Sciences

## SUSTAINABLE REGIONAL DEVELOPMENT

| | |
|---|---|
| **Module number** | 831900130 |
| **EC-points** | 3.0 |
| **Recommended semester of study** | 2 |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | Prof. Dr. Jennifer Gerend |
| **Lecturers involved** | N.N. |

**Competency objectives of the module**

Durch die Teilnahme an der englischsprachigen Ringvorlesung sind die Studierenden in der Lage Themen aus dem Regionalmanagement und aus der ländlichen Entwicklung auch auf internationaler Ebene zu verstehen und zu kommunizieren.
Sie können englischsprachige schriftliche Inhalte für verschiedene Zwecke erstellen, z.B. die Internetseite eines Regionalmanagements oder
einen EU-Förderantrag. Sie verfügen über grundlegende Kenntnisse in Berufsenglisch für Regionalmanager/-innen.

**Contents of the module**
Studierende beschäftigen sich in diesem Modul mit Fachenglisch für Regionalmanagement und Regionalentwicklung. Dabei geht es um internationale Beispiele der nachhaltigen Regionalentwicklung.

*Sustainable Regional Development is instructed in English.*

**Requirements for participation**
Adäquate Teilnahme an internationaler Ringvorlesung. Für eine Vertiefung der Sprachdidaktik wird zusätzlich die Belegung des Sprachkurses 860500070 empfohlen

**Examinations**

831900130 Sustainable Regional Development
Exam form: Project work

**Courses with workload**

831900130A Sustainable Regional Development
Teaching form: Seminar-based tuition | 3.0 SHPW | Contact study 30.00 h | Self-study 60.00 h

**Usability of the module in the following degree programs**

Master Climate Change Management
Master Farm Management
Master Regional Management
Master Environmental Engineering

## GERMAN AS A FOREIGN LANGUAGE - INTERMEDIATE (B1 CEFR)

| | |
|---|---|
| **Module number** | 960400040 |
| **EC-points** | 5.0 |
| **Recommended semester of study** | |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | |
| **Module responsible** | Dr. Gabriel Dorta Mendez |
| **Lecturers involved** | Thomas Bartl |

### Competency objectives of the module

Der Kurs verfolgt folgende Kompetenzziele:
- Die Fähigkeit, einige Alltagssituationen sowie erste studien- und berufsbezogene Kommunikationssituationen in der Fremdsprache in geschriebenen und gesprochenen Kommunikationsformen zu bewältigen.
- Die Fähigkeit, kulturelle Unterschiede wahrzunehmen und dazu Stellung zu nehmen.
- Entwicklung von Lernstrategien, die der Weiterentwicklung der Sprachkenntnisse der Studierenden dienen.

### Contents of the module

### Requirements for participation

Teilnahme am onSET-Einstufungstest oder erfolgreicher Abschluss vom Niveau A2. 75% Anwesenheitspflicht.

### Examinations

960400040 German as a Foreign Language - Intermediate (B1 CEFR)
Exam form: undefined

### Courses with workload

960400040A Deutsch als Fremdsprache - Aufbaustufe 1 (B1 GeR)
Teaching form: Language course | 4.0 SHPW | Contact study 60.00 h | Self-study 120.00 h

### Usability of the module in the following degree programs

Master Farm Management

## MASTER'S THESIS

| | |
|---|---|
| **Module number** | 392214000 |
| **EC-points** | 15.0 |
| **Weight for overall grade** | 3.0 |
| **Recommended semester of study** | 4 |
| **Duration of the module (semester)** | 1 |
| **Offer frequency** | every semester |
| **Module responsible** | Prof. Dr. Ralf Schlauderer |
| **Lecturers involved** | N.N. |

**Competency objectives of the module**

After completion of the module, students are able to independently and scientifically analyse an applied problem from the fields of agricultural management or agricultural economic sciences. They are able to develop, evaluate and present their approach.

**Contents of the module**
- Choosing a topic and managing schedules
- Documenting sources
- Structuring theses
- Phrasing and editing reports
- Designing tables and charts
- Formatting rules
- Literature research
- Techniques of electronic word processing

**Requirements for participation**
no requirements for participation

**Examinations**

392214000 Master Thesis
Exam form: Master's thesis

392214000-Koll Master Thesis Kolloquium
Exam form: undefined

**Courses with workload**

392214000A Master Thesis
Teaching form: Project seminar | 0.0 SHPW | Contact study 0.00 h | Self-study 400.00 h

392214000B Seminar: Master Thesis
Teaching form: Seminar | 2.0 SHPW | Contact study 30.00 h | Self-study 20.00 h

**Usability of the module in the following degree programs**

Master Farm Management