JUSTUS-LIEBIG-UNIVERSITÄT GIESSEN

Faculty 09

Summer Semester 2026

As of 12.03.2026

Module Directory

Faculty 09 - Agricultural Sciences, Nutritional Sciences and Environmental Management

"Sustainable Transition" Master Degree Course Modules

Please consult the timetable or current university calendar for information regarding dates and room numbers of the modules taught in the course:

http://www.uni-giessen.de/cms/fbz/fb09/studium/msc/stpl

Core Modules

MK-067-EN-DI	MK-067-EN-DI Theory and Practice of Economic Development Theory and Practice of Economic Development	6 CP
Core Module / Optional Module	Agricultural Sciences, Nutritional Sciences, and Environmental Management / Department of Agricultural Policy and Market Research Offered for the first time: WS 2021/22 Intake capacity: not limited	1. Sem.;

Frequency and Duration: WS, 1 Semester

Module Coordinator: Chair of Agricultural, Food and Environmental Policy

Applies to the Study Programmes: Transition Management, Master (1.); Sustainable Transition, Master (1.);

Prerequisites for Participation: None

Learning Outcomes:
Students
- are familiar with key concepts for analysing economic development.
- are able to apply them to a range of current development topics.
- are aware of the role of natural resources and institutions in the process of development.
- consider economic development as a multidisciplinary topic and are enabled to integrate viewpoints from neighbouring social sciences into a problem-centred approach

Module Content:
- Models of growth & development
- Trade & globalisation
- Development strategy & industrial policy
- Resource curse
- Land tenure
- Environment & the commons
- Institutions & development

Forms of Instruction:	Contact hours	Preparation and follow-up work
Lecture	60	120
Seminar		
Practical training		
Exercises		
Excursion		
Total:	180	

Prerequitistes for Examination: None

Module Examination:
- Form(s) of assessment: Written examination and assignments (5-10) or assignments (5-10)
- Components of final grade: Written examination (40 %), assignment (60 %) or assignment (100 %)
- Form of module retake examination: Written examination and assignments (5-10) or assignments (5-10)

Language: English

MK-080-EN-DI	MK-080-EN-DI Resource Economics and Sustainable Development	6 CP
	Resource Economics and Sustainable Development	
Core Module / Optional Module	Agricultural Sciences, Nutritional Sciences, and Environmental Management / Department of Agricultural Policy and Market Research	1./2. Sem.; 2. Sem.;
	Offered for the first time: SS 2022	
	Intake capacity: not limited	

Frequency and Duration: SS, 1 Semester

Module Coordinator: Chair of Agricultural, Food and Environmental Policy

Applies to the Study Programmes: Agrar- und Ressourcenökonomie, Master (1./2.); Sustainable Transition, Master (2.);

Prerequisites for Participation: None

Learning Outcomes:

The Students

- know basic management/decision rules of optimal resource use;
- understand the concepts of static and dynamic efficiency of resource use;
- understand the concept and the meaning of externalities;
- understand the theoretical concepts of sustainability and optimal use of (non-) renewable resources;
- know the characteristics of energy/electricity markets with fossil and renewable energies;
- are familiar with the current climate and energy policy.

Module Content:

- Natural resources
- Renewable and non-renewable resources
- The sustainability problem
- Sustainable economic development
- Static and dynamic efficiency
- Overview of energy markets with renewable energies
- Electricity and its technical and economic characteristics
- Climate change and climate policy (emissions trading)

Forms of Instruction:	Contact hours	Preparation and follow-up work
Lecture	30	60
Seminar	30	60
Practical training		
Exercises		
Excursion		
Total:	180	

Prerequitistes for Examination: None

Module Examination:

- Form(s) of assessment: Assignments (4-8) or written exam or written exam and assignments (4-6)
- Components of final grade: Assignments (100 %) or written exam (100 %) or written exam (50 %), assignments (50 %)
- Form of module retake examination: Assignments (4-6) or oral examination

Language: English

MK-102-EN-DI	MK-102-EN-DI Global Food Markets Global Food Markets	6 CP
Core Module / Optional Module	Agricultural Sciences, Nutritional Sciences, and Environmental Management / Department of Agricultural Policy and Market Research Offered for the first time: WS 2021/22 Intake capacity: 45	1. Sem.; 1.-4. Sem.;

Frequency and Duration: WS, 1 Semester

Module Coordinator: Chair of Agricultural and Food Market Analysis

Applies to the Study Programmes: Sustainable Transition, Master (1.); Profil GT, WW, Master (1.-4.); Transition Management, Master (1.);

Prerequisites for Participation: None

Learning Outcomes:

The students

- are familiar with the global trends shaping the world food economy, can identify the key drivers of change in agri-food markets and understand the relationships within complex food systems;
- understand the effects of past and current events on supply and demand in global food markets in general and on food prices, food security, and food safety in particular;
- can describe the causes and consequences of international trade for sustainable development by drawing on economic principles and models of international trade;
- know potential impact pathways how agriculture, trade and global food systems can contribute to achieving the Sustainable Development Goals (SDGs) and can identify potential trade-offs;
- can analyze the effects and welfare implications of agricultural trade policy (e.g., tariffs and quotas) and domestic food policy schemes (e.g., subsidies, taxes) using partial equilibrium models;
- can outline traditional and modern organizational structures of agricultural and food markets and critically reflect on risks and opportunities of global value chains;
- know about the role of consumers and multinational organizations in shaping food markets and value chains;
- strengthen their communication and cooperation skills through group work and can critically reflect on their own results and points of view and those of others.

Module Content:

- The globalization of the agri-food sector and changing diets
- Conceptual and empirical analysis of agricultural trade and global food markets
- Food security, food prices, and SDG 2: Zero hunger
- Food safety and food quality issues
- The role of private and public food standards in global food markets
- The role of consumers in shaping food markets
- Selected agricultural trade and food policy interventions

Forms of Instruction:	Contact hours	Preparation and follow-up work
Lecture	30	60
Seminar	30	60
Practical training		
Exercises		
Excursion		
Total:	180	

Prerequitistes for Examination: None

Module Examination:

- Form(s) of assessment: Assignments and presentation or assignments or assignments and project work
- Components of final grade: Assignments (50 %) and presentation (50 %) or assignments (100 %) or assignments (50 %) and project work (50 %)
- Form of module retake examination: Assignments

Language: English

MK-106-EN-DI	**MK-106-EN-DI Sustainable Food Systems** **Sustainable Food Systems**	6 CP
Core Module / Optional Module	Agricultural Sciences, Nutritional Sciences, and Environmental Management / Department of Agronomy and Plant Breeding II Offered for the first time: SS 2022 Intake capacity: 30	2. Sem.;

Frequency and Duration: SS, 1 Semester

Module Coordinator: Chair of Organic Farming

Applies to the Study Programmes: Sustainable Transition, Master (2.);

Prerequisites for Participation: None

Learning Outcomes:
The students
- Can apply inter- and transdisciplinary research approaches (e.g. participatory research, action research)
- Can analyse their own food systems
- Know about best practices of sustainable food system components
- Are able to critically examine food systems and suggest improvements
- Are able access and address a topic by means of scientific methodologies

Module Content:
- Widening the focus from farming/agroecosystems to food systems
- Methods to assess the sustainability of different food systems
- Components of sustainable food systems (agricultural production, transformation, logistics, …)
- Food system innovations (e.g. Food Policy Councils, Community Supported Agriculture, Food Saving)
- Discussions with local food system stakeholders
- Writing and presenting own contributions to the given topics

Forms of Instruction:	Contact hours	Preparation and follow-up work
Lecture	30	60
Seminar	30	60
Practical training		
Exercises		
Excursion		
Total:	180	

Prerequitistes for Examination: None

Module Examination:
- Form(s) of assessment: Project work
- Components of final grade: Project work (100 %)
- Form of module retake examination: Oral exam

Language: English

MK-107-EN-DI	**MK-107-EN-DI Natural Resources and Ecosystem Services**	6 CP
	Natural Resources and Ecosystem Services	
Core Module / Optional Module	Agricultural Sciences, Nutritional Sciences, and Environmental Management / Department of Landscape Ecology and Resources Management	2. Sem.;
	Offered for the first time: SS 2019	
	Intake capacity: 30	

Frequency and Duration: SS, 1 Semester

Module Coordinator: Chair of Land Use Systems with a focus on Agroforestry

Applies to the Study Programmes: Sustainable Transition, Master (2.);

Prerequisites for Participation: None (Basic knowledge of environmental processes and GIS recommended)

Learning Outcomes:
The students
- understand the concept of ecosystem services;
- know how to estimate ecosystem services using InVEST;
- are able to assess and evaluate natural resources with regard to multiple ecosystem services for an individual project.

Module Content:
- Introduction to the concept of supporting, regulating, provisioning and cultural ecosystem services
- Identification and understanding of multiple ecosystem services provided by different ecosystems
- Repetition of GIS software
- Learning how to use and analyse spatial datasets with InVEST
- Evaluate and use results in the frame of a decision support analysis

Forms of Instruction:	Contact hours	Preparation and follow-up work
Lecture	20	40
Seminar		
Practical training		
Exercises	40	80
Excursion		
Total:	180	

Prerequitistes for Examination: None

Module Examination:
- Form(s) of assessment: Seminar paper (5 - 7 pages) and presentation (10 - 15 min)
- Components of final grade: Seminar paper (70 %), presentation (30 %)
- Form of module retake examination: Revision of the seminar paper or oral examination

Language: English

MK-109-EN-DI	MK-109-EN-DI Climate Change and Economic Development	6 CP
	Climate Change and Economic Development	
Core Module / Optional Module	Agricultural Sciences, Nutritional Sciences, and Environmental Management / Department of Agricultural Policy and Market Research	1. Sem.;
	Offered for the first time: WS 2019/20	
	Intake capacity: 30	

Frequency and Duration: WS, 1 Semester

Module Coordinator: Chair of Agricultural, Food and Environmental Policy

Applies to the Study Programmes: Sustainable Transition, Master (1.);

Prerequisites for Participation: None

Learning Outcomes:
The Students
- are aware of the international challenges in dealing with climate change;
- understand the climate change risks in different developing regions;
- are able to discuss the potential of climate change mitigation and adaptation strategies and ways to implement and finance them.

Module Content:
- Climate change and economic development in low-income countries
- The effects of climate change on the agricultural sector
- Coastal regions and islands that are endangered by flooding
- Migration and conflicts as possible consequences
- The potential of renewable energies in transition and developing countries

Forms of Instruction:	Contact hours	Preparation and follow-up work
Lecture	10	20
Seminar	50	100
Practical training		
Exercises		
Excursion		
Total:	180	

Prerequitistes for Examination: None

Module Examination:
- Form(s) of assessment: Seminar paper (15-25 pages) or seminar paper (10-15 pages) and presentation (10-15 min.) or presentation (15-20 min.)
- Components of final grade: Seminar paper (100 %) or seminar paper (50 %), presentation (50 %) or presentation (100 %)
- Form of module retake examination: Revision of the seminar paper or oral examination

Language: English

<table>
<tr><td rowspan="2">MK-110-EN-DI</td><td>MK-110-EN-DI Political Ecology</td><td rowspan="2">6 CP</td></tr>
<tr><td>Political Ecology</td></tr>
<tr><td rowspan="3">Core Module / Optional Module</td><td>Agricultural Sciences, Nutritional Sciences, and Environmental Management / Department of Consumer Research, Communication and Food Sociology</td><td rowspan="3">2. Sem.;</td></tr>
<tr><td>Offered for the first time: SS 2022</td></tr>
<tr><td>Intake capacity: 30</td></tr>
<tr><td colspan="3">Frequency and Duration: SS, 1 Semester</td></tr>
<tr><td colspan="3">Module Coordinator: Chair of Food Sociology</td></tr>
<tr><td colspan="3">Applies to the Study Programmes: Sustainable Transition, Master (2.);</td></tr>
<tr><td colspan="3">Prerequisites for Participation: none</td></tr>
<tr><td colspan="3">Learning Outcomes:
The students
• understand historical developments of public debates in the arena of food and politics and thereby develop the ability to question norms, practices and opinions and to take an own position in the sustainability discourse;
• distinguish the political and moral meaning of food to reflect their own role in local communities and global society;
• analyse problems and developments around consumption, production and regulation in food systems to identify and understand relationships;
• formulate an argument about a specific food problem in order to understand and reflect on the norms and values underlying actions. A special focus lies on sustainability-related values, principles and goals, being able to negotiate them in the context of conflicts of interest and necessary compromises, of uncertain knowledge and contradictions;
• critically reflect the approaches of various actors who aim to influence the food system and apply different problem-solving approaches to complex sustainability problems.</td></tr>
<tr><td colspan="3">Module Content:
This module introduces you to food as a political issue such as hunger, food security, malnutrition, sustainability, power politics, social justice or cultural identity. Food politics is about the political nature of food from fork to farm as well as from local to global levels. Topics might include:
• food production safety, labelling, and nutrition;
• environmental concerns ranging from organic farming and sustainable agriculture to consumption and waste disposal;
• politics of specific foods and foodways (e.g. fast food, genetically modified foods, etc.);
• ethics of animal care and vegetarianism as politics of the everyday;
• politics of hunger and malnutrition food movements (e.g. slow food movement, food sovereignty movement) and other stakeholders.</td></tr>
</table>

Forms of Instruction:	Contact hours	Preparation and follow-up work
Lecture		
Seminar	30	80
Practical training		
Exercises	30	40
Excursion		
Total:	180	

Prerequitistes for Examination: None

Module Examination:

- Form(s) of assessment: Written report (12 to 15 pages) or oral examination
- Components of final grade: Written report (100 %) or oral examination (100%)
- Form of module retake examination: Revision of the written report or oral examination

Language: English

MK-111-EN-DI	MK-111-EN-DI Scientific Working and Writing	6 CP
	Scientific Working and Writing	
Core Module / Optional Module	Agricultural Sciences, Nutritional Sciences, and Environmental Management / Department of Agricultural Policy and Market Research	4. Sem.;
	Offered for the first time: SS 2023	
	Intake capacity: 30	

Frequency and Duration: SS, 1 Semester

Module Coordinator: Chair of Agricultural and Food Market Analysis

Applies to the Study Programmes: Sustainable Transition, Master (4.);

Prerequisites for Participation: None

Learning Outcomes:
The students
- are able to formulate and write a well-defined and feasible research proposal
- are able to compare the strengths and limitations of various study designs/research methodologies
- are familiar with the scientific environment with an emphasis on the reflection of strengths as well as challenges of interdisciplinary research (e.g. link of natural with social/economic sciences)

Module Content:
- Review of different types of research methodologies (e.g. structured literature reviews, meta-analyses, mixed-methods approaches)
- From an idea to formulating research questions/hypotheses
- Writing a coherent scientific research proposal/report/paper
- Presenting/Defending a research proposal
- Dos and Don'ts in scientific writing
- The importance of visually illustrating research results
- Intellectual property rights / Predatory Journals / Authorship rules

Forms of Instruction:	Contact hours	Preparation and follow-up work
Lecture		
Seminar	30	60
Practical training		
Exercises	30	60
Excursion		
Total:	180	

Prerequitistes for Examination: None

Module Examination:
- Form(s) of assessment: Project Work and presentation
- Components of final grade: Project Work (60 %), presentation (40 %)
- Form of module retake examination: Revision of the project work within 4 weeks and presentation

Language: English

MK-112-EN-DI	MK-112-EN-DI International Economics	6 CP
	International Economics	
Core Module / Optional Module	Economics and Business Studies / Economics and Business Studies	1. Sem.;
	Offered for the first time: WS 2021/22	
	Intake capacity: 30	

Frequency and Duration: WS, 1 Semester

Module Coordinator: Chair of Economics (International Economics)

Applies to the Study Programmes: Sustainable Transition, Master (1.);

Prerequisites for Participation: None

Learning Outcomes:

- Basic knowledge of theories of international trade and trade policies including their methodological, decision-theoretic and mathematical foundations and historic development
- Ability to interpret and critically discuss simple models from this field
- Computational skills necessary for handling such models and to apply them to analyse real-world problems

Module Content:

- Trade in the global economy
- Patterns of international trade
- Effects of globalization on efficiency and distribution
- Instruments and impact of trade policy
- Controversies in trade policy

Forms of Instruction:	Contact hours	Preparation and follow-up work
Lecture	30	60
Seminar		
Practical training		
Exercises	30	60
Excursion		
Total:	180	

Prerequitistes for Examination: None

Module Examination:

- Form(s) of assessment: Assignments
- Components of final grade: Assignments (100 %)
- Form of module retake examination: Assignments

Language: English

<table>
<tr><td rowspan="2">MK-123-EN-DI</td><td>MK-123-EN-DI Transdisciplinary Sustainability Research</td><td rowspan="2">6 CP</td></tr>
<tr><td>Transdisciplinary Sustainability Research</td></tr>
<tr><td rowspan="3">Core Module / Optional Module</td><td>Agricultural Sciences, Nutritional Sciences, and Environmental Management / Department of Consumer Research, Communication and Food Sociology</td><td rowspan="3">1. Sem.;</td></tr>
<tr><td>Offered for the first time: WS 2022/23</td></tr>
<tr><td>Intake capacity: 30</td></tr>
<tr><td colspan="3">Frequency and Duration: WS, 1 Semester</td></tr>
<tr><td colspan="3">Module Coordinator: Chair of Communication and Engagement in Agricultural, Nutritional and Environmental Sciences</td></tr>
<tr><td colspan="3">Applies to the Study Programmes: Sustainable Transition, Master (1.);</td></tr>
<tr><td colspan="3">Prerequisites for Participation: None</td></tr>
<tr><td colspan="3">Learning Outcomes:
The students
• gain a comprehensive, interdisciplinary perspective on sustainability science: its theory, research horizons, and practical applications,
• understand how multiple disciplines contribute to the understanding of interactive social-environmental systems and to the capacity for guiding such systems in a transformation toward sustainability,
• gain insight into the possibilities and limitations of research and its role in society,
• are able to critically assess and approach current challenges for sustainable development from various perspectives,
• are able to demonstrate the ability to integrate knowledge and gain specialised methodological knowledge for transdisciplinary research
• develop communication skills required for participation in inter- and transdisciplinary teams.</td></tr>
<tr><td colspan="3">Module Content:
• Origins of the concept of sustainable development and its challenges,
• Applications across regions will be woven into discussions,
• Core ideas of sustainability science,
• Social-environmental systems as complex systems,
• Understanding of inter- and transdisciplinary research and collaboration,
• Qualitative research methods for transformative sustainability research,
• Challenges of knowledge integration and linking knowledge with action for sustainable development,
• Role of communication in transdisciplinary research and transformation processes.</td></tr>
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Forms of Instruction:	Contact hours	Preparation and follow-up work
Lecture		
Seminar	18	36
Practical training		
Exercises	42	84
Excursion		
Total:	180	
Prerequitistes for Examination: None		
Module Examination: • Form(s) of assessment: • Components of final grade: • Form of module retake examination:		
Language: English		

MK-132-EN-DI	MK-132-EN-DI Planetary Thinking Planetary Thinking	6 CP
Core Module / Optional Module	Agricultural Sciences, Nutritional Sciences, and Environmental Management / Department of Agricultural Policy and Market Research Offered for the first time: SS 2025 Intake capacity: not limited	2. Sem.;

Frequency and Duration: SS, 1 Semester

Module Coordinator: Chair of Planetary Change and Politics

Applies to the Study Programmes: Transition Management, Master (2.); Sustainable Transition, Master (2.);

Prerequisites for Participation: None

Learning Outcomes:
The students
- are able to adopt a planetary perspective on challenges and critically reflect on their relevance;
- can identify, explain, and evaluate key concepts, topics, and scenarios of planetary thinking in relation to Earth's habitability;
- are capable of critically analyzing publications in this field and situating these contributions within the state of research;
- can develop a well-informed opinion on conflicting positions and debates in planetary thinking and articulate these in discussions.

Module Content:
- Perspectives: The origins of planetary thinking are examined, and the development of key frameworks is traced
- Concepts: Key concepts integral to planetary thinking are introduced, discussed, and interrelated
- Constellations: The diverse phenomena interconnected through their planetary character are analyzed
- Scenarios: Emerging scenarios on and beyond our home planet are explored

Forms of Instruction:	Contact hours	Preparation and follow-up work
Lecture	12	24
Seminar	48	96
Practical training		
Exercises		
Excursion		
Total:	180	

Prerequitistes for Examination: None

Module Examination:
- Form(s) of assessment: Written Assignment (2500 words) and multimedia presentation (1 infographic, time frame: 4 weeks)
- Components of final grade: Written Assignment (50 %), Multimedia presentation (50 %)
- Form of module retake examination: Seminar paper (5000 words, time frame: 4 Wochen)

Language: English

Profile Modules

MK-002-EN-DI	MK-002-EN-DI Applied Statistics **Applied Statistics**	6 CP
Core Module / Optional Module	Agricultural Sciences, Nutritional Sciences, and Environmental Management / Department of Agronomy and Plant Breeding II Offered for the first time: WS 2021/22 Intake capacity: 30	3. Sem.;

Frequency and Duration: WS, 1 Semester

Module Coordinator: Chair of Biometry and Population Genetics

Applies to the Study Programmes: Profil englisch digital, Master (3.);

Prerequisites for Participation: None

Learning Outcomes:
The Students
- have knowledge of statistical methods;
- have knowledge of experimental designs;
- are able to analyse experiments and studies.

Module Content:
- Analysis of variance
- Comparison of treatments
- Mixed linear models
- Experimental designs
- Data analysis using statistical software

Forms of Instruction:	Contact hours	Preparation and follow-up work
Lecture	30	60
Seminar		
Practical training	30	60
Exercises		
Excursion		
Total:	180	

Prerequitistes for Examination: None

Module Examination:
- Form(s) of assessment: Assignments (4)
- Components of final grade: Assignments (100 %)
- Form of module retake examination: Assignments

Language: English

MP-163-EN-DI	MP-163-EN-DI Python for Environmental Scientists Python for Environmental Scientists	6 CP
Optional Module	Agricultural Sciences, Nutritional Sciences, and Environmental Management / Department of Landscape Ecology and Resources Management Offered for the first time: WS 2018/19 Intake capacity: 30	1.-4. Sem.;

Frequency and Duration: WS, 1 Semester

Module Coordinator: Chair of Landscape, Water and Biogeochemical Cycles

Applies to the Study Programmes: Profil englisch digital, Master (1.-4.); Profil, Master (1.-4.); Profil englisch, Master (1.-4.);

Prerequisites for Participation: None

Learning Outcomes:
The students
- understand the basic concepts of Python;
- can work with data from different sources and formats;
- know common scientific Python packages and what they are used for;
- can perform basic time series analysis;
- can create graphics for environmental data;
- can perform basic statistics in Python.

Module Content:
- Basic concepts of Python
- Scientific Python packages like numpy, matplotlib, pandas
- Using data form different formats
- Plotting in Python
- Time series analysis in Python
- Statistics in Python

Forms of Instruction:	Contact hours	Preparation and follow-up work
Lecture	15	30
Seminar		
Practical training		
Exercises	45	90
Excursion		
Total:	180	

Prerequitistes for Examination: None

Module Examination:
- Form(s) of assessment: Seminar paper (5-7 pages) and presentation (10 - 15 min)
- Components of final grade: Seminar paper (50 %), presentation (50 %)
- Form of module retake examination: Revision of the seminar paper

Language: English

MP-181-EN-DI	MP-181-EN-DI Gender and Development Gender and Development	6 CP
Optional Module	Agricultural Sciences, Nutritional Sciences, and Environmental Management / Department of Agricultural Policy and Market Research Offered for the first time: SS 2019 Intake capacity: 30	1.-4. Sem.;

Frequency and Duration: WS, 1 Semester

Module Coordinator: Chair of Agricultural, Food and Environmental Policy

Applies to the Study Programmes: Profil, Master (1.-4.); Profil englisch, Master (1.-4.);

Prerequisites for Participation: None

Learning Outcomes:
The students
- have basic understanding of gender terms, get acquainted with the gender glossary;
- are able to take part in scientific discussions on the subject;
- are able to independently prepare a selected topic, take a reflective, critical review as well as applying gender lenses and perspectives.

Module Content:
- Introduction to gender and development
- Gender roles, changing relationships
- Decision making and empowerment
- Gender and natural resource management
- Gender, assets and inputs
- Gender and agricultural labour
- Time allocation and the economic role of women in agriculture
- Nutrition and Gender
- Knowledge, methods and access to information, technology
- Gender sensitive academic research and development projects

Forms of Instruction:	Contact hours	Preparation and follow-up work
Lecture		
Seminar	60	120
Practical training		
Exercises		
Excursion		
Total:	180	

Prerequitistes for Examination: None

Module Examination:
- Form(s) of assessment: Presentation (20 min.) and seminar paper (3-5 pages)
- Components of final grade: Presentation (40 %) and seminar paper (60 %)
- Form of module retake examination: Revision of the seminar paper

Language: English

MP-208-EN-DI	MP-208-EN-DI Concepts of Ecological Economics Concepts of Ecological Economics	6 CP
Optional Module	Agricultural Sciences, Nutritional Sciences, and Environmental Management / Department of Agricultural Policy and Market Research Offered for the first time: SS 2020 Intake capacity: 30	1.-4. Sem.;

Frequency and Duration: WS, 1 Semester

Module Coordinator: Chair of Agricultural, Food and Environmental Policy

Applies to the Study Programmes: Profil englisch digital, Master (1.-4.); Profil, Master (1.-4.); Profil GT, WW, Master (1.-4.); Profil englisch, Master (1.-4.);

Prerequisites for Participation: None

Learning Outcomes:
The students
- know about ecological economics and political ecology as analytical concepts to assess challenges in the sustainable use of natural resources in the world, and especially natural resource use conflicts between different agents.
- understand the difference between neo-classical economic models, environmental economics and ecological economics.
- can explain the basic assumptions held in ecological economics
- can identify work domain in which ecological economics is appropriate and formulation questions which can be answered by using approaches rooted in ecological economics.
- know by name and by basic concept several different analytical methods used in ecological economics
- know in-depth about one analytical methods and are in a position to convey their knowledge to peers

Module Content:
- Introduction to ecological economics and position with regard to other neo-classical economics of natural resources
- Context of use of ecological economics and history of development: conflicts in natural resource use
- Main assumptions underlying ecological economics
- Different methods and approaches used in ecological economics studies
- Role of political aspects in the use of natural resources

Forms of Instruction:	Contact hours	Preparation and follow-up work
Lecture	20	40
Seminar	40	80
Practical training		
Exercises		
Excursion		
Total:	180	

Prerequitistes for Examination: None

Module Examination:
- Form(s) of assessment: Homework, presentation (10-30 min.) with writen report (between 4 and 12 pages) and seminar paper (1000 bis 2500 Wörter)
- Components of final grade: Homework (30 %), presentation with writen report (40 %) and seminar paper (30 %)
- Form of module retake examination: Oral examination

Language: English

MP-211-EN-DI	**MP-211-EN-DI Agriculture, Ecosystem Functioning and Climate Change** **Agriculture, Ecosystem Functioning and Climate Change**	**6 CP**
Optional Module	Agricultural Sciences, Nutritional Sciences, and Environmental Management / Department of Landscape Ecology and Resources Management Offered for the first time: WS 2020/21 Intake capacity: 30	1.-4. Sem.;

Frequency and Duration: WS, 1 Semester

Module Coordinator: Chair of Landscape Ecology and Landscape Planning

Applies to the Study Programmes: Profil englisch digital, Master (1.-4.); Profil, Master (1.-4.); Profil englisch, Master (1.-4.);

Prerequisites for Participation: None

Learning Outcomes:
The students
- understand the importance of climatic conditions and effects of climate change for agricultural production and ecosystem functioning;
- understand the biochemical processes in agriculture resulting in greenhouse gas emissions and carbon sequestration;
- know how to quantify greenhouse gas emissions from agriculture on local to regional scales;
- know measures in agriculture to mitigate and adapt to climate change.

Module Content:
- Abiotic controlling factors in agriculture and for ecosystem functioning
- Biochemical processes of CO2, nitrous oxide and methane release in agriculture
- Calculation methods of greenhouse gas emissions from agriculture on various spatial scales
- Climate as driver of biodiversity change
- Climate mitigation and adaptation strategies in agriculture
- CO2 footprints of agricultural products

Forms of Instruction:	Contact hours	Preparation and follow-up work
Lecture	40	80
Seminar		
Practical training		
Exercises	20	40
Excursion		
Total:	180	

Prerequitistes for Examination: None

Module Examination:
- Form(s) of assessment: Writen examination, presentation (15-20 min.) and writen assignment (15-20 pages)
- Components of final grade: Writen examination (50 %), presentation (25 %), writen assignment (25 %)
- Form of module retake examination: Writen examination

Language: English

MP-220-EN-DI	**MP-220-EN-DI Special Topics of the UN Sustainable Development Goals I** **Special Topics of the UN Sustainable Development Goals I**	**6 CP**
Optional Module	Agricultural Sciences, Nutritional Sciences, and Environmental Management / Department of Agricultural Policy and Market Research Offered for the first time: WS 2022/23 Intake capacity: 30	1.-4. Sem.;

Frequency and Duration: WS, 1 Semester

Module Coordinator: Chair of Agricultural and Food Market Analysis

Applies to the Study Programmes: Profil englisch, Master (1.-4.); Profil englisch digital, Master (1.-4.); Profil, Master (1.-4.);

Prerequisites for Participation: None

Learning Outcomes:
The students
- have in-depth knowledge of the discussed subject;
- know the theoretical basics of the field and important empirical applications;
- are able to apply their knowledge of research methods to selected scientific issues;
- are capable to conduct their own project work.

Module Content:
- Current topics of the research field

Forms of Instruction:	Contact hours	Preparation and follow-up work
Lecture	30	60
Seminar	30	60
Practical training		
Exercises		
Excursion		
Total:	180	

Prerequitistes for Examination: None

Module Examination:
- Form(s) of assessment: Assignments and project work or oral examination and project work or oral examination
- Components of final grade: Writen assignments (50 %) and project work (50 %) or oral examination (50 %) and project work (50 %) or oral examination (100 %)
- Form of module retake examination: Writen assignments or oral examination

Language: English

MP-221-EN-DI	MP-221-EN-DI Special Topics of the UN Sustainable Development Goals II Special Topics of the UN Sustainable Development Goals II	6 CP
Optional Module	Agricultural Sciences, Nutritional Sciences, and Environmental Management / Department of Agricultural Policy and Market Research Offered for the first time: WS 2022/23 Intake capacity: 30	1.-4. Sem.;

Frequency and Duration: WS, 1 Semester

Module Coordinator: Chair of Agricultural and Food Market Analysis

Applies to the Study Programmes: Profil englisch digital, Master (1.-4.); Profil englisch, Master (1.-4.); Profil, Master (1.-4.);

Prerequisites for Participation: None

Learning Outcomes:
The students
- have in-depth knowledge of the discussed subject;
- know the theoretical basics of the field and important empirical applications;
- are able to apply their knowledge of research methods to selected scientific issues;
- are capable to conduct their own project work.

Module Content:
- Current topics of the research field

Forms of Instruction:	Contact hours	Preparation and follow-up work
Lecture	30	60
Seminar	30	60
Practical training		
Exercises		
Excursion		
Total:	180	

Prerequitistes for Examination: None

Module Examination:
- Form(s) of assessment: Assignments and project work or oral examination and project work or oral examination
- Components of final grade: Writen assignments (50 %) and project work (50 %) or oral examination (50 %) and project work (50 %) or oral examination (100 %)
- Form of module retake examination: Writen assignments or oral examination

Language: English

MP-247-EN-DI	MP-247-EN-DI Land Use Change Projection with Q-GIS **Land Use Change Projection with Q-GIS**	6 CP
Optional Module	Agricultural Sciences, Nutritional Sciences, and Environmental Management / Department of Landscape Ecology and Resources Management Offered for the first time: WS 2022/23 Intake capacity: not limited	1.-4. Sem.;

Frequency and Duration: WS, 1 Semester

Module Coordinator: Chair of Landscape, Water and Biogeochemical Cycles

Applies to the Study Programmes: Profil, Master (1.-4.); Profil englisch, Master (1.-4.); Profil englisch digital, Master (1.-4.);

Prerequisites for Participation: None

Learning Outcomes:
The students
- have mastered the basics of QGIS;
- can work with spatial data from different sources and formats;
- can perform landscape analyses with QGIS and develop land use scenarios based on these analyses;
- can develop spatial algorithms with Google Earth Engine.

Module Content:
- Introduction to the basics of QGIS
- Use of spatial data from different formats
- Introduction to landscape analysis with QGIS
- Use of Google Earth Engine

Forms of Instruction:	Contact hours	Preparation and follow-up work
Lecture	15	30
Seminar		
Practical training		
Exercises	45	90
Excursion		
Total:	180	

Prerequitistes for Examination: None

Module Examination:
- Form(s) of assessment: Assignments (8-10 pages)
- Components of final grade: Assignments (100 %)
- Form of module retake examination: Revision of the assignments

Language: English

MP-252-EN-DI	MP-252-EN-DI Sustainable Water Management Sustainable Water Management	6 CP
Optional Module	Agricultural Sciences, Nutritional Sciences, and Environmental Management / Department of Agricultural Policy and Market Research Offered for the first time: WS 2023/24 Intake capacity: 30	1.-4. Sem.;

Frequency and Duration: SS, 1 Semester

Module Coordinator: Chair of Agricultural, Food and Environmental Policy

Applies to the Study Programmes: Profil, Master (1.-4.); Profil englisch, Master (1.-4.);

Prerequisites for Participation: None

Learning Outcomes:
The students
- are able to identify and evaluate advanced literature on current (research?) topics and summarize and present the current state of research;
- are able to get involved in scientific discussions and develop them further;
- are able to make a critical and well-founded statement on specific topics and can develop them further.

Module Content:
- Water Resources, Water Governance and Management
- Water Security: from Concept to Reality
- Integrated Water Resources Management: Principles and Instruments
- Socio-Technical Aspects of Water Resources Management
- Water Management Under Uncertainty: Climate and Water
- Transboundary Water Resources Management
- Water Diplomacy
- Agenda 2030 And SDG 6 (Clean Water and Sanitation)
- SDG Interlinkages – Synergies & Tradeoffs

Forms of Instruction:	Contact hours	Preparation and follow-up work
Lecture		
Seminar	60	120
Practical training		
Exercises		
Excursion		
Total:	180	

Prerequitistes for Examination: None

Module Examination:
- Form(s) of assessment: Presentation (15–20 Min.) with writen assignment (5–7 pages) or seminar paper (15–20 pages) or writen examination and presentation (15–20 Min.)
- Components of final grade: Presentation (50 %) with writen assignment (50 %) or seminar paper (100 %) or writen examination (50 %) and presentation (50 %)
- Form of module retake examination: Revision of the writen assignment or revision of the seminar paper or oral exam

Language: English

MP-255-EN-DI	MP-255-EN-DI Entrepreneurship in action – Entrepreneurial Diversity	6 CP
	Entrepreneurship in action – Entrepreneurial Diversity	
Optional Module	Agricultural Sciences, Nutritional Sciences, and Environmental Management / Department of Business Administration of the Agricultural and Food Sector	1.-4. Sem.;
	Offered for the first time: WS 2024/25	
	Intake capacity: not limited	

Frequency and Duration: WS, 1 Semester

Module Coordinator: Chair of Agribusiness Management and Food Economics

Applies to the Study Programmes: Profil, Master (1.-4.); Profil englisch, Master (1.-4.); Profil englisch digital, Master (1.-4.);

Prerequisites for Participation: None

Learning Outcomes:
The students
- have knowledge about diversity in entrepreneurship, recognize and understand gender bias in economic activities;
- recognize systemic boundaries and cultural prejudices and learn strategies for participation;
- develop solutions to promote inclusion, learn to use the advantages of heterogeneous teams and develop them from the stakeholder perspective of different economic actors.

Module Content:

Forms of Instruction:	Contact hours	Preparation and follow-up work
Lecture	40	80
Seminar	20	40
Practical training		
Exercises		
Excursion		
Total:	180	

Prerequitistes for Examination: None

Module Examination:
- Form(s) of assessment:
- Components of final grade:
- Form of module retake examination:

Language: English

<table>
<tr><td rowspan="2">MP-257-EN-DI</td><td>MP-257-EN-DI Sustainable Diets and Nutrition Security</td><td rowspan="2">6 CP</td></tr>
<tr><td>Sustainable Diets and Nutrition Security</td></tr>
<tr><td rowspan="3">Optional Module</td><td>Agricultural Sciences, Nutritional Sciences, and Environmental Management / Department of Nutritional Sciences</td><td rowspan="3">1.-4. Sem.;
3. Sem.;</td></tr>
<tr><td>Offered for the first time: WS 2024/25</td></tr>
<tr><td>Intake capacity: 30</td></tr>
<tr><td colspan="3">Frequency and Duration: WS, 1 Semester</td></tr>
<tr><td colspan="3">Module Coordinator: Chair of International Food and Nutrition Security</td></tr>
<tr><td colspan="3">Applies to the Study Programmes: Profil englisch digital, Master (3.); Profil, Master (1.-4.); Profil englisch, Master (3.);</td></tr>
<tr><td colspan="3">Prerequisites for Participation: None</td></tr>
<tr><td colspan="3">Learning Outcomes:
The students
• can critically evaluate relevant literature and publications;
• are able to explain what a sustainable diet is;
• have a basic understanding of the different attributes of sustainable diets, the complexity of sustainable diets as well as synergies and trade-offs;
• can identify some of the challenges and drivers of achieving sustainable diets;
• know about different methods for assessing diets, nutrition and health in a low- and middle-income country context;
• can categorise and present project activities in terms of their potential impact on the food and nutrition security of a region or country.</td></tr>
<tr><td colspan="3">Module Content:
• The role of diet in health/ Global burden of disease
• Nutrient requirements and dietary guidelines
• Environmental impacts on and of diets
• Agrobiodiversity and sustainable diets
• Social, cultural and economic aspects of diets
• Food Environments
• Definition, synergies and trade-offs of sustainable diets
• Drivers and opportunities for change for achieving sustainable diets
• Introduction to the methods of assessments of diets, nutrition and health in low- and middle-income countries
• Methods for participatory project planning in food and nutrition security</td></tr>
</table>

Forms of Instruction:	Contact hours	Preparation and follow-up work
Lecture	26	52
Seminar	26	52
Practical training		
Exercises	8	16
Excursion		
Total:	180	

Prerequitistes for Examination: None

Module Examination:

- Form(s) of assessment: Presentation (20-30 Min.) with discussion (15-20 Min.) and seminar paper (10 pages) or presentation (20-30 Min.) with discussion (15-20 Min.) and working on tasks (5 pieces)
- Components of final grade: Presentation (40 %) with discussion (10 %) and seminar paper (50) or presentation (40 %) with discussion (10 %) and working on tasks (50 %)
- Form of module retake examination: Oral exam

Language: English