Description of modules

Code of modules	Titles of modules	Semester
Profile modules		
09-TS-MSc-K1	Economic Development and World Agricultural Markets	1
09-TS-MSc-K2	Transition and Integration Economics	1
09-TS-MSc-K3	Law in Transition	1
09-TS-MSc-K4	European Studies and Political Transformation	2
09-TS-MSc-K5	Internship	3
09-TS-MSc-K6	Empirical Research Methods	2
09-TS-MSc-K7	Transition in Practice	2
09-TS-MSc-K8	Thesis module	3
Profile module		
09-TS-MSc-P1	Economy of Agrarian Institutions	2
09-TS-MSc-P2	Nutritional Behaviour and Communication	2
09-TS-MSc-P3	Methods of Regional Analysis and Planning	2
09-TS-MSc-P4	Ressource Economics and Environmental Management	1
09-TS-MSc-P5	Production and Quality Management	1
09-TS-MSc-P6	Methods in Physical Geography	1
09-TS-MSc-P7	Risk Assessment, Ethics and Patent Law	2
09-TS-MSc-P8	Biostatistics and Bioinformatics	2

Exemplification of the code of modules:

09-TS-MSc-K… Faculty 09 – study course Transition Studies – Master of Science – Core module-Nr.
09-TS-MSc-P… Faculty 09 – study course Transition Studies – Master of Science – Profile module-Nr.

09-TS-MSc-K1	**Economic Development and World Agricultural Markets**	**1. Sem.**	**6 CP**

Title of module	**Economic Development and World Agricultural Markets**
Code of module	09-TS-MSc-K1
Faculty/ study program / Institution	Faculty of Agricultural science, Nutritional sciences and environmental management / institution of Agricultural politics and market research
Used in StG / Sem.	Agricultural science, Nutritional sciences and environmental management / Profilemodule of all Master programs / 1.-4. Sem. (FB09-Master-MP13)
Person in charge	Prof. Dr. P. Michael Schmitz (Prof. Dr. Roland Herrmann, PD Dr. Manfred Leupolt)
Prerequisites	None
Course aims	Students will - be able to analyze and systematize the problem of development in its various dimensions and to establish connections to poverty, hunger and malnutrition - be able to provide explanatory approaches to the existence of underdevelopment, poverty and food insecurity - be able to assess agricultural and developmental policy measures and problem-solving strategies - be able to understand the characteristics of world agricultural markets as well as price formation on and interdependencies between such markets - be able to explain the influence of national and international agricultural market policy on world agricultural trade - understand the relationship between agricultural trade and economic development
Course content	- underdevelopment, poverty and hunger: a survey - causes of underdevelopment, poverty and hunger - micro- and macroeconomic development strategies - role of the agricultural sector and agricultural policy in the developing world (overview and case studies) - agricultural policies of industrialized and transition countries (overview and case studies) - sustainable development: rural development, decentralisation, land use concepts (approaches and case studies presented by guest lecturers of the GTZ) - growth, transformation and development - globalization from the perspective of the developing world - features of world agricultural markets (price instability, terms of trade) - influence of national agricultural policies, agricultural development policy and international commodity agreements on world agricultural trade - activities of internat. organizations, their influence on world agricultural trade - supply, demand and pricing in major world agricultural markets
Class format	Lecture and practice
Workload	180 h — Credit-Points: 6 CP

containing	A Course		B self-study	C examination	total
	a Presence	b preperation/postprocessing, LN			
lecture	54	100			
practice	6	18			
total	60	118		2	180

Examination format Grading Compensation Repetition	Written test (2 h) Written test (100%) --- Written test (2 h)
Availability Duration (semester)	SS, each year one semester
Acceptance capacity	none
Language of instruction	English
Notes	Information concerning modules and literature: see board of information / Date: see university calendar

09-TS-MSc-K2	**Transition and Integration Economics**	**1. Sem.**	**6 CP**

Title of module	**Transition and Integration Economics**
Code of module	09-TS-MSc-K2
Faculty / study program / Institution	Faculty 02/ economics
used in StG / Sem.	--
Person in charge	Prof. Dr. Dr. h.c. Armin Bohnet, (Dr. Ivo Bischoff)
Prerequisites	None
Course goal	The students have an understanding of: …concerning the theory of economic systems and institutional economics: - the characteristics of different economic systems; in particular the functioning principles of a market economy - the role of institutions (property rights, markets, hierarchies, private and state financial systems,) for the economic performance; - of the mechanisms of the role of the state and its institutions in market economies - of the driving forces and problems of institutional change …concerning the transformation of centrally planned economies: - the main reasons for the break-down of socialist-planned economies and the low performance of some developing countries; - different strategies of transition, their strengths and disadvantages in theory; - transition processes in middle and east european countries and in south-east asia.
Course content	- Constitutional characteristics and functioning of economic systems; - New Institutional Economics (property rights theory, transaction costs theory, coordination mechanisms etc.); - Theory of origin and change of markets and hierarchies; - Efficiency criteria, the efficiency of markets and the theory of market failure - Public Choice Theory and government failure (including corruption); - Theory of institutional change; - Principles of evolutionary economics; - Functioning and failures of socialist planned economies - Strategies of transition; - Case studies: former GDR, Russia, China;
Class format	Lecture and practice
Workload	180 h — Credit-Points: 6 CP

containing:

	A Course		B self-study	C examination	total
	a presence	b preperation/postprocessing, LN			
Lecture	40	50			
Practice	20	28			
Total	60	78		42	180

Examination format Grading Compensation Repetition	Term paper (40 h) and written exam (2 h) Term paper (50%), Written exam (50%) Respective part of examination Term paper and oral exam (0,5 h)
Availability Duration	SS, each year one semester
Acceptance capacity	None
Language of instruction	English
Notes	Information concerning modules and literature: see board of information / Date: see university calendar

09-TS-MSc-K3	**Law in Transition**	**1. Sem.**	**6 CP**

Title of modules	**Law in Transition**
Code of modules	09-TS-MSc-K3
Faculty / study program / institution	FB01/ law
used in StG / Sem.	--
Person in charge	Prof. Dr. Thilo Marauhn (Prof. Dr. Christoph Benicke, Dr. Andrea Kramer)
Prerequisites	None
Course goal	Students will - have a basic understanding of the role of law and legal systems in economic and social change - be familiar with the main sources and principles of international economic law - be familiar with the most popular regimes of international commercial arbitration - understand the importance of national law for economic and social change - be able to explain the concepts of rule of law and governance - comprehend the role of the judiciary in transition - be able to evaluate legal reforms
Course content	International Economic Law (Prof. Marauhn) - WTO Law - International Financial Institutions Transnational Commercial Law (Prof. Benicke) - Transnational Commercial Transactions - Transnational Commercial Arbitration Law, Governance and Development (Dr. Kramer) - Rule of law - Judicial reform - Evaluating legal reforms
Class format	Lecture and practice
Workload	180 h — Credit-Points: 6 CP

containing:

	A Course		B self-study	C examination	total
	a Presence	b preperation / postprocessing/ LN			
Lecture	30	45			
Practice	30	30			
Total	60	75		45	180

Examination format Grade of module Form Ausgleichspr. Form Repetition	Essay (40 h), presentation (5 h), participation Essay (70%), presentation (20 %), oral participation (10%) Respective part of examination Oral exam
Availability Duration	SS, each year one semester
Acceptance capacity	none
Language of instruction	English
Notes	Information concerning modules and literature: see board of information / Date: see university calendar

09-TS-MSc-K3	**European Studies and Political Transformation**	**2. Sem.**	**6 CP**
Title of module	**European Studies and Political Transformation: Domestic Processes and International Impact**		
Code of module	09-TS-MSc-K4		
Faculty / study program / institution	Faculty 03/political science/ department of politics		
used in StG / Sem.	Political and social science: Diplom/Magister and Staatsexamen (BA- und MA- study programs to be developed)		
Person in Charge	Prof. Dr. Reimund Seidelmann, (Prof. Dr. Hanne-Margret Birckenbach, Dr. Kirsten Westphal, Herr Vasilache)		
Prerequisites	None		
Course goals	The students will have acquired an overview about the current theoretical and methodological debate on political transformation studies. It introduces the relevant international actors involving in transformation activities (such as the EU, the OSCE and the Council of Europe), their policies towards transformation and their impact. Comparative case studies that put particular emphasis on emerging norms, standards, skills and ordering principles help to analyse and evaluate processes of transformation in their global, regional and national dimensions.		
Content of module	- Theoretical concepts and methodological approaches to political transformation - Structure, dynamics and patterns of external involvement in nation-states in transformation - National and regional concepts of political transformation - Interrelation between internal and external transformation dynamics - Nexus between transformation and transnationalization - Comparative case studies on success, failure and challenges		
Class format	2 seminars / preseminars		
Workload	180 h	Credit-Points: 6 CP	

containing:

	A Course		B self-study	C examination	total
	a Presence	b preperation/ postprocessing LN			
Lecture					
Seminar	60	49	30		
total	60	49	30	41	180

Examination format	1 presentation per seminar (0,5 h), 1 term paper (40 h), either 1 oral (0,5 h) or 1 written exam (2 h)
Grade of module	Presentation (20%); term paper (40%); oral or written exam (40%)
Compensation	each part of the exam
Repetition	term paper and oral exam (je 0,5 h), Note der Präsentation bleibt bestehen
Availability	SS, each year
Duration	one Semester
Acceptance capacity	None
Language of instruction	English
Notes	Information concerning modules and literature: see board of information / Date: see university calendar

09-TS-MSc-K5	**Internship**	**3. Sem.**	**6 CP**

Title of module	**Internship**
Code of module	09-TS-MSc-K5
Faculty / study program / institution	Faculty Agricultural science, nutritional science and environmental management
used in StG / Sem.	--
Person in charge	Head of the board of internship, faculty 09 (administrative) as well as managing director of ZEU (coordination, content)
Prerequisites.	None
Course goal	The students have acquired essential practical experience on activities and operations of enterprises and/or institutions which are related to transition countries or are useful for the transition process. The students understand the main structures and functionalities of those enterprises/ institutions and are able to link scientific knowledge to its practical application.
Course content	The internship takes place either at institutions of international development cooperation, national or international institutions and organisations, governmental bodies, private companies, or research institutions. The content of the internship depends on the chosen enterprise/ institution and has to be related to any of the modules of the study course.
Class format	Lecture as preperation and postprocessing, internship of at least 6 weeks in approved enterprises / institutions, a report about the internship has to be written
Workload	180 h — Credit-Points: 6 CP

containing:

	A Courses		B self-study	C examination	total
	a Presence	b preperation / postprocessing, LN			
Lecture	1,5				
Internship	158				
Total	159,5			20,5	180

Examination format Grading Compensation Repetition	Certification of internship, Report (20 h), oral exam (0,5 h) Certification (prerequisite for exam), report (30%), oral exam (70%) Respective part of examination oral exam only, Grade of report persists
Availability Duration	SS, each year 4 weeks
Acceptance capacity	None
Language of instruction	English
Notes	It is recommended to accomplish a traineeship between WS and SS (calendar week 10-15). Duration of traineeship is not less than 4 weeks. The student has to organize a proper Traineeship by himself/herself. The ZEU supports the student in finding a traineeship. For further instructions see array of internships within the study program Transition Studies (Appendix 3).

09-TS-MSc-K6	**Empirical Research Methods**	**2. Sem.**	**6 CP**

Title of module	**Empirical Research Methods**
Code of module	09-TS-MSc-K6
Faculty / study program / Institution	Faculty of agricultural science, nutritional science and environmental management
used in StG / Sem.	--
Person in charge	Prof. Dr. P. Michael Schmitz Teacher: Prof. Dr. Ernst-August Nuppenau, Prof. Dr. Roland Herrmann, Prof. Dr. P. Michael Schmitz, Prof. Dr. Ingrid-Ute Leonhäuser, Prof. Dr. Hermann Boland, Prof. Dr. Rainer Kühl
Prerequisites.	None
Course goals	The students have acquired knowledge of general principles of various qualitative and quantitative research methods as well as evaluation research. They will be able to understand the application of various methods with regard to research objectives.
Course content	- mathematical basic principles (e.g. derivation, matrices) - mathematical production economics (e.g. cost function) - correlation and causality - basic approach of econometrics - basic introduction to simple and multiple regression analysis - principles and extensions of cost-benefit analysis - principles of applied statistics and grounded theory - collecting and analysing panel data - designing surveys, interviews, questionnaires - qualitative data collection technique - principles of strategic management - game theory - organisation theory
Class format	Lecture and practice
Workload	180 h — Credit-Points: 6 CP

containing:

	A Course		B self-study	C examination	total
	a Presence	b preperation/ postprocessing, LN			
Lecture	30	60			
Practice	30	36	20		
Total	60	96	20	4	180

Examination format Grading Compensation Repetition	Two partial written exams (each 2 h) 1. written exam (50%), 2. written exam (50%) Respective part of examination Oral exam (0,5 h) each part
Availability Duration	WS, each year one Semester
Acceptance capacity	None
Language of instruction	English
Notes	Information concerning modules and literature: see board of information / Date: see university calendar

09-TS-MSc-K7	**Transition in Practice**			**2. Sem.**	**6 CP**
Title of module	**Transition in Practice**				
Code of module	09-TS-MSc-K7				
Faculty/study program/institution	Faculty agricultural science, nutritional science and environmental managment				
used in StG / Sem.	--				
Person in charge	Managing director of ZEU				
Prerequisites	None				
Course goal	The students have gained knowledge about the practical work with and within transition countries. They understand the problems as interdisciplinary and have been introduced to practical approaches to overcome the problems.				
Course content	The module takes place in form of a seminar including guest presentations of practitioners working in the field of transition: development agencies, consultancies, governmental bodies, enterprises, research institutions. Furthermore the students themselves will prepare case studies on development projects in transition countries. The module will focus on: - development projects in transition countries - current research and its impact on development work in transition countries - governmental approaches of transition				
Class format	Seminar (presentations)				
Workload	180 h			Credit-Points: 6 CP	
containing:		A Course		B self-study	C examination	total
		a Presence	b preperation/postprocessing, LN			
	Lecture					
	Seminar	60	79,5			
	total	60	79,5		40,5	180
Examination format Grading Compensation Repetition	Term paper(40 h) and presentation (0,5 h) Term paper (80%), presentation (20%) Respective part of examination Term paper and oral exam (0,5 h)					
Availability Duration	WS, each year one Semester					
Acceptance capacity	none					
Language of instruction	English					
Notes	Information concerning modules and literature: see board of information / Date: see university calendar					

09-TS-MSc-K8	**Thesis Module**	**3. Sem.**	**24 CP**

Title of module	**Thesis Module**
Code of module	09-TS-MSc-K8
Faculty/study program/institution	All institutions and professors who take part of the study program „Transition Studies“
used in StG / Sem.	--
Person in charge	Managing director of ZEU
Prerequisites	Successful graduation of at least 5 of 7 modules of the Master program „Transition Studies“
Course goals	Students have the competence to attend to a concrete problem regarding transition countries. They are able to address and analyse the problem by using scientific methods. They are able to write it in a scientific way and to present and defend the results.
Course content	The topic of the thesis has to be related to one of the taken modules of the study and has to be supervised by at least one professor of one of those modules. - Conception of a work plan - Independent study of related literature and methodology - Application of methodology - Compilation of the thesis - Presentation of results - Colloquium
Class format	Lecture as instruction for scientific working, Tutorial (mentoring), writing of final thesis, preparation and realisation of defence (presentation and cooloquium)
Workload	720 h — Credit-Points: 24 CP

containing:

	A Course		B self-study	C examination	total
	a Presence	b preperation/postprocessing, LN			
Lecture	2	2			
Tutorial	4	20			
Thesis			670		
Defence			21	1	
Total	6	22	691	1	720

Examination format Grading Compensation Repetition	Final thesis, oral defence: presentation (0,5 h) and colloquium (0,5 h) Thesis (70%), oral defence (30%) -- Like examinations of module
Availability Duration	SS one semester
Acceptance capacity	none
Language of instruction	English
Notes	Information concerning modules and literature: see board of information / Date: see university calendar

09-TS-MSc-P1	**Economy of Agrarian Institutions**	**2. Sem.**	**6 CP**

Title of module	**Economy of Agrarian Institutions**
Code of module	09-TS-MSc-P1
Faculty/study program/institution	FB Agrarwissenschaften, Ökotrophologie und Umweltmanagement / Wirtschafts- und Sozialwissenschaften/ Institut für Agrarpolitik und Marktforschung
used in StG / Sem.	Agricultural science, nutrition and environmental management / profilemodule of the Master program of all Studienrichtungen / 1.-4. Sem. (FB09-Master-MP 44)
Person in charge	Prof. Dr. Ernst-August Nuppenau
Prerequisites	none
Course goal	Students will - have basic knowledge of the relationship between agriculture and society from perspectives of sociology and institutional economics - be able to recognize how human activity is determined in a social context, as well as how institutions are explained economically and socially - recognize the interactions between individuals and society and know methodical approaches to elucidating the structure of agrarian societies - be familiar with basic social issues in agrarian societies and be able to apply various social theories of work, land, credit, input markets
Course content	- foundations of & demands on agrarian institutions by transaction minimal costs - efficient institutions and rural forms of organization - work and land: theories of sharecropping and distribution of surplus - land taxes: potentials and limitations in international comparison - land policy and land reform, institutional regulation of rural credit markets - water rights and technology - comparison of agricultural law in various countries - problems associated with institutional change - institutional problems of agricultural transition in Eastern Europe - interaction between individuals and societal institutions, - theories of social stratification, community and society - theories of social change and effects on the agricultural sector - property and usage rights, property rights and rents - theories of social justice and appropriation - agrarian constitutions and labour regulations - land access and regulations, land ownership - rural behaviour, rural welfare systems in historical context - traditional social safety nets - peasantry and peasant behaviour, farming as a lifestyle
Class format	Lecture and Seminar
Workload	180 h — Credit-Points: 6 CP

containing:

	A course		B self-study	C examination	total
	a Presence	b preperation/postprocessing, LN			
Lecture	40	39			
Seminar	20		40		
Total	60	39	40	41	180

Examination format Grading Compensation Repetition	Term paper (40 h), presentation (0,5 h), oral exam (0,5 h) Term paper (30%), presentation (20%), oral exam (50%) Respective part of examination term paper and oral exam (0,5 h), grade of presentation persists
Availability Duration	WS, each year one Semester
Acceptance capacity	30 Persons
Language of instruction	English
Notes	Information concerning modules and literature: see board of information / Date: see university calendar

09-TS-MSc-P2	**Nutritional Behaviour and Communication**	**2. Sem.**	**6 CP**

Title of module	**Nutritional Behaviour and Communication**
Code of module	09-TS-MSc-P2
Faculty/study program/institution	FB agricultural science, nutrition and environmental science / Faculty of nutritional science / Faculty of Agricultural sociology and consulting field
used in StG / Sem.	Agricultural science, nutrition and environmental management / coremodule of the Master program of Nutritional science / 3. Sem. (FB09-Master-MKE 08)
Person in charge:	Prof. Dr. Ingrid-Ute Leonhäuser (Prof. Dr. Hermann Boland)
Prerequisites	none
Course goal	Students will… - be able to frame the socioeconomic, psychosocial and cultural determinants of behaviour in the context of eating and drinking by means of theoretical models and empirical studies - be able to distinguish the various disciplinary perspectives and operational approaches of nutritional sociology, nutritional psychology and socioeconomic behavioural research - recognise the behaviour-oriented communication and counselling approach based on criteria of the behavioural sciences - be able to apply targeted methods of nutrition promotion and evaluate their effectiveness - have a command of theory and practice in behavioural analysis - be able to classify process models of counselling, supervision and therapy - have trained skills of conducting conversations under complex circumstances
Course content	- food consumption data household-budgets, studies in nutritional epidemiology - nutritional habits, eating behaviour and eating disorders - information and knowledge as cognitive determinants - behavioural analysis and behavioural modification - nutrition as a psychosocial phenomenon: approaches to a theoretical framework for behavioural counselling - counselling, supervision, therapy - training in handling difficult situations
Class format	Lecture and Seminar
Workload	180 h — Credit-Points: 6 CP

containing:

	A Course		B self-study	C examination	total
	a Presence	b preperation/postprocessing, LN			
Lecture	50	38			
Seminar	10	40			
total	60	78		42	180

Examination format	Written exam (2 h) and term paper (40 h)
Grading	Written exam (75%) and term paper (25%)
Compentence	Respective part of examination
Repetition	only written exam (2 h), grade of term paper persists
Availability	WS, each year
Duration	one Semester
Acceptance capacity	max. 20
Language of instruction	English
Notes	Information concerning modules and literature: see board of information / Date: Friday 8.00-12.00 a.m.

09-TS-MSc-P3	**Methods of Regional Analysis and Planning**	**2. Sem.**	**6 CP**
Title of modules	**Methods of Regional Analysis and Planning**		
Code of modules	09-TS-MSc-P3		
Department/ Study Program/ Institution	Dept. of Agricultural Science, Nutritional Sciences, and Environmental Management / Institution of Economics of Agricultre- and Nutritional Science		
Used in StG / Sem.	Agriculture Science, Nutritional Sciences, and Environmental Management/ core module of Master program in the study field of Agricultural Economic and Management as well as Environmental- and Resource Management / 3. and 1. Sem. respectively (Dept.09-Master-MKA 07/ MKU 01)		
Person in charge	Prof. Dr. Siegfried Bauer		
Prerequisites	None		
Course goals	Students will - recognize the necessity and purpose of demarcation and differentiations of rural regions - have knowledge of the major methods of region differentiation - know key analytic parameters for describing regional structures - be able to apply quantitative methods for the analysis and forecasting of regional developments - recognize the necessity of evaluation within the scope of regional and environmental planning - be able to assess the advantages and disadvantages of various evaluation methods - be able to select and apply adequate evaluation methods for various regional and environmental Planning - consider the basics of project management		
Course contents	- principles of regional grouping and differentiation] - methods of regional demarcation - statistical parameters of regional analysis - complex indicators for describing regional structures - methods of regional structural analysis - regional models - foundations of welfare theory - evaluation methods - application of evaluation methods to examples of regional and environmental planning - project management in regional and environmental planning		
Kinds of teaching	Lecture and Seminar		
Workload/ hours .	180 h	Credit-Points: 6 CP	

Containing:

	A course		B self-study	C examination	total
	a Presence	b preperation/postprocessing, LN			
Lecture	40	50			
Seminar	20	28			
Total	60	78		42	180

Examination format Grading Compensation Repetition	Written Exam (2 h), Term Paper (40 h) Written Exam (80%), Term Paper (20%) Respective part of exam only of written exam (2 h), Term Paper cannot be re-done/ Grade of Term Paper cannot be improved
Availability, Duration (semester)	WS, yearly 1 Semester
Acceptance capacity	none
Language of instruction	English
Note	Tutoring and Literature: look at semester- board / Date: Thursday 2-6 pm

09-TS-MSc-P5	**Resource Economics and Environmental Management**	**3. Sem.**	**6 CP**

Title of module	**Resource Economics and Environmental Management**
Code of module	09-TS-MSc-P5
Department/ Study Program/ Institution	Dept. Agricultural Sciences, Nutritional Sciences, and Environmental Management / business- and social sciences/ Institution for Agricultural Politics and Market Research
Used in StG / Sem.	agricultural sciences, nutritional sciences, and environmental management / profile module of all master studies (all study fields) / 1.-4. Sem. (Dept09-Master-MP 47)
Person in charge	Prof. Dr. Ernst-August Nuppenau
Prerequisites	None
Course goal	Students will - have foundational knowledge modelling intertemporal optimization of agricultural resource utilization - understand the basics of management concepts towards the resolution of resource use conflicts - be able to simultaneously model ecological and economic material cycles - be able to depict dynamic processes of resource regeneration - be able to construct computer simulation models - be able to derive economically and ecologically justifiable extraction rates from soil, water, and biotic resources - be able to draw knowledge of such concepts as sustainability, the introduction of save minimum standards, etc. to aid efforts in resource management.
Course content	- intertemporal optimization and resource usage - economics of non-renewable resources - economics of renewable resources - open access property and extinction of species as biotic resources - nature conservation as common property management - introduction to the economics of sustainable cultivation - mathematical formulation of resource management models - programming of optimization models - management of cultivated landscapes - trade and the environment - political questions about the implementation of environmental policies - international questions of resource protection - resource evaluation - property rights and institutions
Kinds of teaching	lecture (2/3) and seminar (1/3)
Workload/ hours	180 h — Credit-Points: 6 CP

Containing:

	A course		B self-study	C examination	total
	a Presence	b preperation/postprocessing, LN			
Lecture	40	60			
Seminar	20	27,5	30		
Total	60	87,5	30	2,5	180

Examination format Grading Compensation Repetition	presentation (0,5 h), written exam (2 h) presentation (30%), written exam (70%) respective part of examination only written exam (2 h)
Availability Duration (semester)	SS, yearly 1 Semester
Capacity of entry	max. 30 persons
Language of instruction	English
Note	Tutoring and Literature: look at semester board / Date: look at university calendar

09-TS-MSc-P6	**Production and Quality Management**	**3. Sem.**	**6 CP**

Title of module	**Production and Quality Management**
Code of module	09-TS-MSc-P6
Department/ Study Program/ Institution	Dept. Agricultural Sciences, Nutritional Sciences and Environmental Management / professorship for process technology
Used in StG / Sem.	Agricultural sciences, nutritional sciences and environmental management / profile module of all master studies (all study fields) / 1.-4. Sem. (Dept.09-Master-MP 14)
Person in charge	Prof. Dr. Elmar Schlich
Prerequisites	none
Course goal	Students will - know the scientific foundations of production and quality management - have knowledge of the principal elements of quality management, risk management in accordance with HACCP, and environmental management in line with applicable standards - be able to scientifically evaluate appropriate management systems, implement them in practice, and further develop existing systems - have knowledge of the creation and application of quality-management systems, quality audits, quality-management handbooks, HACCP-compliant risk-management systems in the food industry, environmental-management systems with life cycle assessment, product audits, process audits, purchase evaluation and interface evaluations, including the fields of packaging and disposal technology as well as associated legal foundations
Course content	The module content is delivered not only through lectures but very concrete in form of an excursion to several enterprises of the food industry and retail trade. The excursion is accompanied by presentations of external guests. - quality-management systems according to ISO 9000:2000 standards - HACCP according to European and German national regulation and legislation certification in accordance to producer and or retailer standards (e.g. EUREPGAP; IFS; BRC, QS etc.) - ecoauditing according to ISO 14000 standards - life cycle assessment (LCA) according to ISO 14040 standards - integrated management systems (IMS) - packaging and disposal technology according to regulations governing packaging and recycling management
Kinds of teaching	practice for advanced students: lecture as instruction, presentation, excursion
Workload/ hours	180 h — Credit-Points: 6 CP

Containing:

	A course		B self-study	C examination	tiotal
	a Presence	b preperation/postprocessing, LN			
Lecture	30	40			
Practice & Excursion	30	40	39		
Total	60	80	39	1	180

Examination format Grading Compensation Repetition	presentation (0,5 h), oral exam (0,5 h) presentation (50%), oral exam (50%) respective part of examination only oral exam (0,5 h), grade of presentation persists
Availability Duration (semester)	SS, yearly 1 Semester
Capacity of entry	max. 30 persons
Language of instruction	English
Note	Tutoring and Literature: look at semester board/ Date: Thursday 2-6 pm

09-TS-MSc-P7	**Methods in Physical Geography**	**3. Sem.**	**6 CP**

Title of module	**Methods in Physical Geography: Environmental and Natural Hazard Studies**
Code of module	09-TS-MSc-P7
Department/ Study Program/ Institution	Dept. 07/ mathematics and informatics, physics, geography/ Institution for Geography
Used in StG / Sem.	--
Person in charge	Prof. Lorenz King (Dr. Thomas Christiansen)
Prerequisites	none
Course goal	Methods in Physical Geography (climatology, hydrology, geophysics) – Prof. King: Students will: - have an overview over methods of registering climatological & hydrological data - have foundational knowledge of geophysical methods used to research subsurface conditions relevant for natural resources and hazards (groundwater, slope instabilities) - be able to assess the collected climatological, hydrological and geophysical data - be able to understand the potential and limitations of these methods Geographic Information Systems and Remote Sensing Methods and Techniques – Dr. Christiansen: Students will: - receive a general overview over the principles of geographic information systems (GIS) and remote sensing (RS) - be able to assess the relevance and suitability of different geographical and remotes sensing data - be able to understand potential and limitations of various GIS- and RS-methods
Course content	Methods in Physical Geography (climatology, hydrology, geophysics) – Prof. King: - nature and elements of atmosphere and hydrosphere - climatological and hydrological data sources and data acquisition - limitations and errors of climatological and hydrological data acquisition - nature and elements of lithosphere - introduction to geophysical prospecting (seismic, geoelectric, georadar) - limitations and errors of geophysical data acquisition Geographic Information Systems and Remote Sensing Methods and Techniques – Dr. Christiansen: - principles and nature of geographic and remote sensing data - data sources and data acquisition - general principles and methods of geographic information systems - general principles and methods of RS systems - application examples for remote sensing
Class format	Lecture and Practice
Workload	180 h — Credit-Points: 6 CP

Containing:

	A course		B self- study	C examination	total
	a Presence	b preperation/postprocessing, LN			
Lecture	40	70			
Practice	20	30	16		
Total	60	100	16	4	180

Examination format Grading Compensation Repetition	2 written exams (each 2 h) 1. written exam (50%), 2. written exam (50%) respective part of written exam(s) written exam (4 h)
Availability Duration (semester)	SS, each year block course
Acceptance capacity	no limitation
Language of instruction	English
Note	Tutoring and Literature: look at semester board / Date: look at university calendar

09-TS-MSc-P8	**Risk Assessment, Ethics & Patent Law**	**2. Sem.**	**6 CP**

Title of module	**Risk Assessment, Ethics and Patent Law**
Code of module	09-TS-MSc-P8
Department/ Study Program/ Institution	Dept. Agricultural Sciences, Nutritional Sciences and Environmental Management / Institution for Phytopathology and Applied Zoology
Used in StG / Sem.	agricultural sciences, nutritional sciences and environmental management / core module of master study of agrobiotechnology / 3. Sem. (Dept.09-MKAB 3)
Person in charge	Prof. Dr. Karl-Heinz Kogel
Prerequisites	none
Course goal	Students will - have broad knowledge of various processes in the field of technology assessment of agricultural products - have fundamental knowledge of the structure of the authorizing agencies for plant protection products - be able to explain structure and tasks of institutions responsible for evaluation of suitability, risk assessment, environment protection, farmer and consumer protection, and food security - be able to understand the ethic aspects of technology assessment - know fundamental principles of the European Patent Law - be able to understand the evaluation and authorisation procedures for plant protection products according to European Union Council Directives
Course content	The module contains specific work on a case study which is the application of bio safety research of transgenic plants on open land tests at the university. The aspect of patent law and ethics is additionally covered by 2 guest lectures from associations and/or companies. - Development of guidelines for the risk management of plant protection products - Evaluation of suitability of plant protection products - Tasks & structure of the EU Ethic and Food Safety Authority Commission - Tasks & structure of the Fed. Inst. for Consumer Protection & Food Security BVL - Tasks & structure of the Fed. Institute for Risk Assessment (BfR), Environmental Agency (UBA), Biological Research Centre for Agriculture and Forestry (BBA) - Tasks/ structure European & Mediterranean Plant Protection Organiz. (EPPO) - Assessment of different strategies in development of pest resistance of cultivated plants: Gene technology vs. plant breeding - Ecotoxicological studies of side effects of plant protection products (e.g. surface water pollution, effects on beneficial insects, …) - Federal and European Patent Law - TA studies on transgenic plants and food, on environmental problems of agriculture, and on renewable energies - TA and SD studies on agriculture, food chains and food - ways to deal with uncertainty, lack of knowledge, different values and interests - ways to develop different options for action - Terms and conditions for organic farming and Integrated Pest Management - Release and marketing of genetically modified organism
Class format	Lecture, Seminar and Practice
Workload	180 h — Credit-Points: 6 CP

Containing:

	A course		B self- study	C examination	total
	a Presence	b preperation/postprocessing, LN			
Lecture	30	40			
Practice & Seminar	30	47,5	30		
Total	60	87,5	30	2,5	180

Examination format Grading Compensation Repetition	written exam (2 h) and presentation (0,5 h) written exam (50%), presentation (50%) respective part of examination only oral exam (0,5 h), grade of presentation persists
Availability Duration	SS, yearly 1 Semester
Acceptance capacity	no limitation
Language of instruction	English
Note	Tutoring and Literature: look at semester board/ Date: look at university calendar

09-TS-MSc-P9	**Biostatistics and Bioinformatics**	**3. Sem.**	**6 CP**

Title of module	**Biostatistics and Bioinformatics**
Code of module	09-TS-MSc-P9
Department/ Study Program/ Institution	Dept. Agricultural Sciences, Nutritional Sciences, and Environmental Management/ Interdisciplinary Research Center IFZ/ Institution for Biometry und Population Genetics
Used in StG / Sem.	agricultural sciences, nutritional sciences and environmental management / core module of master studies of agro biotechnology / 1. Sem. (Dept.09-Master-MKAB 1)
Person in charge	Prof. Dr. Wolfgang Köhler
Prerequisites	basic knowledge of mathematics and statistics
Course goal	Students will - be able to plan experiments statistically (experimental design) - be familiar with descriptive and inferential statistical methods - be able to handle large data sets in Molecular Biology - be familiar with standard procedures in Bioinformatics
Course content	- Uni- and multivariate statistical analysis - Use of statistical program packages - Databases and software tools in Molecular Biology - Sequence alignments - Microarray expression analysis
Class format	Lecture and Practice (with computer)
Workload	180 h — Credit-Points: 6 CP

Containing:

	A course		B self-study	C examination	Total
	a Presence	B preperation/postprocessing, LN			
Lecture	30	48			
Practice	30		60		
Total	60	48	60	12	180

Examination format Grading Compensation Repetition	3 weekly graded exercises (9 h), 1 PC-Test (1 h), written exam (2 h) 3 weekly graded exercises (10%), PC-Test (20%), written exam (70%) respective part of examination only written exam (2 h)
Availability Duration	WS, each year 1 Semester
Acceptance capacity	max. 30
Language of instruction	English
Note	Tutoring and Literature: look at semester board/ Date: look at university calendar