

Module Name	Module Code
Quantitative Methods of Farm Planning and Performance Analysis	AEF-agr059
Module Coordinator	
Prof. Dr. Uwe Latacz-Lohmann	
Organizer	
Institute of Agricultural Economics - Farm Management and Production Economics	
Faculty	
Faculty of Agricultural and Nutritional Sciences	
Examination Office	
Faculty of Agricultural and Nutritional Sciences - Examination Office	

ECTS Credits	6
Evaluation	Graded
Duration	one semester
Frequency	Only takes place during winter semesters
Workload per ECTS Credit	30 hours
Total Workload	180 hours
Contact Time	60 hours
Independent Study	120 hours
Teaching Language	English

Recommended Requirements			
Knowledge of the theoretical and methodological foundations of farm management and production economics and their applications to planning problems in livestock and plant husbandry			
Module Courses			
Course Type	Course Name	Compulsory/Optional	SWS
Lecture	Quantitative Methods of Farm Planning	Compulsory	4

Examination(s)				
Examination Name	Type of Examination	Evaluation	Compulsory / Optional	Weighting
Oral Examination: Quantitative Methods of Farm Planning and Performance Analysis	Oral Examination	Graded	Compulsory	100
Further Information on the Examination(s)				
1.+2. period in winter semester 1. period in summer semester examiner: Prof. Dr. Latacz-Lohman QIS: 43102 with number of Examination 43120				

Course Content
Linear Programming: theoretical foundations and farm management applications; advanced models of linear programming; introduction to efficiency analysis using frontier approaches, with a particular focus on Data Envelopment Analysis and its applications in agricultural economics research.
Learning Outcome
The students know advanced methods of operations research and non-parametric efficiency analysis, can critically assess their advantages and disadvantages, and are able to apply the methods to selected problems. By reviewing a series of journal articles, the students appreciate the wide range of applications in agricultural economics research and have acquired the methodological competence to conduct their own research.
Reading List
Detailed syllabus; reference to relevant textbooks and journal articles in the course of the module Plà-Aragonés, Lluís M.: Handbook of Operations Research in Agriculture and the Agri-Food Industry. Springer 2015. Neela Patel: Linear Programming Model for Crop Production Planning. Lamberts Publishers. Peter Hazel: Mathematical programming for economic analysis in agriculture. MacMillan Publishing Company, New York 1986.

Use	Compulsory / Optional	Semester
Master, 1-Subject, Agricultural Sciences, Specialisation Agricultural Economics, (Version 2017)	Compulsory	-
Master, 1-Subject, Agricultural Sciences, Specialisation Agricultural Economics, (Version 2013)	Compulsory	-
Master, 1-Subject, Agricultural Sciences, Special. Agricultural Economics and Agribusiness # Specific Field of Study: Agricultural Economics, (Version 2008)	Optional	-
Master, 1-Subject, Agricultural Sciences, Special. Agricultural Economics and Agribusiness # Specific Field of Study: Agribusiness, (Version 2008)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Agribusiness, (Version 2017)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Agribusiness, (Version 2013)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Crop Sciences, (Version 2017)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Crop Sciences, (Version 2013)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Crop Sciences, (Version 2008)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Animal Sciences, (Version 2017)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Animal Sciences, (Version 2013)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Animal Sciences, (Version 2008)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Environmental Sciences, (Version 2017)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Environmental Sciences, (Version 2013)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Environmental Sciences, (Version 2008)	Optional	-
Master, 1-Subject, Dairy Science, (Version 2017)	Optional	-
Master, 1-Subject, Nutritional and Food Science, (Version 2013)	Optional	-
Master, 1-Subject, Nutritional and Consumer Economics, (Version 2017)	Optional	-
Master, 1-Subject, Nutritional and Consumer Economics, (Version 2013)	Optional	-
Master, 1-Subject, Nutritional Sciences and Household Economics, Specialisation Nutritional and Consumer Economics, (Version 2008)	Optional	-
Master, 1-Subject, Nutritional Sciences and Household Economics, Specialisation Nutritional Sciences, (Version 2008)	Optional	-

