

Module Name		Module Code	
Quantitative Methods of Farm Planning and Performance Analysis		agrarAEF059-01a	
Module Coordinator			
Prof. Dr. Uwe Latacz-Lohmann			
Organizer			
Institut für Agrarökonomie - Landwirtschaftliche Betriebslehre und Produktionsökonomie			
Faculty			
Faculty of Agricultural and Nutritional Sciences			
Examination Office			
Prüfungsamt Agrar- und Ernährungswissenschaftliche Fakultät			
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	3
Practical Exercise	Quantitative Methods of Farm Planning	Compulsory	1

Examination(s)				
Examination Name	Type of Examination	Evaluation	Compulsory / Optional	Weighting
Oral Exam: Quantitative Methods of Farm Planning	Oral Examination	Graded	Compulsory	100
Further Information on the Examination(s)				
<p>1.+2. period in winter semester 1. period in summer semester</p> <p>examiner: Prof. Dr. Latacz-Lohman QIS: 43102 with number of Examination 43120</p>				
Course Content				
<p>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.</p>				
Learning Outcome				
<p>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.</p>				
Reading List				
<p>Detailed syllabus; reference to relevant textbooks and journal articles in the course of the module.</p> <p>Textbooks: 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.</p>				

Use	Compulsory / Optional	Semester
Master, 1-subject, Agricultural Sciences, Agricultural Economics, (Version 2013)	Compulsory	-
Master, 1-subject, Agricultural Sciences, Agribusiness, (Version 2013)	Optional	-
Master, 1-subject, Agricultural Sciences, Crop Sciences, (Version 2013)	Optional	-
Master, 1-subject, Agricultural Sciences, Animal Sciences, (Version 2013)	Optional	-
Master, 1-subject, Agricultural Sciences, Environmental Sciences, (Version 2013)	Optional	-
Master, 1-subject, Nutritional and Food Science, (Version 2013)	Optional	-
Master, 1-subject, Nutritional and Consumer Economics, (Version 2013)	Optional	-