Modulnummer	**441**
Modulname	**Ökonometrische Produktions- und Effizienzanalyse für Agrar- und Ernährungsökonomen**
Modulname - englisch	**Econometric Production and Efficiency Analysis for Agricultural and Food Economists**
Studiengang und -abschnitt	M.Sc. Agricultural Sciences, Optional Course
Häufigkeit des Angebots	Annually (summer semester)
Modulverantwortlicher	Prof. Dr. Johannes Sauer
Studienberatung zum Modul	Prof. Dr. Johannes Sauer
Lehrveranstaltungen und Dozenten	Lecture: Econometric Production and Efficiency Analysis for Agricultural and Food Economists Prof. Dr. Johannes Sauer and Staff Tutorial: Econometric Production and Efficiency Analysis for Agricultural and Food Economists Prof. Dr. Johannes Sauer and Staff
Vorkenntnisse	Quantitative Methods, Production Economics Basics
Sprache	English
Plätze	Minimum of 25, Allocation at first meeting (see UNIVIS)
externe Plätze	Up to 5: Allocation at first meeting (see UNIVIS) for M.Sc. VWL and BWL
Lehrformen (Präsenzstunden/ Workload)	Lecture 30/90 SWS and Tutorial 30/90 SWS
Ablauf	Weekly during lecture time
Art und Gewichtung der Prüfungsleistungen	assignment 50% Sauer written test 50% Sauer
European Credit Points des Moduls	6
Ziele des Moduls	To enable students to conduct econometric based production and efficiency analysis. Theoretical concepts and empirical methods will be applied by using real data on individual firms and farms in the agricultural and food sector as well as state-of-the-art statistical software. Students will be able to empirically investigate questions related to productivity and efficiency with respect to production units and sectors. The knowledge of such methodical skills is of essential importance for successfully working at national and international organisations and companies. Such expertise can be a crucial competitive advantage in future work life and seems essential for an ongoing academic career in the area of quantitative agricultural and resource economics.
Inhalte des Moduls	- production theory and technologies (primal and dual, i.e. production functions, cost and profit functions, Shephard and directional distance functions, transformation functions) - formal and mathematical description/notation of production problems - productivity, efficiency concepts and frontiers - data, measurement, screening and evaluation - econometric methods to empirically investigate such functions and frontiers: least square techniques, stochastic frontier analysis, dynamic panel frontiers etc. - total factor productivity indeces (Malmquist Index, Luenberger Index etc.) - relevant statistical concepts and software (e.g. Stata, Limdep, R, Frontier)
Vermittelte Kompetenzen	1) formal description of production- and efficiency problems using

mathematical functions based on economic theory
2) empirical analysis / estimation of such problems
3) derivation of managament and policy implications

Studienhilfsmittel

Rasmussen, S. (2010). Production Economics. Springer.
Greene, W. (2000). Econometric Analysis. Prentice Hall
Coelli, T. et al. (2005). An Introduction to Efficiency and Productivity Analysis. Springer.
Kumbhakar, S., Knox Lovell, C.A. (2003). Stochastic Frontier Analysis. Cambridge University Press.
Chambers, R. (1994). Applied Production Analysis. CUP.
Relevante Wissenschaftliche Artikel.