Georg-August-Universität Göttingen Module M.WIWI-QMW.0004: Econometrics I	6 C 4 WLH

Learning outcome, core skills: This lecture provides a detailed introduction and discussion to the theory of several topics of econometrics. In a practical course the students will apply the methods discussed to real economic data and problems using the statistical software packages Eviews and R.	**Workload:** Attendance time: 56 h Self-study time: 124 h

Courses:	
1. Econometrics I (Lecture) *Contents*: Multiple linear regression model: Estimation, Inference and Asymptotics. Maximum likelihood modeling. Generalized least squares. Stochastic regressors. Intrumental variable estimators. Generalized method of moments, likelihood based inference. Dynamic models, weak exogeneity, cointegration, stochastic integration.	2 WLH
2. Econometrics I (Tutorial)	2 WLH
Examination: Written examination (90 minutes) **Examination requirements:** Linear regression models, generalized linear regression models. OLS, GLS, EGLS estimation. Multiplikative heteroskedasticity, autocorrelation. LM specification testing, Durbin Watson test. Convergence in probability, convergence in distribution. Asymptotics (consistency, asymptotic normality) of OLS estimators. IV estimation, GMM estimation.	6 C

Admission requirements: none	**Recommended previous knowledge:** Necessary: Mathematics (linear algebra), Statistics in addition: Introduction to econometrics (or equal lecture)
Language: English	**Person responsible for module:** Prof. Dr. Helmut Herwartz
Course frequency: every semester	**Duration:** 1 semester[s]
Number of repeat examinations permitted: twice	**Recommended semester:** 2 - 3
Maximum number of students: not limited	