

<b>Name:</b>			
<b>Computer Lab in Regression Analysis - Applied Econometrics</b>			
<b>Responsible:</b>			
Professor Martin Kukuk, Dr Tamara Schamberger, Chair of Econometrics			
<b>Program:</b>	<b>Type:</b>	<b>Term:</b>	<b>ECTS:</b>
Bachelor	Lecture	Winter/Summer	5 CP
<b>Contents &amp; Objectives:</b>			
<p>This course considers different distributions, their characteristics, simulation experiments, as well as the linear regression model. The main software used are Excel and Gretl.</p> <p>The course starts by reviewing different distributions using a so-called shiny-app that lets the user see how distributions behave when their respective parameters change. They also learn to generate samples of these, and estimate as well as interpret the descriptive statistics using Excel.</p> <p>The second part of the course deals with the linear regression model and its application to some empirical data sets. The students are introduced to empirical studies and the open-source software Gretl.</p> <p>At the end of the course an overview is given of possible problems with empirical specifications in the context of the linear regression model. The students are able to estimate a linear regression using R or Excel, interpret the results, and be aware of possible shortcomings in the data.</p>			
<b>Prerequisites:</b>			
Students attending this course should know about basic statistics. Further prerequisites are not required			
<b>Course Structure:</b>			
<b>Week</b>	<b>Content</b>		
1-3	Introduction to statistical inference, distributions and moments		
4-6	Simulations and multivariate normality		
7-9	Introduction to linear regression analysis		
10-13	Transformed depend and independent variables, interaction terms, multicollinearity, and heteroskedasticity		

<b>Literature:</b>
Wooldridge, J.: Introductory Econometrics, Cengage Learning.
<b>Grading:</b>
There will be an exam at the end of the semester.
<b>Contact:</b>
Dr. Martin Kukuk, Professor ( <a href="mailto:martin.kukuk@uni-wuerzburg.de">martin.kukuk@uni-wuerzburg.de</a> )
Manuel Rademaker, Research Assistant ( <a href="mailto:manuel.rademaker@uni-wuerzburg.de">manuel.rademaker@uni-wuerzburg.de</a> )