

2019.HS

<b>Module Name: Empirical Methods in Economics</b>			
Module Code	w.BA.XX.2EmpME.XX		
Module Description	Vast amounts of data are collected across the globe on a daily basis: Insurance companies collect detailed information about the costs of their client's last doctor or hospital visit and the pharmaceuticals they use; banks gather information on the income, wealth, credit-worthiness and transactions of their clients, and tech giants (e.g., Apple, Google) harvest data on essentially any dimension of our personal life from consumption patterns to social interactions via email, social media, or mobile devices. One key advantage of the improved data availability is that it allows policy makers, companies and scientists alike to answer a series of highly relevant real-world questions. For example, firms can use information about their clients to evaluate the effects of a recently run ad-campaign on their sales/profits; public health offices might be interested in the impact of a smoking ban on cigarette consumption, and students might wonder if it is worthwhile to do a Master's degree in terms of future income. On the other hand, answering such questions requires solid statistical knowledge on how to properly analyze the newly available data. This module introduces students to the most important quantitative methods used in economic research and provides an introduction to the statistical software R. Students learn how to carry out an empirical project, in which they apply the techniques taught in class based on real world data (e.g., SwissHousehold Panel and SHARE, which will be provided in class to all participants). Topics include linear regression analysis, the analysis of longitudinal data (panel data) and causal analysis (DID, IV). Examples from the literature and computer tutorials offer hands-on experience in utilizing the methods. The distinctive feature of the module is a learning-by-doing approach with a strong emphasis on the application of methods to real data and the correct interpretation of results. In addition, the module introduces students to the more recent developments in causal analysis, thereby teaching students to reflect on how to estimate causal effects from the data at hand.		
Program and Specialization	<ul style="list-style-type: none"> <li>§ Business Administration - Accounting, Controlling, Auditing</li> <li>§ Business Administration - Banking and Finance</li> <li>§ Business Administration - Banking and Finance (FLEX)</li> <li>§ Business Administration - Banking and Finance (PiE)</li> <li>§ Business Administration - Economics and Politics</li> <li>§ Business Administration - General Management</li> <li>§ Business Administration - Risk and Insurance</li> <li>§ Business Information Technology</li> <li>§ International Management</li> </ul>		
Legal Framework	Academic Regulations BSc dated 29.01.2009, Appendix to the Academic Regulations for the degree programs in Business Administration, Business Information Technology, and Business Law, first adopted on 12.05.2009		
Module Category	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;"><b>Module Type:</b> Compulsory Elective</td> <td style="width: 40%;"><b>Program Phase:</b> Main Study Period</td> </tr> </table>	<b>Module Type:</b> Compulsory Elective	<b>Program Phase:</b> Main Study Period
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ECTS	3		
Organizational Unit	W Center for Energy and Environment		
Module Coordinator	Tobias Müller (murt)		
Deputy Module Coordinator	Nicole Bellert (bell)		
Prerequisite Knowledge	The course is aimed at BSc students with a solid knowledge in (basic) statistics and a strong preference for working with data and statistical software.		
Contribution to Program Learning Goals (Affected by Module)	<ul style="list-style-type: none"> <li>§ Professional Competence</li> <li>§ Methodological Competence</li> <li>§ Social Competence</li> <li>§ Self-Competence</li> </ul>		
Contribution to Program Learning Objectives	<ul style="list-style-type: none"> <li>Professional Competence <ul style="list-style-type: none"> <li>§ Knowing and Understanding Content of Theoretical and Practical Relevance</li> <li>§ Apply, Analyze, and Synthesize Content of Theoretical and Practical Relevance</li> <li>§ Evaluate Content of Theoretical and Practical Relevance</li> </ul> </li> <li>Methodological Competence <ul style="list-style-type: none"> <li>§ Problem-Solving &amp; Critical Thinking</li> <li>§ Scientific Methodology</li> <li>§ Work Methods, Techniques, and Procedures</li> <li>§ Information Literacy</li> <li>§ Creativity &amp; Innovation</li> </ul> </li> </ul>		

	Social Competence § Written Communication § Oral Communication § Teamwork & Conflict Management Self-Competence § Learning & Change		
Module Learning Objectives	Students... § are able to explain the basic principles of modern empirical economics § are able to interpret empirical results and conduct statistical significance tests § are able to explain the obstacles in the causal interpretation of empirical results § are able to work with the statistical software R § are able to plan and apply the methods discussed in class in their own work (e.g., module project, Bachelor's thesis) § are able to summarize their empirical findings and present them to their peers		
Module Content	§ Introduction to key empirical methods in economics (linear regression, instrumental variables, panel data methods, difference-in-difference) § Introduction to the statistical software R § Working with real-world data (Swiss Household Panel, SHARE) § Methods are illustrated using simulated and real-world data		
Links to other modules	The content of this module is linked to the following modules: w.BA.XX.1QMeth.XX w.BA.XX.1Stat.XX w.BA.XX.1Stat-PiE.XX		
Methods of Instruction	§ Lecture § Exercises § Problem-Oriented Teaching § Project Work	<b>Social Settings Used:</b> § Individual Work § Group Work	
Digital Resources	§ Teaching Videos § Teaching Materials § Practice and Application Exercises (with Key)		
Type of Instruction	<b>Classroom Instruction</b>	<b>Guided Self-Study</b>	<b>Autonomous Self-Study</b>
Large Class	20 h	-	
Small Class	-	-	
Group Instruction	-	-	
Practical Work	8 h	-	
Seminar	-	-	
<b>Total</b>	<b>28 h</b>	<b>0 h</b>	
Performance Assessment			
<b>End-of-module exam</b>	<b>Form</b>	<b>Length (min.)</b>	<b>Weighting</b>
-	-	-	-
<b>Permitted Resources</b>	-		
<b>Others</b>	<b>Assessment</b>	<b>Length (min.)</b>	<b>Weighting</b>
Written Assignment	Grade	-	100.00 %
Classroom Attendance Requirement	No		
Language of Instruction/Examination	English		
Compulsory Reading	Angrist, J. & Pischke, J. (2008). Mostly harmless econometrics: An empiricist's companion. Princeton university press. ISBN 0691120358.		
Recommended Reading	-		
Comments	-		