

<b>Module title</b>		<b>Abbreviation</b>
Introduction to Statistical Inference and Regression Analysis		12-QWF-G-o82-m01
<b>Module coordinator</b>		<b>Module offered by</b>
holder of the Chair of Econometrics		Faculty of Business Management and Economics
<b>ECTS</b>	<b>Method of grading</b>	<b>Only after succ. compl. of module(s)</b>
5	numerical grade	--
<b>Duration</b>	<b>Module level</b>	<b>Other prerequisites</b>
1 semester	undergraduate	--
<b>Contents</b>		
<p>Description:</p> <p>This module deals with random variables and their statistical distributions as well as with the basic terms and methods of inferential statistics. Some of the most famous distributions such as the normal, binomial, poisson or the exponential distribution are introduced in the first half of the course. The second half deals with the fundamental concepts and techniques used in inferential statistics, including interval estimation and the construction, application and interpretation of hypothesis tests. Additionally, an introduction to multiple regression analysis is given towards the end of the course.</p> <p>The knowledge and skills acquired in this course serve as a prerequisite for the course "Computerpraktikum" ("Computer Lab in Regression Analysis") and the subsequent Master's course "Ökonometrie I" ("Econometrics I").</p> <p>Outline of syllabus:</p> <ol style="list-style-type: none"> <li>1. Random variables and their distributions</li> <li>2. Distribution parameters</li> <li>3. On the importance of the normal distribution</li> <li>4. Central limit theorems</li> <li>5. Inferential statistics</li> <li>6. Interval estimation</li> <li>7. Hypothesis testing</li> <li>8. Regression analysis</li> </ol>		
<b>Intended learning outcomes</b>		
<p>Students acquire a basic knowledge of the techniques necessary for the analysis of random events. They will be familiar with different distributions and their respective parameters. Apart from basic estimation methods for these unknown parameters, students learn how to construct and interpret common statistical tests and are able to apply these to specific economic or business questions. Additionally, students acquire a basic understanding of ordinary least square (OLS), enabling them to read simple scientific papers and to apply these tools to scientific questions.</p> <p>The competences acquired in this course serve as a prerequisite for the course "Computer Lab in Regression Analysis" and the subsequent Master's course "Econometrics I".</p>		
<b>Courses</b> (type, number of weekly contact hours, language – if other than German)		
V + Ü (no information on SWS (weekly contact hours) and course language available)		
<b>Method of assessment</b> (type, scope, language – if other than German, examination offered – if not every semester, information on whether module is creditable for bonus)		
written examination (approx. 120 minutes)		
<b>Allocation of places</b>		
<p>Number of places: 640. No restrictions with regard to available places for Bachelor's students of Wirtschaftswissenschaft (Business Management and Economics), Wirtschaftsmathematik (Mathematics for Economics) and Wirtschaftsinformatik (Business Information Systems). The remaining places will be allocated to students of other subjects. Should the number of applications exceed the number of available places, places will be allocated in a standardised procedure among all applicants irrespective of their subjects according to the following</p>		

quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in the respective degree subject; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. Applicants who already have successfully completed at least one module component of the respective module will be given preferential consideration. Places on all courses of the module component with a restricted number of places will be allocated in the same procedure. A waiting list will be maintained and places re-allocated as they become available.

**Additional information**

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**Workload**

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**Teaching cycle**

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**Referred to in LPO I** (examination regulations for teaching-degree programmes)

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**Module appears in**

Bachelor' degree (1 major) Business Management and Economics (2009)  
 Bachelor' degree (1 major) Business Management and Economics (2008)  
 Bachelor' degree (1 major) Business Management and Economics (2010)  
 Bachelor' degree (1 major) Business Information Systems (2007)  
 Bachelor' degree (1 major) Business Information Systems (2009)  
 Bachelor' degree (1 major) Business Information Systems (2008)  
 Master's degree (1 major) China Business and Economics (2014)  
 Master's degree (1 major) China Business and Economics (2012)