

Module title		Abbreviation
Introduction to Statistical Inference and Regression Analysis		12-QWF-G-152-m01
Module coordinator		Module offered by
holder of the Chair of Econometrics		Faculty of Business Management and Economics
ECTS	Method of grading	Only after succ. compl. of module(s)
5	numerical grade	--
Duration	Module level	Other prerequisites
1 semester	undergraduate	--
Contents		
<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"> 1. Random variables and their distributions 2. Distribution parameters 3. On the importance of the normal distribution 4. Central limit theorems 5. Inferential statistics 6. Interval estimation 7. Hypothesis testing 8. Regression analysis 		
Intended learning outcomes		
<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>		
Courses (type, number of weekly contact hours, language — if other than German)		
V (2) + T (2)		
Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)		
a) written examination (approx. 60 minutes) or b) written examination (approx. 90 minutes) or c) written examination (approx. 120 minutes)		
Allocation of places		
840 places. (1) No restrictions with regard to available places for Bachelor's students of Wirtschaftswissenschaft (Business Management and Economics) (BSc with 180 ECTS credits), Wirtschaftsmathematik (Mathematics for Economics) (BSc with 180 ECTS credits), Wirtschaftsinformatik (Business Information Systems) (BSc with 180 ECTS credits) as well as Bachelor's students with the minor Wirtschaftswissenschaft (Business Management and		

Economics) (60 ECTS credits). (2) Additional places will be allocated to students of other subjects. (3) When places are allocated in accordance with (2) and the number of applications exceeds the number of available places, places will be allocated by lot among all applicants irrespective of their subjects. (4) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (5) A waiting list will be maintained and places re-allocated by lot as they become available.

Additional information

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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 (2015)
 Bachelor' degree (1 major) Business Information Systems (2015)
 Master's degree (1 major) China Business and Economics (2016)
 Bachelor' degree (1 major) Business Information Systems (2016)
 Master's degree (1 major) China Business and Economics (2019)
 Bachelor' degree (1 major) Business Information Systems (2019)
 Bachelor' degree (1 major) Business Management and Economics (2019)
 Bachelor' degree (1 major) Business Information Systems (2020)