Module title	Abbreviation
Fundamentals of Econometrics	12-QWF-G-262-m01

Module coordinator	Module offered by
holder of the Chair of Econometrics	Faculty of 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

Description:
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.
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").

Outline of syllabus:
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

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.

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".

Courses (type, number of weekly contact hours, language — if other than German)

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Module taught in: German and/or English

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 to 120 minutes) or
b) portfolio (approx. 50 hours total)
Language of assessment: German and/or English
creditable for bonus

Allocation of places

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Additional information
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Workload
150 h
Teaching cycle
Teaching cycle: winter semester
Referred to in LPO I (examination regulations for teaching-degree programmes)
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Module appears in
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