Module title	Abbreviation
Statistics	12-Stat-G-242-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

Description:
This module deals with the basic terms and concepts of descriptive statistics, indices and probability calculus. It introduces students to common frequency distributions and fundamental distributional characteristics of one-dimensional data as well as basic concepts and methodology necessary for the description and interpretation of multi-dimensional data. In addition, interpretation and calculation with indices as well as fundamental terms of probability calculus are discussed in the second half of the course.

Outline of syllabus:
1. Basic terms in statistics
2. Frequency distributions
3. Distributional characteristics
4. Multi-dimensional data
5. Index calculus
6. Fundamental probability calculus
7. Random variables and distributions

Reading:
Assenmacher, W.: Deskriptive Statistik, Springer.
Bamberg, G., Baur, F.: Statistik, Oldenbourg.
Bohley, P.: Statistik, Oldenbourg.
Hartung, J., Elpelt, B., Klösner, K.-H.: Statistik, Oldenbourg.
Hippmann, H.-D.: Statistik, Schäffer-Poeschel.
Leiner, B.: Einführung in die Statistik.
Litz, H.-P.: Statistische Methoden in den Wirtschafts- und Sozialwissenschaften, Oldenbourg.
Mosler, K., Schmid, F.: Beschreibende Statistik und Wirtschaftsstatistik, Springer.
Schaich, E., Köhle, B., Hartung, J.: Statistik I für Volkswirte, Betriebswirte und Soziologen, Verlag Franz Vahlen.
Schira, J.: Statistische Methoden der VWL und BWL, Pearson Studium.

Intended learning outcomes

Students acquire knowledge of the fundamental terms and concepts of descriptive statistics. In particular, they become familiar with the application and interpretation of common visual and formal tools for descriptive data analysis while simultaneously learning how to competently deal with economic and/or statistical data. On the visual side, this includes knowledge of the construction and interpretation of histograms, bar plots, pie charts, and empirical distribution functions, while on the formal side students learn how to deal with basic distributional characteristics and correlation measures. Additionally, students are familiarized with index calculus and interpretation (in particular the Laspeyres and the Paasche price index) as well as with the most fundamental concepts and terms of probability calculus.
The competences acquired in this course serve as a prerequisite for "Introductory Statistics II".

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)

written examination (approx. 60 to 120 minutes)

creditable for bonus

Allocation of places

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Additional information

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Workload

150 h

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 Information Systems (2024)

Bachelor' degree (1 major) Business Management and Economics (2024)

Bachelor's degree (1 major, 1 minor) Business Management and Economics (Minor, 2024)