Valid from 2026.FS

Module description: Statistics

Module Code	w.BA.XX.2Stat.XX
ECTS Credits	6
Language of Instruction/Examination	German
Module Description	Students understand the fundamental concepts of descriptive and inferential statistics to summarize and analyze data and apply the methods in a practical business context.
Organizational Unit	Institut für Wealth & Asset Management
Module Coordinator	Thomas Gramespacher
Deputy Module Coordinator	Armin Bänziger-Aiba
Program and Specialization	• Business Administration - Specialization in Accounting, Controlling, Auditing • Business Administration - Specialization in Banking and Finance • Business Administration - Specialization in Behavioral Design • Business Administration - Specialization in Economics and Politics • Business Administration - Specialization in Financial Management • Business Administration - Specialization in General Management • Business Administration - Specialization in Human Centered Organisation • Business Administration - Specialization in Insurance Management • Business Administration - Specialization in Marketing • Business Administration - Specialization in Risk and Insurance • Business Administration - Spezialization in Politics and Management
Legal Framework	Academic Regulations BSc dated 29.01.2009, for the degree programs in Business Administration, International Management, Business Information Technology, Business Law, Business Law and Applied Law, first adopted on 12.05.2009
Module Category	**Module Type** Compulsory **Program Phase** Main Study Period
Prerequisite Knowledge	w.BA.XX.2Mathe1.XX, w.BA.XX.2Mathe2.XX
Contribution to Program Learning Objectives (by the concerned Module)	• Professional Competence • Methodological Competence • Social Competence • Self-Competence

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Contribution to Program Learning Objectives	**Professional Competence** • Knowing and Understanding Content of Theoretical and Practical Relevance • Apply, Analyze, and Synthesize Content of Theoretical and Practical Relevance • Evaluate Content of Theoretical and Practical Relevance **Methodological Competence** • Problem-Solving & Critical Thinking • Scientific Methodology • Work Methods, Techniques, and Procedures • Information Literacy • Creativity & Innovation **Social Competence** • Oral Communication • Teamwork & Conflict Management • Intercultural Insight & Ability to Change Perspective **Self-Competence** • Self-Management & Self-Reflection • Ethical & Social Responsibility • Learning & Change
Module Learning Objectives	Students... • understand the concept of numerical measures to describe data. • explain central concepts of probability theory. • understand the importance of confidence intervals and hypothesis testing. • describe linear the relationship of two variables. • represent data in appropriate charts. • calculate key figures of empirical and theoretical distributions. • determine probabilities of elementary random events. • apply probability distributions on a case by case basis. • construct confidence intervals for the population mean. • test hypotheses concerning a population mean. • analyze data using statistical analysis. • evaluate hypotheses with sample data. • interpret results of simple linear regressions. • learn to use the statistical software gretl autonomously. • solve the applied exercises of the textbook on their own.
Module Content	• Processing and presenting data • Statistical measured values: location and dispersion measures • Probability calculation (incl. elementary combinatorial analysis) • Discrete probability distributions (esp. binomial distribution) • Continuous probability distributions (esp. uniform and normal distribution; normal approximation of discrete distributions) • Distribution of random sample statistics • Estimation procedures (point and interval estimation, esp. for mean values) • Hypothesis tests (esp. with regard to the mean value of a population) • Relationships between variables: cross tabulation and dispersion diagrams; covariance and correlation; linear regression models with an independent variable
Links to other modules	This module is linked to the following modules:
Digital Learning Resources	• Practice and Application Exercises (with Key) • Multiple Choice Tests
Methods of Instruction	• Lecture • Interactive Instruction • Exercises Social Settings Used: • Individual Work

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Type of Instruction

	Classroom Instruction	Guided Self-Study	Autonomous Self-Study
Large Class	28 h	-	
Small Class	28 h	56 h	
Group Instruction	-	-	
Practical Work	-	-	
Seminar	-	-	
Total	**56 h**	**56 h**	**68 h**

Performance Assessment

End-of-module exam	Form	Length (min.)	Weighting
Written exam	Specified documentation	60	100.00
Permitted Resources	Spec. calculator acc. to leaflet "Utilities"	With dictionary	

Others	Assessment	Format	Length (min.)	Weighting
-	-	-	-	-

Classroom Attendance Requirement

None

Compulsory Reading

- Bachmann, O., Bänziger, A., Gramespacher, T., Hilber, N. & Rentzmann, S. (2014). Übungsband zur angewandten Statistik: Mit einer Einführung in die Ökonometrie-Software gretl. 2. korrigierte edition. Zürich: Compendio. ISBN 978-3-7155-9924-3.

Recommended Reading

- Carlson, W. & Thome, B. & Newbold, P. (2023). Statistics for Business and Economics (Global Edition). 10 Edition. Upper Saddle River, N.J.: Pearson Prentice Hall. ISBN 978-1292436845.

Comments