Advanced Statistical Methods and Applications

Kennnummer	Workload	Credits/LP	Studiensemester	Häufigkeit des Angebots	Dauer
IMM 2	180 Std.	6	1 + 2	Jedes Semester	2 Semester

1	Lehrveranstaltungen	Sprache	Kontaktzeit	Selbststudium	Geplante Gruppengröße
	a) Advanced Statistical Methods	a) English	a) 22,5 Std.	a) 67,5 Std.	a) 15
	b) Advanced Statistical Applications	b) English	b) 22,5 Std.	b) 67,5 Std.	b) 15

2 Lernergebnisse/Kompetenzen

Nach erfolgreicher Teilnahme am Modul können die Studierenden ...

Analyse (4)
... …identify the benefits of using complementary qualitative information when performing quantitative statistical analysis.
... …assess the suitability of alternative multivariate methods for an advanced statistical analysis of specific business situations.
... …compare the advantages and disadvantages of data-intensive statistical analysis in actual managerial problems and determine the relevance of it.

Synthese (5)
... …explain the potential relationship of empirical results published in the management literature with those obtained in related disciplines in order to devise areas of further research.
... …develop an adequate strategy in order to perform, revise and modify a data-intensive analysis using modern statistical software.

Evaluation / Bewertung (6)
... …evaluate and criticize empirical findings in current academic research on actual managerial and marketing problems.
... …relate the theoretical insights from the literature on business administration with the statistical methods required to evaluate their empirical implications and recommend a quantitative research strategy.

3 Inhalte

a)
- Review of probability, review of statistics
- Hypothesis testing
- Simple and multivariate linear regression, time series regression and forecasting
- Cluster analysis, factor analysis, conjoint analysis, multidimensional scaling, introduction to statistical software.

b)
- Nonlinear regression functions
- Regression with panel data, instrumental variables, assessment of studies based on multivariate analysis
- Experiments and quasi-experiments, applications in selected industries, issues when working with statistical software.

4	**Lehrformen** a) Seminar b) Seminar
5	**Teilnahmevoraussetzungen** Statistics at Bachelor level
6	**Prüfungsformen** a) Prüfungsleistung 1K (Klausur) (3 LP) b) Prüfungsleistung 1sbH (Hausarbeit) (3 LP)
7	**Verwendung des Moduls** International Management M.Sc. (IMM)
8	**Modulbeauftragte/r und hauptamtlich Lehrende** Prof. Dr. Daniel Cerquera (Modulverantwortliche/r)
9	**Literatur** a) Stock, J. H. and M. W. Watson (2012) Introduction to Econometrics. 3rd Edition. Pearson. Baye, M. R. (2010) Managerial Economics and Business Strategy. 7th Edition. McGraw-Hill. Cameron, A. C. and P. K. Trivedi (2005) Microeconometrics: Methods and Applications. Cambridge. Doane, D. P. and L. E. Seward (2012) Applied Statistics in Business and Economics. 4th Edition. McGraw-Hill. McDaniel, C. and R. Gates (2012) Marketing Research. 9th Edition. Wiley.