COURSE SYLLABUS

Doctoral course: Contemporary Quantitative methods in Business Administration, 7,5 credit points

Course code:
Reviewed by: RFB
Approved by: RFB
Valid as of: 2022-11- 09
Version: 1
Reference number: 2016/1098-41

Education Cycle: Third cycle, doctoral program course
Doctoral programme subject: Social sciences. Business administration, Informatics, etc.

Purpose:

This course is an introductory course in quantitative methods available to PhD students. The goal of the course is to provide the PhD students with basic understanding of the role and potential of quantitative methods in social science research, basic ability to understand and evaluate the merits and shortcomings of other researchers' (quantitative) studies, basic ability to apply certain quantitative techniques in your own research, and basic orientation that facilitates further self-study or taking more advanced courses on quantitative methods.

Intended learning outcomes:

On completion of the course, the students will be able to:

Knowledge and understanding

1. Read and communicate quantitative studies by appropriate statistical terminology
2. Identify which kind of multivariate statistical analysis is appropriate for a specific problem
3. Explain important concepts of statistical methods for analysis of multivariate data

Skills and abilities

4. Explain the potentials and limitations of statistical methods for analysis of multivariate data
5. Analyze, criticize and document potential weaknesses of the quality of the data and its consequences
6. Conduct multivariate statistical analyses with an appropriate statistical software
7. Assess the goodness-of-fit of a multivariate model

Judgement and approach

8. Assess the general usefulness/weaknesses of the statistical analyses treated in the course
9. Recognize the common errors made in multivariate analysis

Content:

1) Descriptive statistics + graphical analysis
2) Survey design and design of experiment
3) Explanatory and confirmatory factor analysis
4) Regression analysis
5) Sturctural equation modelling

Type of Instruction/Teaching format:

Lectures, labs and seminars.

Prerequisites:

Admitted to a doctoral program at a recognized business school or university. An expected common background is 15 credits in introductory level statistics

Examination and grades:

Compulsory attendance to labs. Possible grades are Pass/Fail.

- Hand-in reports in connection to each lab (about 4), fulfils ILOs 4-9
- Individual written assigments in connection to each lecture, fulfils ILOs 1-4 and 8

Course evaluation:

A course evaluation will be conducted at the end of the course.

Additional information:

Literature:

Hair Jr., J. F., Black, W.C., Babin, B.J. & Anderson, R.E, *Multivariate Data Analysis: Pearson New International Edition,* 7 ed., Pearson Education. Latest edition

Byrne, Barbara, **Structural Equation Modeling With AMOS: Basic Concepts, Applications, and Programming,** Routledge. Latest edition

A list of articles will be supplied at the course introduction.