FME3523 Advanced Statistics 7.5 credits

Avancerad statistik

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

Establishment

Course syllabus for FME3523 valid from Autumn 2013

Grading scale

Education cycle

Third cycle

Specific prerequisites

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

To build on the introductory course on quantitative research methods by introducing attendees to high level data analysis techniques that are increasingly being applied in the business and management area. This will involve the study of multivariate data analysis techniques

with particular emphasis on their application. Critical to the teaching and learning process will be the use of the following software packages – SPSS, AMOS, and SmartPLS.

Collectively, these activities should work together to enhance the ability of attendees to present and discuss their own statistical analysis as well as their ability to read and to critique academic papers that use these high level statistical techniques.

Course contents

1. Review of key concepts and techniques from the introductory course.
2. Hypothesis testing with extensions to effect size, power and sample size considerations.
3. Multiple Regression and ANOVA
4. Multiple Discriminant Analysis
5. Logistic regression
6. Cluster Analysis
7. Exploratory Factor Analysis
8. Structural Equation Modelling SEM
   a) Covariance based structural equation modelling
   b) Partial least squares structural equation modeling

Course literature

Hair, J. F., Black, W. C., Babin, B. J., and Anderson, R. E. (2010). Multivariate Data Analysis (Seventh edition). Prentice Hall: Upper Saddle River.

Hair, J.F., Celsi Wolfinbarger, M. W., Money, A. H., Samouel, P. & Page, M. (2011). Essentials of Business Research Methods (2nd edition). M. E. Sharpe: Armonk, New York.

*Pallant, J. (2010). SPSS Survival Manual (4th edition). McGraw-Hill: Maidenhead, United Kingdom.

Guidelines for conducting research and publishing in marketing: From conceptualization through the review process.

[PDF] from up.ac.za

JO summers - Journal of the Academy of Marketing Science, 2001 –

A paradigm for developing better measures of marketing constructs

[PDF] from franzecosta.com

GA Churchill Jr - Journal of marketing research, 1979 - JSTOR

Information systems/technology evaluation practices: evidence from UK organizations

JA Ballantine, RD Galliers... - Journal of Information ..., 1996

Response rate in academic studies-A comparative analysis

Y Baruch - Human relations, 1999

A meta-analysis of response rates in Web-or Internet-based surveys

[PDF] from uta.edu

C Cook, F Heath... - ... psychological measurement, 2000 - epm.sagepub.com

Survey response rate levels and trends in organizational research

[PDF] from georgetown.edu

Y Baruch... - Human Relations, 2008

Comparing response rates in e-mail and paper surveys: A meta-analysis

TH Shih... - Educational Research Review, 2009 - Elsevier

Senior managers' views on quality: a strategic perspective

..., C Tynan, A Money - Journal of Strategic Marketing, 1994 - Taylor & Francis

Service quality: a measure of information systems effectiveness

LF Pitt, RT Watson... - MIS quarterly, 1995

The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations.

[PDF] from wisc.edu

RM Baron, DA Kenny - Journal of personality and social ..., 1986

The application of cluster analysis in strategic management research: an analysis and critique

..., CL Shook - Strategic management journal, 1996 - Wiley Online Library

Demand chain management in manufacturing and services: web-based integration, drivers and performance

[PDF] from psu.edu

..., R Westbrook - Journal of Operations Management, 2002 - Elsevier

e-Integration in the Supply Chain: Barriers and Performance*

[PDF] from njit.edu

MT Frohlich - Decision Sciences, 2002 - Wiley Online Library

An assessment of the use of structural equation modeling in strategic management research

[PDF] from cbs.dk

CL Shook, DJ Ketchen Jr, GTM Hult... - ... Management Journal, 2004 - Wiley Online

Factors influencing partner selection in strategic alliances: the moderating role of alliance context

RH Shah... - Strategic Management Journal, 2008

The effects of customizability and reusability on perceived process and competitive performance of software firms

SR Nidumolu... - MIS Quarterly, 1998

Towards a Theory of Competitive Progression: Evidence from High-Tech Manufacturing

ED Rosenzweig... - Production and Operations ..., 2004 - Wiley Online Library

Examination

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.