# FME3531 Avancerad kvantitativ forskningsmetodik 7,5 hp

**Advanced Quantitative Methods**

## Fastställande

Kursplan för FME3531 gäller från och med VT14

## Betygsskala

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## Utbildningsnivå

Forskarnivå

## Särskild behörighet

## Undervisningsspråk

Undervisningsspråk anges i kurstillfällesinformationen i kurs- och programkatalogen.

## Lärandemål

Efter avslutad kurs ska studenten ha erhållit större förmåga och kunskap för att kunna

- Designa och genomföra ett specifikt empiriskt forskningsprojekt.
- Utveckla och bedöma psykometriska egenskaper hos värdena på latenta variabler
- Analysera och tolka data

- Rapportera forskningsresultat för att kunna publicera dessa i referentgranskade tidskrifter
- Kritiskt värdera andras forskning

## Kursinnehåll

- Teori, metodik och forsknings- och publiceringsverksamhet
- Regression, faktoranalys och strukturekvationsmodellering
- Mätmetoder:”Single-item”- och ”multiple-item”-mätningar och parcelanvändning
- Formativa och reflektiva indikatorer
- Tillförlitlighetsanalys: Konvergens och differentialer i mätningar
- Metodvarians
- Mätningsinvarians
- Mediation, moderation och modellinteraktioner
- Tillämpning av moderation och mediation
- Aggregering av individuella svar och flernivåmodeller

## Kurslitteratur

SUGGESTED BOOKS AND SOFTWARE

Hair, Joseph F., William C. Black, Barry J. Babin, Rolph E. Anderson (2010), Multivariate Data Analysis, 7th Edition, Upper Saddle River, NJ: Prentice Hall

Schwab, Donald P. (2005), Research Methods for Organizational Studies, 2nd Edition, Mahwah, NJ: Lawrence Erlbaum.

Each participant should have a working experience with SPSS software and access to LISREL 9.1 Student Edition (free download at: http://www.ssicentral.com/lisrel/student.html and Smart PLS (free download at http://www.smartpls.de/forum/release.php).

Articles

- Barley, Stephen R. (2006), “When I Write My Master Piece: Thoughts on What Makes a Paper Interesting,” Academy of Management Journal, 49 (1), 16-20.
- Davis, Donna F., Susan L. Golicic and Courtney N. Boerstler (2011), “Benefits and challenges of conducting multiple methods research in marketing,” Journal of the Academy of Marketing Science, 39, 467–479.
- Stewart, David W. (2009), “The Role of Method: Some Parting Thoughts From a Departing Editor,” Journal of the Academy of Marketing Science, 37 (4), 381-383.
- Sutton, Robert I. and Barry M. Staw (1995), “What Theory is Not,” Administrative Science Quarterly, 40(3), 371-384.
- Armstrong, J.S. (1975), “Tom Swift and his Electric Regression Analysis Machine: 1973,” Psychological Reports, 36 (3), 806.

- Bagozzi, Richard P. and Youjae Yi (2012), "Specification, Evaluation, and Interpretation of Structural Equation Models," Journal of the Academy of Marketing Science, 40 (1), 8-34.
- Hair, J.F., M. Sarstedt, C.M. Ringle, and J.A. Mena (2012), "An Assessment of the Use of Partial Least Squares Structural Equation Modeling in Marketing Research," Journal of the Academy of Marketing Science, 40 (3), 414-433.
- Bagozzi, Richard P. (2007), "On the meaning of formative measurement and how it differs from reflective measurement: Comment on Howell, Breivik, and Wilcox (2007), Psychological Methods, 12(2), 229-237.
- Diamantopoulos, Adamantios and Heidi M. Winklhofer (2001), "Index Construction with Formative Indicators: An Alternative to Scale Development," Journal of Marketing Research, 38 (May), 269-277.
- Edwards, Jeffrey R. and Richard P. Bagozzi (2000), "On the Nature and Direction of Relationships Between Constructs and Measures," Psychological Methods, 5 (2), 155-174.
- Bagozzi, Richard P. and Jeffrey R. Edwards (1998), "A General Approach for Representing Constructs in Organizational Research," Organizational Research Methods, 1 (1), 45-87.
- Bergkvist, Lars and John R. Rossiter (2007), "The Predictive Validity of Multiple-Item Versus Single-Item Measures of the Same Constructs," Journal of Marketing Research, 44 (May), 175-184
- Diamantopoulos, Adamantios, M. Sarstedt, C. Fuchs, P. Wilczynski, and S. Kaiser (2012), "Guidelines for Choosing Between Multi-Item and Single-Item scales for Construct Measurement: A Predictive Validity
- Perspective," Journal of the Academy of Marketing Science, 40 (3), 434-449.
- Williams, Larry J. and Ernest H. O'Boyle Jr. (2008), "Measurement Models Linking Latent Variables and Indicators: A Review of Human Resource Management Research Using Parcels," Human Resource Management Review, 18 (4), 233-242.
- Anderson, James C. and David W. Gerbing (1988), "Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach," Psychological Bulletin, 103, No. 3, 411-423.
- Bagozzi, Richard P. (2011), "Measurement and Meaning in Information Systems and Organizational Research: Methodological and Philosophical Foundations," MIS Quarterly, 35 (2), 261-292.
- Bagozzi, Richard P. (1981), "Evaluating Structural Equation Models With Unobservable Variables and Measurement Error: A Comment," Journal of Marketing Research, 18 (August), 375-381.
- Fornell, Claes and David F. Larcker (1981), "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error," Journal of Marketing Research, 18 (February), 39-50.
- MacKenzie, Scott B., Philip M. Podsakoff, and Nathan P. Podsakoff (2011), "Construct Measurement and Validation Procedures in MIS and Behavioral Research: Integrating New and Existing Techniques," MIS Quarterly, 35 (2), 293-334.
- Lance, Charles E., Bryan Dawson, David Birkelbach and Brian J. Hoffman (2010), "Method Effects, Measurement Error, and Substantive Conclusions," Organizational Research Methods 13(3), 435-455.

- Malhotra, Naresh K., Sung S. Kim and Ashutosh Patil (2006), "Common Method Variance in IS Research: A Comparison of Alternative Approaches and a Reanalysis of Past Research," Management Science, 52(12), 1865-1883.
- Podsakoff, Philip M., Scott B. MacKenzie, and Nathan P. Podsakoff (2012), "Sources of Method Bias in Social Science Research and Recommendations on How to Control It," Annual Review of Psychology, 63, 539-569.
- Spector, Paul E. (2006), "Method Variance in Organizational Research: Truth or Urban Legend?" Organizational Research Methods, 9(2), 221-232.
- Williams, Larry J., Nathan Hartman and Flavia Cavazotte (2010), "Method Variance and Marker Variables: A Review and Comprehensive CFA Marker Technique," Organizational Research Methods, 13(3), 477-514.
- Steenkamp, Jan-Benedict E.M. and Hans Baumgartner (1998), "Assessing Measurement Invariance in Cross-National Consumer Research," Journal of Consumer Research, 25 (June), 78-90.
- Vandenberg, Robert J. and Charles E. Lance (2000), "A Review and Synthesis of the Measurement Invariance Literature: Suggestions, Practices, and Recommendations for Organizational Research," Organizational Research Methods, 3(1), 4-69.
- Social Psychological Research: Conceptual, Strategic, and Statistical Considerations," Journal of Personality and Social Psychology, 51(6), 1173-1182.
- Cortina, Jose M., Gilad Chen and William P. Dunlap (2001), "Testing Interaction Effects in LISREL: Examination and Illustration of Available Procedures," Organizational Research Methods, 4 (4), 324-3 60.
- Iacobucci, Dawn, Neela Saldanha, and Xiaoyan Deng (2007), "A Mediation on Mediation: Evidence That Structural Equation Models Perform Better Than Regressions," Journal of Consumer Psychology, 17 (2), 139-153.
- Rucker, D. D., Preacher, K. J., Tormala, Z. L., and Petty, R. E. (2011). Mediation analysis in social psychology: Current practices and new recommendations. Social and Personality Psychology Compass, 5, 359–371.
- Zhao, X., Lynch Jr., J. G, and Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and Truths about Mediation Analysis. Journal of Consumer Research, 37, 197–206.
- Donavan, Todd D., Tom J. Brown and John C. Mowen (2004), "Internal Benefits of Service-Worker Customer Orientation: Job Satisfaction, Commitment, and Organizational Citizenship Behaviors," Journal of Marketing, 68 (January), 128-146.
- Joreskog, Karl G. (2000), "Latent Variable Scores and Their Uses," http://www.ssicentral.com/lisrel/advancedtopics.html
- Kelava, Augustin, Christina S. Werner, Karin Schermelleh-Engel, Helfried Moosbrugger, Dieter Zapf, Yue Ma, Heining Cham, Leona S. Aiken, and Stephen G. West (2011),"Advanced Nonlinear Latent Variable Modeling: Distribution Analytic LMS and QML Estimators of Interaction and Quadratic Effects," Structural Equation Modeling, 18,465–491.
- Selig, J. P., & Preacher, K. J. (2008, June). Monte Carlo method for assessing mediation: An interactive tool for creating confidence intervals for indirect effects [Computer software]. Available from http://quantpsy.org/
- Chan, David (1998), "Functional Relations Among Constructs in the Same Content Domain at Different Levels of Analysis: A Typology of Composition Models," Journal of Applied Psychology, 83 (2), 234-246.

- Ehrhart, Karen Holcombe, L. A. Witt, Benjamin Schneider, Sara Jansen Perry (2011), "Service Employees Give as They Get: Internal Service as a Moderator of the Service Climate–Service Outcomes Link," Journal of Applied Psychology, 96 (2), 423–431.
- LeBreton, James M. and Jenell L. Senter (2008), "Answers to 20 Questions About interrater Reliability and Interrater Agreement," Organizational Research Methods, 11 (4), 815-852.
- Schneider, B., M.G. Ehrhart, D.M. Mayer, J.L. Saltz and K. Niles-Jolly (2005), "Understanding Organization-Customer Links in Service Settings," Academy of Management Journal, 48(6), 1017-1032.
- Takeuchi, Riki, Gilad Chen, and David P. Lepak (2009) "Through the Looking Glass of a Social System: Cross-Level Effects of High-Performance Work Systems on Employees' Attitudes," Personnel Psychology, 62, 1


## Examination

Examinator beslutar, baserat på rekommendation från KTH:s handläggare av stöd till studenter med funktionsnedsättning, om eventuell anpassad examination för studenter med dokumenterad, varaktig funktionsnedsättning.

Examinator får medge annan examinationsform vid omexamination av enstaka studenter.

När kurs inte längre ges har student möjlighet att examineras under ytterligare två läsår.

## Etiskt förhållningssätt

- Vid grupparbete har alla i gruppen ansvar för gruppens arbete.
- Vid examination ska varje student ärligt redovisa hjälp som erhållits och källor som använts.
- Vid muntlig examination ska varje student kunna redogöra för hela uppgiften och hela lösningen.