Professor Dr. Robert Jung

Summer 2026

Institute of Economics
Department of Econometrics and Statistics
University of Hohenheim

Applied Financial Econometrics (5211-520) / Master's program

Instructors:

Prof. Dr. Robert Jung
FG. Ökonometrie und Wirtschaftstatistik
e–mail: `econometrics@uni-hohenheim.de`
Office hour: by appointment

Meeting times and locations:

Lecture and Practical Class Wednesday, 16:15 - 18:30 HS 7 (first lecture on April, 8, 2026)

Course description:

This course introduces students to the empirical analysis of financial data, covering key statistical and econometric models alongside modern data analytic methods. Emphasis is placed on practical application: students gain hands-on experience working with real financial data using the R programming environment. Upon successful completion, students will be able to independently apply the models and methods covered in the course, interpret results using appropriate statistical software, and critically evaluate their findings in an applied financial context.

Grading:

Course evaluation will be based on a paper and pen exam (90 minutes). The exam is closed book, but you can bring a 'cheat sheet', specific rules will be announced during the course.

Bonus rule: Students can earn up to 20 additional points (out of 100) on the final exam: up to 10 points by taking the midterm exam and up to 10 points through participation in the optional forecast competitions. Details will be provided in class.

Course materials:

Lecture slides, data sets, assignments and additional material will be available via ILIAS. **Note that the ILIAS course membership is by request only. Access is provided only, if your request contains the your current semester and study program.**

Outline:

1. Introduction
2. Univariate and Multivariate Return Distributions
3. Time Series Prediction of Asset Returns
4. Single- and Multifactor Asset Pricing Models
5. Event Study Analysis
6. Volatility Modelling
7. Market Risk Analysis

Literature:

- Brooks, C. (2019) *Introductory Econometrics for Finance*, Cambridge UP (4th edition).
- Hurn, S.; Martin, V.L.; Phillips, P.C.B. and Yu, J. (2021) *Financial Econometric Modeling*. Oxford UP.
- Linton, O. (2019) *Financial Econometrics*, Cambridge UP.
- Ruppert, D. und D.S. Matteson (2015) *Statistics and Data Analysis for Financial Engineering*. Springer (2nd edition)
- Tsay, R. S. (2010) *Analysis of Financial Time Series*, Wiley (3rd edition).
- Tsay, R. S. (2012) *An Introduction to Analysis of Financial Data with R*, Wiley.
- Scheuch, C.; Voigt, S. and Weiss, P. (2023) *Tidy Finance with R*. CRC-Press.
- Schmid, F. und M. Trede (2006) *Finanzmarktstatistik*, Springer.