

Introduction to Time Series Analysis

Syllabus

Bachelor in Economics: specialization: “Quantitative Methods” (“Vertiefungs- und Spezialisierungsgebiet Quantitative Methoden”), 6 ECTS

Bachelor in Business Administration: specialization: “Quantitative Methods” (“Vertiefungsgebiet Quantitative Methoden”), 6 ECTS

Structure

- Lecture, 2 hours per week
- Exercise, 2 hours per week

Knowledge level

Students should have successfully passed the courses “Introduction to Econometrics”, “Introduction to Statistics”, “Inferential Statistics”, and “Mathematics for Economists”.

Examination

Final exam (120 minutes, pen & paper) at the end of the term.

Software

EViews (available in the PC-Pools)

Topics

Autoregressive Models, Moving Average and ARMA Models, Forecasting, Modeling Volatility, Nonstationary Time Series and Cointegration, Vector Autoregressive Models

Literature

- Econometrics textbooks with time series chapters:
 - Hill, R. Carter, William E. Griffiths, and Guay C. Lim. Principles of econometrics. Wiley, 2018. [Available in the library](#).
 - Stock, James H., and Mark W. Watson. Introduction to econometrics. Pearson Education, 2019. [Available online and in the library](#).
 - Wooldridge, Jeffrey M. Introductory econometrics: A modern approach. Cengage, 2020. [Available in the library](#)
- Kirchgässner, Gebhard, Jürgen Wolters, and Uwe Hassler. Introduction to modern time series analysis. Springer, 2012. [Available online and in the library](#).
- Enders, Walter. Applied Econometric Time Series, Wiley, 2015. [Available online and in the library](#).

Further Information

- Course material and communication throughout the semester on Blackboard
- This course is required for the seminar “Applied Time Series Econometrics” (next summer)