

35787 and 35788 Foundations of Econometrics**Module number***Added by the coordinator for the respective program***Module title**

35787 Foundations of Econometrics (Lecture) and 35788 Foundations of Econometrics (Tutorial)

Module coordinator

Prof. Dr. Harry Haupt

Examination number	Credit points (ECTS)	Hours per week (SWS)
<i>Added by the coordinator for the respective program</i>	5	2+2
Availability	Duration	Recommended semester
Every winter semester	1 semester	1-3

Workload

Lecture 2 SWS (28 h contact and 42 h self-study). Tutorial 2 SWS (28 h contact, 42 h self-study). We are calculating with 15 semester weeks (lectures & tutorials plus 1 exam week). Each SWS is included in the calculation with 60 minutes.

Module applicability*Added by the coordinator for the respective program***Reference to the LPO I****Recommended prerequisites**

Prerequisites and contents of the course Econometric Methods (35777, 35778)

Requirements

none

Language of instruction

English

Content

This module provides an in-depth exploration of several core methods in modern econometrics, building on their underlying statistical and mathematical concepts. The following topics are covered: regression-based estimation, testing, and forecasting methods; regression modeling with heteroscedastic and dependent data; diagnosis of regression results; simulation-based methods.

Intended learning outcomes (ILOs)

Students who have successfully completed the module are able:

- to give a systematic overview of the core principles of modern econometrics.
- to understand regression estimation and inference methods and their statistical structure and interpretations
- to apply the acquired methods and principles to data-based problems.
- to perform econometric analyses and will know the underlying mathematical assumptions and the corresponding statistical properties of important regression-based testing and estimation procedures.
- to critically assess empirical results, identify potential pitfalls, falsify statements while quantifying the underlying uncertainty, and develop and interpret sound simple models.

Teaching methods
Interactive frontal teaching and discussion of the course content, weekly exercise materials and required literature.
Required attendance
Examination (type of examination, scope)
Portfolio: Final grade (based on max. 70 points) determined from Exercises (single/group): max.10 points; Written exam (60 minutes), max. 60 points. The precise mode of assessment will be announced at the start of the semester.
Overall grade relevance
100%
Exam resit opportunities
Recommended reading
- Wooldridge, J. (2019) Introductory Econometrics. 7e. Cengage - Stock J.H. & M.M.Watson (2019) Introduction to Econometrics. 4e. Pearson. - Hansen, B. (2022) Econometrics. Princeton Univ. Press. - Davidson, R. & J.G. MacKinnon (2009) Econometric Theory and Methods, Oxford Univ. Press.
Additional notes