BA-BMECV2502U Econometrics

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Kursuskatalog

https://kursuskatalog.cbs.dk/2025-2026/BA-BMECV2502U.aspx

- Week plan on Canvas.

Module aims

The main aims of this module are:

- to provide sufficient background in modern econometric methods to understand and implement appropriate econometric modelling techniques suited both to the data source and to the economic model;
- to understand how appropriate model specification choices can create a link between an economic problem and econometric estimation;
- to deepen the understanding of statistical properties of estimators and to acquire competencies with the related mathematical tools.
- to develop skills in the interpretation and critical appraisal of econometric estimates;
- to develop skills in applied economic work, exploiting the availability of computer techniques and packages for model solution.

Learning outcomes

- Understand econometric estimation and inference methods for higher dimensional data.
- Understand how to model, estimate and interpret the partial or causal relationship between two variables in models with many variables.
- Understand the relevance of assumptions on the econometric model for the properties of estimation and inference results.
- Appropriately choose an econometric model from those introduced in the course and assess its suitability.
- Understand estimation results and interpret them.
- Relate R-code and R-output to the econometric models introduced in the course.
- Conduct econometric analysis in R.

Course content

Lecture programme

- Part 1: Multiple Regressions Model

  Mid-term exam

- Part 2: Topics in Microeconometrics

  Final exam

Module content:

Lecture programme (Lecturer: Ralf Wilke)

- self-contained topics
- emphasise particular econometric issues and problems
- illustrative practical examples can be replicated

Exercises

- 7 times two hours classes (mix of theory and empirical questions).
- Content relevant for the exams.
- Work in R: Data, example files, output online
- Group work/presentations (groups on Canvas)

Lecture programme

Consists of 7 topics:

Emne A1. Estimation of the multiple regression model by OLS in matrix notation – Distribution and asymptotic properties

Prerequisite*: Estimation of the linear regressions model by OLS is known+ Standard inference methods. (Ch3+4, W2025), Fundamentals: AppA+D, W2025.*

Emne A2. OLS – topics

Emne A3. Policy Analysis

Emne B1. Endogeneity

Emne B2. Simultaneous Equation Models

Emne B3. Maximum Likelihood methods

Emne B4. Limited Dependent Variable Models

Leksions program

- *Lecture times:*
  - Check your Calendar on MyCBS.dk
- *Exercise times:*
  - Check your Calendar on MyCBS.dk
- Download teaching material from Canvas.
  - Lecture slides, revision material, problem sets
  - R code, data for lectures and exercises

Feedback

- Feedback hours:

  Mondays 14:00-16:00 in PH16, room 1.72
  From 1. september 2025. Teaching weeks only.

  Please book your 20 minutes appointment in advance.
  Go to course calendar in Canvas.

  2 bookings per student.
  If you need additional appointments, check my availability in Canvas.

Module texts

- The main course texts are:
  - **Wooldridge, J.** (2025) Introductory Econometrics (8th edition), Cengage.
    - eBook and blended learning environment by the publisher: MindTab: course environment: https://cengage.widen.net/s/q9wlchgl2q/emea_cbs_ba-bmecv1031u_econometrics_fall_2025
  - **Wooldridge, J.** (2010) Econometric Analysis of Cross-Section and Panel Data (2nd Edition), Cambridge: MIT Press.
    - eBook rental option: https://mitpress.ublish.com/book/econometric-analysis-cross-section-and-panel-data#purchase

These books deal well with most aspects of this part of the course.

To work with R:

- **Heiss, F.** (2016) Using R for Introductory Econometrics