UNIVERSITÄT HOHENHEIM

Prof. Dr. Robert Jung / MSc Domenic Franjic
Econometrics and Statistics (520K)
Faculty of Business, Economics and Social Sciences
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Consultation hours: make an appointment by email

Course Outline winter term 2024-25

"Econometric Methods in Business and Economics"

Master in International Business and Economics

Schedule:

- **Practical class: Thursday 10:15 – 11:45**, (**HS 1**), Domenic Franjic

Objectives:

The course aims to familiarise students with econometric techniques frequently used in applied economics, finance and business administration research. It provides a modern treatment of methods and models suitable for analysing cross-section, time series, and panel data.

After successfully attending this class, students are expected to be able to select a proper econometric method for investigating an empirical problem and to meaningfully interpret the results obtained by using a statistical software package.

Grading:

The final grade will be based on a 90-minute paper and pen exam. A minimum of 50 (out of 100 points) must be reached to pass the exam.
Bonus rule: If the minimum number of points is reached in the paper and pen exam, the final grade can be improved by up to 15 points by submitting a **facultative group assignment**.

The final exam is a closed-book exam. However, you may bring three DIN-A4 sized sheets of paper as 'cheat sheets'. Rules for the 'cheat sheets' will be available on ILIAS.

Online Statistics Review course:

We offer an online review tutorial on basic statistical concepts considered prerequisites for the course. The **tutorial videos** are available through **openILIAS**.

https://openilias.uni-hohenheim.de/goto.php?target=cat_52207&client_id=UHOH2

We recommend studying the course material as soon as possible!

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Graded Assignment:

We offer a facultative group assignment on practical tasks involving econometric data analysis using a statistical software package. The assignment will be handed out during the last week of teaching in 2024. The deadline for the online submission of solutions is **08.01.2025 at 23:59**. Further details will follow on ILIAS.

Flipped or inverted classroom design and course material:

The lecture will be taught using a flipped or inverted classroom design. Before each week's practical class, students must study the course materials provided on ILIAS. Students who did not find time to study the course material in advance will not be able to follow the in-person lecture class.

All course materials, problem sets, and additional materials will be available on the ILIAS platform.

The ILIAS course will be available under the following link:

https://ilias.uni-hohenheim.de/goto.php?target=crs_1513853&client_id=UHOH

You must provide your name, semester, and study program to access the ILIAS course.

Practical class:

The weekly practical class is taught by Domenic Franjic. This class aims to repeat concepts learned and demonstrate their practical application using real-world data sets and the statistical software package R. Moreover, the weekly practical class is used to answer questions and discuss problems. The class will not be recorded or streamed.

Statistical software packages:

The solutions for the practical problem sets will be provided using the software package R. R is a free, open-source software package available from https://www.r-project.org/. Also, we offer support for questions using the R software.

Students may use an alternative statistical software package (e.g. Stata, gretl,…) in their practical work and for the submission of the assignment. However, no or only limited support for those software packages can be provided. More information will be provided during the first practical class.

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Literature:

The main textbook for this course is

Stock, J.H. and Watson, M.M. [SW] (2020). Introduction to Econometrics. 4th edition. Pearson.

The book is available online via the University of Hohenheim library website.

Course content

1. Introduction (SW Ch 1)
2. Linear Regression with One Regressor (SW Ch 4, 5)
3. Linear Regression with Multiple Regressors (SW Ch 6, 7)
4. Multiple Regression Analysis: Further Issues (SW Ch 8,9)
5. Regression Analysis with Panel Data (SW Ch 10)
6. Regression with a Binary Dependent Variable (SW Ch 11)
7. Instrumental Variables Regression and Causal Inference (SW Ch 12,13)
8. Many Regressors and Big Data (SW Ch 14)
9. Regression Analysis of Time Series Data (SW Ch 14,15)