Schedule: PhD course in Econometric theory, 7.5 ECTS credits, spring 2027, Linnaeus University, Växjö.

The course will be given at the Växjö campus, Linnaeus University (Rooms are yet t.b.a.), but some lectures might be streamed live online, through Zoom. There will also be computer classes to ensure a strong connection to empirical econometric modelling and these will be streamed live online, through Zoom.

We will be following the book *Econometric analysis: 8th Edition. W. H. Greene* closely throughout the course. The exam will consist of a written exam and a written assignment. Students who have not yet applied to the course should do this asap, directly to the course coordinator (kristofer.mansson@lnu.se).

20/1, 13.00-16.00. Lecture 1 in classroom (Location to be announced later). Introduction: Linear algebra and Stochastic limit theory. **Lecturer: Peter Karlsson**

21/1, 09.00-12.00. Lecture 2 in classroom (Location to be announced later). Econometrics, The linear regression model and the least square estimator. **Lecturer: Peter Karlsson**

21/1, 13.00-16.00. Lecture 3 in classroom (Location to be announced later). The least square estimator and Estimating the Regression Model by Least Squares. **Lecturer: Peter Karlsson**

3/2, 13.00-16.00. Lecture 4 in classroom (Location to be announced later). Hypothesis tests and model selection. **Lecturer: Peter Karlsson**

4/2, 09.00-12.00. Lecture 5 in classroom (Location to be announced later). Functional form and nonparametric econometrics. **Lecturer: Kristofer Månsson**

4/2, 13.00-16.00. Lecture 6 **via ZOOM**. The generalized regression model, heteroscedasticity and systems of equations. **Lecturer: Deliang Dai**

24/02, 13.00-16.00. Lecture 7 in classroom (Location to be announced later) by **Stanislas Muhinyuza** about estimation frameworks in econometrics, Minimum distance estimation and GMM.

25/2, 09.00-12.00. Lecture 8 in classroom (Location to be announced later) by **Deliang Dai** about maximum likelihood estimation.

25/2, 13.00-16.00. Lecture 9 in classroom (Location to be announced later) by **Deliang Dai** about simulation-based estimation and inference and random parameter models, Bayesian estimation and inference.

26/02*, 09.00-12.00. Computer class 1. STATA exercises involving selected contents from lecture 2-9.* **Instructor: Stanislas Muhinyuza via ZOOM**