

STATISTICS AND ECONOMETRICS – MODULE FOUR

TIME SERIES ECONOMETRICS

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This is the fourth module of the first-year graduate econometrics course. The course is designed to introduce students to such concepts as unit root, stationarity, cointegration, and spurious regressions, as well as practical aspects of univariate and multivariate time series modeling using R. The course aims to provide students with both firm theoretical ground and intensive practice.

Course outline:

1. Basic Time Series Concepts
2. Univariate Stationary Processes (MA, AR, ARMA)
3. Vector Auto Regressive Models (VAR)
4. Nonstationarity and Cointegration (CI)
5. Error Correction Models (ECM)
6. Vector Error Correction Models (VECM)
7. Auto Regressive Conditional Heteroskedastic Models ((G)ARCH)

Textbooks and other materials:

- Gujarati, Damodar and Dawn C. Porter (G), “Basic Econometrics”.
- Enders, Walter (E), ‘Applied Econometric Time Series’.

All class materials can be found in the corresponding course folder at Moodle. All assignments should be submitted to the corresponding course folder at Moodle

Basis of grades:

There will be midterm (30%) and final (40%) exams, home assignments (30%).

The final exam is comprehensive with a focus on the **after-midterm part of the course**. Thus, good understanding of pre-midterm material is essential.

Grading scale

A 91-100%, B 76-90, C- 60-75; F 0-59

Homework

All homeworks are individual assignments of practical matter (to be done in R). They will be due in a week and have to be uploaded to Moodle no later than 22:00 on corresponding week of the corr. **You should start working on your homework well in advance to avoid emergency situations that prevent you from submitting your homework in time.**

Academic integrity a.k.a. NO CHEATING:

If you want to get knowledge in this class it is important to respect the Academic integrity rules. Academic integrity is valued by KSE and its vast majority of students. The minimum penalty for a student caught cheating or plagiarizing will be an F for that assignment.

Grade disputes and appeals:

All grade appeals should be submitted by email within 7 calendar days after you received your work. Reach me by email to set up a meeting to resolve the issue. I will do my best to reply within 48 hours.