



**Course:** **Macroeconometrics**

**Faculty:** Luca Gambetti

**Term:** Second Semester

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### **Description**

This is an introductory course in Time Series Analysis with applications in macroeconomics. The course will cover both univariate and multivariate time series models.

### **Objective**

The course has two objectives: (i) to provide the students with the knowledge of a comprehensive set of tools and techniques necessary for empirical research in macroeconomics; (ii) to survey some of the current research topics in time series econometrics.

### **Outline**

- 1) Introduction
- 2) Stationary ARMA processes
- 3) VAR models
- 4) Structural VAR models
- 5) Factor models
- 6) Time varying parameters models

### **References**

- 1) P. J. Brockwell, and R. A. Davis, (2009), Time Series: Theory and Methods, Springer-Verlag: Berlin
- 2) F. Canova (2007), Methods for Applied Macroeconomic Research, Princeton University Press: Princeton
- 3) J. D. Hamilton (1994), Time Series Analysis, Princeton University Press: Princeton
- 4) H. Lutkepohl (2005), New Introduction to Multiple Time Series, Springer-Verlag: Berlin

**Grading:** 50% problem set, 50% take-home exam.