

# Time Series Econometrics 2009

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1. Stationary and integrated stochastic processes (**LK** Ch 2, **H** Ch 3, **G** Ch 20)
2. ARIMA processes (**LK** Ch 2, **H** Ch 3, **G** Ch 20)
3. Estimation and specification of stationary ARMA processes (**LK** Ch 2, **H** Ch 5, **G** Ch 20)
4. Forecasting (**LK** Sec 2.8, **H** Ch 4)
5. Estimation of  $I(1)$  processes and unit root tests (**LK** Ch 2, **H** Ch 17, **G** Ch 20)
6. Spectral Analysis/Frequency Domain Analysis (**H** Ch 6)
7. Dynamic regression models: setup and estimation (**G** Ch 19, **D** Ch 7)
8. Vector Autoregressive Models (**LK** Ch 3, **L** Ch 2, **C** Ch 4)
9. Estimation and specification of VAR models (**LK** Ch 3, **L** Ch 3 & 4, **C** Ch 4)
10. Cointegration and vector error correction models (**LK** Ch 3, **L** Ch 6)
11. Estimation and specification of VECMs (**LK** Ch 3, **L** Ch 7 & 8)

Related literature:

- Canova, F., *Methods for Applied Macroeconomic Research*, Princeton, Princeton University Press, 2007. **C**
- Davidson, J., *Econometric Theory*, Oxford, Blackwell, 2000. **D**
- Green, W.H., *Econometric Analysis*, 5th Edition, Prentice Hall. **G**
- Hamilton, J., *Time Series Analysis*, Princeton, NJ, Princeton University Press, 1994. **H**
- Lütkepohl, H., *New Introduction to Multiple Time Series Analysis*, Berlin, Springer, 2005. **L**
- Lütkepohl, H., Krätzig, M., *Applied Time Series Econometrics*, Cambridge, Cambridge University Press, 2004. **LK**

A set of exercises will be provided and discussed in the weekly exercise sessions which will help to prepare for the exam. They do not count for the final grade. The exam will be a two hour exam in the exam week following the course. It will be the sole basis for the grade.