

Time Series Econometrics 2010

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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**

Course requirements

A set of homework assignments will be provided and discussed in the weekly exercise sessions which will help to prepare for the exam. The first 4 homework assignments count for a total of 20% of the grade. The remaining 80% of the grade is based on the exam. The exam will be a two-hour exam in the exam week following the course.