PhD in Statistics

Probability Theory

Academic Year 2013/2014

Federica Giummolè and Giovanni Fonseca

Course Schedule:

January 2014

- Monday 20, 10.00-14.00 (Giummolè): Probability Distributions (Ch.1 [Sev])
- Friday 24, 10.00-14.00 (Giummolè): Conditioning (Ch.2 [Gut], Ch.2 [Sev])
- Tuesday 28, 10.00-14.00 (Giummolè): Characteristic and moment generating functions (Ch.3 [Gut], Ch.3,4 [Sev])
- Friday 31, 10.00-14.00 (Giummolè): Functions of random variables (Ch.1,4 [Gut], Ch.7 [Sev])

February 2014

- Tuesday 4, 10.00-14.00 (Giummolè): Normal distribution theory (Ch.5 [Gut], Ch.8 [Sev])
- Friday 7, 10.00-14.00 (Giummolè): Convergence of Random Variables (Ch.6 [Gut], Ch.11 [Sev])
- Tuesday 11, 10.00-14.00 (Giummolè): Central Limit Theorem (Ch.6 [Gut], Ch.12 [Sev])
- Friday 14, 10.00-12.00 (Giummolè): Further topics (Ch. 7 [Gut], Ch.13 [Sev])
- Tuesday 18, 10.00-14.00 (Fonseca): Discrete time Markov chains (Ch.1 [Nor])
- Friday 21, 10.00-14.00 (Fonseca): Continuous time Markov chains (Ch.2-3 [Nor])
- Tuesday 25, 10.00-14.00 (Fonseca): Poisson process and Brownian motion (Ch.4-6 [Res])

References:

[Gut] A. Gut, An intermediate course in probability, Springer Verlag, 1995.

[Nor] J.R. Norris, Markov chains, Cambridge University Press, 1997.

[Sev] T.A. Severini, Elements of distribution theory, Cambridge University Press, 2005.

[Res] S.I. Resnick, Adventures in Stochastic Processes, Birkhauser, 1992.