MM513 Probability Theory II
Ugeseddel 4

In the lectures in week 19 we have covered the following material: A further investigation of L_2-martingales, which have lead to the theorem of Kolmogorov (Theorem 27.4 in JP, and Theorem 3.3 of the notes which is an extended version). Further we have covered uniform integrability and proved a convergene theorem for uniformly integrable martingales. Finally we have considered backwards martingales and proved a convergence theorem for such martingales. This corresponds to the notes, pages 17–22 and JP, pages 226–228, 232–234. Note that there are big overlaps between the notes and JP.

In the lectures in week 20 we shall apply the backwards martingale convergence theorem to prove The Strong Law of Large Numbers and start proving the Radon–Nikodym Theorem. The obligatory problems will also be given that week.

Øvelser til uge 20

- Remaining problems from week 19.

- Exercises for MM513: 10, 11, 14, 15, 21.

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