

Syllabus for MA3238/ST3236: Stochastic Processes I

- Lecture time: Wednesday, Friday 12:00–14:00
- Lecture venue: LT21
- Tutorial time: Tuesday 12:00–13:00, 13:00–14:00
Wednesday 9:00–10:00, 10:00–11:00
Thursday 9:00–10:00, 10:00–11:00
- Tutorial room: Block S17, Room 04–05
- Prerequisite: {MA1101 or MA1101R or MA1508 or GM1302} and {MA2216 or ST2131}
- This module introduces the concept of modelling dependence and focuses on discrete-time Markov chains.
- Major topics: discrete-time Markov chains, examples of discrete-time Markov chains, classification of states, irreducibility, periodicity, first passage times, recurrence and transience, convergence theorems and stationary distributions.
- References:
 - G. Grimmett and D. Stirzaker, *Probability and Random Processes*, Oxford, 3rd ed., 2001.
 - R. Durrett, *Essentials of Stochastic Processes*, Springer, 2nd ed., 2012.
(This book has a free version <http://www.math.duke.edu/~rtd/EOSP/eosp.html>).
- Assessment: Assessment of students will be based on
 - An in-class test during lecture time (*tentatively* on 6, March 2014), 35%
 - Homework and tutorial participation, 15%
 - Final examination, 50%

Any student who is absent without a valid reason from an assessment will be given zero mark for that assessment.