

Instructor: Dr. K. Dao Duc, MATX 1213, kdd@math.ubc.ca

Office hours: Mon. 16:00-16:50, Wed.: 11:00-11:50, Fri.: 11:00-11:50, or by appointment

Website: Section 202: <http://kdaoduc.com/math-303>

Pre-requisites: One of MATH 302, STAT 302

Text: The course text is S.M. Ross, “Introduction to Probability Models”, 12th edition, Academic Press, (2010). The 11th and 12th editions are indistinguishable for our purposes, apart from changes to page numbers, and you should feel free to use the 11th edition. Problems assigned from the text will be identical in both the 11th and 12th editions.

Outline/ Learning outcomes:

The course will be based primarily on topics from Chapters 4, 5, 6 of Ross. The main topics are:

1. discrete time Markov chains
2. exponential distribution and Poisson process
3. continuous time Markov chains

Evaluation: There will be homework assignments, two tests, and a final exam.

Homework: Eight assignments will be given and marked for credit. Assignments are due at the beginning of class on the due date. No late assignments will be accepted. The assignment schedule is as follows:

Assignment given	Assignment due
Jan 8	Jan 17
Jan 15	Jan 24
Jan 24	Jan 31
Jan 31	Feb 7
Feb 14	Feb 28
Feb 28	Mar 6
Mar 6	Mar 13
Mar 20	Mar 27

Tests: There will be two 50-minute tests held on the following dates: Wednesday, February 12, Wednesday, March 18.

Final exam: There will be a final examination during the April examination period.

Final mark: The final mark will be based on homework (10%), two midterm exams (20% each), and final exam (50%). Term marks may be scaled for consistency in all sections of MATH 303.

Missed mid-terms and assignments: If you miss an evaluation (homework, or midterm) for a valid reason – see UBC Vancouver Senate’s Academic Concession Policy V-135, please fill out

an academic request form and bring it to the instructor. In this case, for a missed homework, the weight will be transferred onto the remaining homework assignment. If you miss the midterm, the weight will be transferred onto the final exam. Note that in accordance with UBC policy for academic concessions, this form may be used ONCE per course. On a second instance, students will be expected to provide documentation. Any student who misses an assessment is to present to their instructor a self-declaration form (or relevant documentation if this is not the first time they miss an assessment) within 72 hours of the assessment date or their mark in the missed evaluation will be 0. This policy conforms with the UBC Vancouver Senate's Academic Concession Policy V-135 and students are advised to read this policy carefully.

Discussion board: We will use a Piazza discussion board this term. You can ask questions regarding the course there, and answer other students' questions. Do not share solutions to assignments on Piazza before the due date.

University Policies:

UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions. Details of the policies and how to access support are available on the UBC Senate website <https://senate.ubc.ca/policies-resources-support-student-success>.

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