

## Syllabus

The course will is based on Chapters 4,5,6 of the textbook. The main topics are:

- Discrete time Markov chains: Properties, long-term behaviour, and applications.
- Poisson processes: Properties and applications.
- Continuous time Markov chains.

## **Course details**

Instructor: Omer Angel. Contact me through discord or by email. Please include "math303" in the subject line.

TAS: Yucheng Liu and Benjamin Langer. If you have any comments for Ben or Yucheng, go through me.

## Class times:

- Section 201: MWF 13:00, at Chemistry D300.
- Section 202: MWF 9:00, at Buchanan A103.

It is possible that some lectures will also be accessible through zoom.

**Online forum**: We will use a discord forum this term. You can ask any questions regarding the course there. You are encouraged to ask questions there on lectures, assignments, and any course related topic. You are also encouraged to answer other students' questions. Significant participation may result in extra credits (please use your full name on the server). Obviously, **do not** share solutions to assignments (on discord or elsewhere) before the due date.

**Online learning**: While we are online, there will be pre-recorded lectures uploaded to canvas, which you should watch before class. At the official class time we will meet on zoom where I will answer any questions and solve problems related to the material.

Office hours: Office hours will take place Monday 14:00-15:00 and Friday 10-11 in MATX 1210, or by appointment. While classes are online, office hours will take place over zoom instead.

**Textbook**: The main book we will follow is Ross: "Introduction to Probability Models", 12th edition, Academic Press. Earlier editions are indistinguishable for our purposes apart from possible changes to page and problem numbers. An optional and more advanced reference is Grimmett and Stirzaker: "Probability and Random Processes". See also www.randomservices.org/random for the relevant topics and further references.

## **Evaluation**

The final mark will be based on:

- 15% homework
- 40% two midterms
- 45% final exam

(If the final exam is online, the midterms and final exam will have equal weight instead.) Additional credits may be given for significant participation in class or on discord.

**Missed work**: There are no make-up midterms or assignments. Missing a midterm for a valid reason normally results in the weight of the midterm being transferred to the final exam. Personal travel and work conflicts are not considered valid. A student who misses the midterm must submit UBC's self-declaration form within 72 hours of the midterm date or as soon as possible. See the UBC Senate's Academic Concession Policy V-135.