SYLLABUS: MATH 541 APPLIED STOCHASTIC PROCESSES, FALL 2023

Instructor. Alexander Dunlap, Ph.D. (he/him). Office: Physics 297. Office hours: Tuesdays 16:30–17:30 and Wednesdays 15:00–16:30. Email: dunlap@math.duke.edu. Please use email only for administrative issues. If you have questions about course content, please come to office hours or use our Ed Discussions site (accessible via Canvas). I will check emails and Ed Discussions at least once each workday; please do not expect immediate responses (e.g. on weekends or right before the homework is due).

Course meetings. This course will meet on Tuesdays and Thursdays 11:45am–1:00pm in Physics 130.

Course websites. The course will use Canvas, Gradescope, Ed Discussions and the course website at https://services.math.duke.edu/~ajd91/teaching/541-f23/. All of these are linked from the Canvas site. An outline of the topics to be covered in the course is included on the course website, and will be updated throughout the semester.

Prerequisites. The prerequisite for this course is Math 230 (undergraduate probability). We will use linear algebra in this course as well.

Textbook. The textbook for this course is Lawler, Introduction to Stochastic Processes, second edition.

Homework. There will be homework assignments every week or two; you will have at least a week to complete each assignment. Homework assignments will be submitted on Gradescope. A (possibly proper) subset of the problems will be graded. Homework can be either neatly handwritten and scanned, or (preferably) typed (e.g. in LaTeX). There will be a 59-minute grace period to account for technical issues in submitting the homework; after that, no late homework will be accepted unless an extension has been granted in advance by the instructor, or in the case of serious (documented) emergency that would prevent you from requesting an extension in advance. Students are responsible for ensuring that their uploaded homework is easy to read, and that pages have been assigned correctly on Gradescope. If there are technical issues with Gradescope that prevent you from uploading the homework, please send it by email to the instructor before the deadline.

The two lowest homework scores (which may include scores of zero) will be dropped at the end of the semester.

Exams. There will be a midterm exam in class on Thursday, October 12, and a final exam as scheduled by the registrar (currently listed as Friday, December 15, 2pm–5pm). Exam problems will be similar to those on the homework.

Grading. The final grade will be computed as a combination of 20% homework, 30% midterm, 50% final exam. The lowest two homework assignments will be dropped.

Regrade requests. If you have any questions or concerns about how any assignment or exam was graded, you must contact the instructor or submit a regrade request on Gradescope within five working days of when it was returned for the grade to be reviewed.

Academic integrity. You are encouraged to talk about the homework problems with other students in the class, but writing the solutions must be done individually. Students are expected to uphold the Duke Community Standard.

Accommodations. Students who require academic accommodations, due to a disability or other reason, should request these through the Student Disability Access Office as appropriate. Please contact the instructor if there are other things he can do to facilitate your access to the course.