Stochastic Processes
STA 4821
Spring 2023

Instructor:

J. P. Hobert

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Class: T: 8:30-9:20am & R: 8:30-10:25am in Griffin Floyd Hall 230

Office Hours: 2:30-3:45pm MF

Course Web Page:

http://web.stat.ufl.edu/~jhobert/sta4821.html

Recommended Text:

12th edition of *Introduction to Probability Models* by Sheldon M. Ross.

Prerequisites:

The prerequisite for this course is STA 4321 (Introduction to Probability). If you have not taken STA 4321 (or its equivalent) and earned at least the required minimum grade, then you may not register for STA 4821.

Objective:

This course is designed to provide a firm foundation in the basic theory of elementary stochastic processes, including Poisson processes and their generalizations, Markov chains, and birth and death processes.

Course Schedule:

The first two or three weeks will be spent covering the first three chapters of the textbook (1. Introduction to Probability Theory, 2. Random Variables, and 3. Conditional Probability and Conditional Expectation). This will be, to a large extent, a review of the material covered in STA 4321. Approximately six weeks will be spent on Chapter 4 (Markov Chains). After that, about two weeks will be spent on each chapter of the textbook starting with Chapter 5. However, the actual pace of the course will ultimately be determined by the students. The instructor will speed up or slow down depending on the instructor's perception of how the students are digesting the material.

Class Attendance and Make-up Exams:

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at:

https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx

Students with Disabilities:

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, `https://disability.ufl.edu/`) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Exams:

Three exams will each count for 30% of the final grade. The exams are tentatively scheduled for February 16, March 23, and April 20.

Grading:

The usual 10 point scale (90% for an **A**, 80% for a **B**, . . .) is tentatively adopted, but will most likely be loosened. Information on current University of Florida grading policies for assigning grade points is given at:

`https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx`

Teaching Assistant:

The Teaching Assistant for the course will be Yeison Quiceno (Office: 117A Griffin Floyd Hall, Email: yeison.quicenodu@ufl.edu). Yeison will hold regular office hours from 2:50-3:50pm every Tuesday, and from 2:00-4:00pm every Wednesday.

Homework:

Mastery of the material presented in this course requires a great deal of practice. Homework will usually be assigned on a Thursday and will usually be due seven days after it is assigned. Homework is worth 10% of the final grade. No late homework will be accepted.

Course Evaluation Process:

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at `https://gatorevals.aa.ufl.edu/students/`. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via `https://ufl.bluera.com/ufl/`. Summaries of course evaluation results are available to students at `https://gatorevals.aa.ufl.edu/public-results/`.