Stat 400: Applied Probability and Statistics I

Instructor: Jenna Zomback

Meetings: Tuesday/Thursday 9:30-10:45am in LEF 2205 Text: Notes by Jonathan Fernandes and Danul Guantilleka

Application/Software: (Required) R, RStudio Office Hours: Tuesday 2-3pm in Kirwan 4305

E-mail: zomback@umd.edu Office: 4305 Kirwan Hall

Best way to contact me: Email me! I will usually respond within 1 business day.

TAs: Mohammad Sharifi Kiasari (sharifi@umd.edu) and Yilin Zhang (yzhang26@umd.edu)

Recitation: Mondays (time depends on your section) starting on September 9

Mohammad's Office Hours: Monday and Wednesday, 4 pm to 5 pm, location TBD Yilin's Office Hours: Monday and Thursday, 2:30pm-3:30pm in Kirwan Hall 2119

Course description: Random variables, standard distributions, moments, law of large numbers and central limit theorem. Sampling methods, estimation of parameters, testing of hypotheses.

Prerequisites: Math 131 or 141 with a C- or better. I will be working under the assumption that you have a solid grounding in differentiation and integration. Results and techniques from both areas will be used throughout.

ELMS-Canvas: We will be using the ELMS-Canvas page for this course to post course materials, homework, grades, and announcements. You should check your current Canvas notification settings to ensure that you stay up to date. You can access ELMS-Canvas at https://elms.umd.edu/.

Expectations: My expectation is that you attend and engage in lecture and whenever possible. This includes, but is not limited to, paying attention, asking questions, and participating in activities and group work. Lectures, office hours, email, and canvas are all considered classroom settings, so your behavior in each should be in line with the student code of conduct.

Recitation Sessions: Recitation sessions are on Mondays, exact time determined by the section number. The Teaching Assistants run recitations and will use this time to help reinforce the course content. This will include help with some of the more challenging problems on the homework and R projects.

Course grades:

• Homework: 15%

Homework assignments will be due to Gradescope on Tuesdays at 11:59pm

• R projects: 10%

There will be three R projects designed to help you visualize the material we are learning. These will also be assigned via Gradescope.

• Midterm exams: 45%

There will be three midterm exams (tentatively on Thursday September 26, Thursday October 24, and Thursday November 21) given in class. Each midterm is worth 15% of your course grade.

• Final exam: 30%

The final exam will be on Thursday, December 12 from 10:30-12:30pm.

My policies

Grading Scale The anticipated grading scale for this course is below. At my discretion, this scale may be adjusted, but only in your favor.

| A+ | 98-100 | A | 93-98 | A- | 90-92 |
|----|--------|--------------|-------|----|-------|
| B+ | 88-89 | В | 83-87 | B- | 80-82 |
| C+ | 78-79 | \mathbf{C} | 73-77 | C- | 70-72 |
| D+ | 68-69 | D | 63-67 | D- | 60-62 |
| | | F | 0-59 | | |

Make-Up Policy: Students with university excused absences should make alternative arrangements with me as soon as possible if the absences interfere with any course components. The validity of excuses will be handled on a case-by-case basis. I reserve the right to alter the questions and format of any make-up assignment given.

If you have concerns: If you are having trouble with any aspect of the course, please seek help as soon as you recognize a problem. You may visit me in office hours or set up an appointment. E-mail is the easiest way to contact me, and I will respond to e-mails promptly (usually within 24 hours except for weekends). I will not necessarily be able to solve your problem, but am always willing to listen to your concerns and will try to explain my policies. I want you to succeed, and so please let me know if there is something I can do to help you with that.

University policies

Academic Dishonesty: Cheating in any form will not be tolerated and may result in a failing grade for the relevant assignment or exam and/or a failing grade in the course. The University's Code of Academic Integrity is designed to ensure that the principles of academic honesty and integrity are upheld. In accordance with this code, the University of Maryland does not tolerate academic dishonesty. Please ensure that you fully understand this code and its implications because all acts of academic dishonesty will be dealt with in accordance with the provisions of this code. All students are expected to adhere to this Code. It is your responsibility to read it and know what it says, so you can start your professional life on the right path.

As future professionals, your commitment to high ethical standards and honesty begins with your time at the University of Maryland. You are not allowed to post graded homework, exam, or reassessment problems to any websites or message boards (including Chegg, Math Stack Exchange, and the ELMS discussion board). You are not allowed to ask anyone for help during exams. If you are ever unclear about acceptable levels of collaboration, please ask.

Accommodations: The University of Maryland is committed to creating and maintaining a welcoming and inclusive educational, working, and living environment for people of all abilities. The University of Maryland is also committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs, or activities of the University, or be subjected to discrimination. The Accessibility & Disability Service (ADS) provides reasonable accommodations to qualified individuals to provide equal access to services, programs and activities. ADS cannot assist retroactively, so it is generally best to request accommodations several weeks before the semester begins or as soon as a disability becomes known. Any student who needs accommodations should contact me as soon as possible so that I have sufficient time to make arrangements. For assistance in obtaining an accommodation, contact Accessibility and Disability Service at 301-314-7682, or email them at adsfrontdesk@umd.edu. Information about sharing your accommodations with instructors, note taking assistance and more is available from the Counseling Center.

Student Responsibilities: It is our shared responsibility to know and abide by the University of Maryland's policies that relate to all courses, which include topics like:

- Academic integrity
- Student and instructor conduct
- Accessibility and accommodations
- Attendance and excused absences
- Grades and appeals
- Copyright and intellectual property

Please visit www.ugst.umd.edu/courserelatedpolicies.html for the Office of Undergraduate Studies' full list of campus-wide policies and follow up with me if you have questions.

Important Dates: (Exam 1-3 dates subject to change)

- First Day of Lecture- Tuesday, August 27
- Drop Deadline (without 'W')- Monday, September 9
- Exam 1- Thursday, September 26 (in class)
- Thanksgiving break- November 27 December 1
- Exam 2- Thursday, October 24 (in class)
- Drop Deadline (with 'W')- Monday, November 4
- Exam 3- Thursday, November 21 (in class)
- Last Day of Lecture- Thursday, December 5
- Final Exam- Thursday, December 12, 10:30am-12:30pm

Here is a handy chart of my expectations.

| You may | You may not | |
|--|---|--|
| get to know each other and work together outside | be rude, hurtful, racist, sexist, intolerant, or gen- | |
| of class. | erally uncivilized. | |
| work with others on your homework. | work with others on the exams. | |
| let me know if there's a problem with class, home- | stew in seething resentment towards me. | |
| work, R projects, or exams. | | |
| let me know if there's a problem with the recita- | stew in seething resentment towards your TAs. | |
| tions or TA office hours. | | |

| I will | I won't | |
|---|--|--|
| write challenging problems intended to improve | write problems intended to trick you. | |
| your understanding of the material. | | |
| help you sift through your logic if you feel stuck. | tell you how to solve your homework questions. | |
| generally respond to e-mails within one business | always be available. | |
| day and arrange appointments if/when necessary. | | |

| Your TAs can | Your TAs cannot |
|--|-----------------------|
| talk with me and make reasonable guesses about | read my mind. |
| exam content. | |
| help you work towards your goals. | determine your grade. |

I reserve the right to make changes as necessary throughout the semester. Any changes will be announced in class and posted on ELMS-Canvas.

I look forward to sharing this course with you! If you have any concerns, please contact me. Have a great semester!