Math 3670

Probability and Statistics with Applications

Fall 2024

Catalog Description

Introduction to probability, probability distributions, point estimation, confidence intervals, hypothesis testing, linear regression and analysis of variance.

Prerequisites

MATH 2401 or MATH 24X1 or MATH 2411 or MATH 2551 or MATH 2550 or MATH 2X51.

Textbook

Title: Introduction to Probability and Statistics for Engineers and Scientists
Author: Sheldon Ross. Editor: academic Press. Edition: 6th edition
The book is available for free to Georgia students. The link for the 6th edition is:
https://www.sciencedirect.com/book/9780128243466/introduction-to-probability-and-statistics-for-engineers-and-scientists.

Instructor

Dr. Alexandre Locquet, office 206.
Communication: Please send me messages using Canvas only. ("Inbox" tab on your dashboard)

Lecture Times

TBD

Office hours

TBD

Attendance

A 1% BONUS is associated to attendance. Attendance Polling using Turning Point Technology and/or attendance sheets will be used to count the number of absences.
Students need to install the TurningPoint app on a mobile device. As a Georgia Tech student, installation and use of the app is free. In the TurningPoint settings, the region needs to be set to "North/South America" and NOT to Europe.
Students who do not miss more than 2 lectures during the entire term get a 1% attendance BONUS. Students who miss more than 2 classes get 0% for the attendance BONUS.

In-Lecture Polling

Students will be asked to answer questions during some lectures, using the Turning Point app. Students who will have correctly answered at least 80% of all questions asked get a 1% BONUS. Session ID is gtl57160

Grading Policy

Homework	**14%**
Quiz 1	**28%**
Quiz 2	**28%**
Final Exam	**30%**

Homework

7 problems sets will be assigned. **Homework should be submitted electronically on Canvas as a single, legible, pdf file.** The submission time on Canvas will be used to determine whether a homework is submitted on time or not: no exceptions will be made. A completion grade will be assigned. If a given homework 1) has been submitted on time and 2) every problem is answered, the student gets 2% credit. **If one of the conditions above is not satisfied, 1% credit will be assigned. If none of the conditions are satisfied, 0% credit will be assigned. If a homework is submitted more than 2 days late, 0% credit will be assigned, even if every problem is answered.**

Quizzes and Final Exam

The quizzes and the final exam will be in-person, closed-book and notes. The final exam will be comprehensive (cumulative). The use of a calculator will be allowed. Any request for regrading a quiz must be made to the instructor within one week of getting the quiz back. If you have an acceptable reason for missing quiz 1 or quiz 2, the weight associated to the quiz will be transferred to the final exam. If the sanitary situation requires it, the quizzes and final might be administered online at some point during the term. You can use this formula sheet for the quizzes and final.

Important Dates

Quiz 1	**TBD**
Quiz 2	**TBD**
Final Exam	**TBD**

Student-Faculty Expectations Agreement

At Georgia Tech we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. See http://www.catalog.gatech.edu/rules/22/ for an articulation of some basic expectation that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial

interactions will help build the environment we seek. Therefore, I encourage you to remain committed to the ideals of Georgia Tech while in this class.

Honor Code

Students are, of course, expected to abide by the [Georgia Tech Honor Code](#). Instances of academic misconduct will be viewed very seriously and reported to the Dean of Students.

Feedback

Anonymous feedback can be provided to the instructor using the link below:
https://docs.google.com/forms/d/e/1FAIpQLSeCdgnMWhYMXHMNUJUIwcPd706nBW9NWaFkh4AehA2Dp_1tfw/viewform?usp=sf_link

You are also encouraged to fill in the course-instructor opinion survey (CIOS).

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4.1 A Special Case: the Simple Sample Space

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I.6. Bayes' Theorem

I.7. Counting Techniques
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II.4 The Probability Density Function of Continuous Random Variables *Text: 4.1,4.2*
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