

## ISyE 3770 Syllabus and Course Outline – TENTATIVE -

### **Statistics and Applications**

**Instructor:** Prof. Turgay Ayer; email: [ayer@isye.gatech.edu](mailto:ayer@isye.gatech.edu)

**Course Textbook:** Applied Statistics and Probability for Engineers by Montgomery and Runger, 7th Edition, online book with WileyPLUS code.

**Course Objectives:** Provide an introduction to probability, probability distributions, point estimation, confidence intervals, hypothesis testing, and linear regression. This course is cross-listed with MATH 3770 and CEE 3770.

**Course Outcomes:** Students should be able to:

1. Solve problems involving discrete and continuous random variables, probability distribution functions (discrete and continuous), conditional probability, joint probability, expectation, variance, conditional expectation, conditional variance, independence, laws of large numbers, and basic Poisson processes.
2. Analyze and display sampling data, evaluate statistics, and estimate distribution parameters;
3. Draw conclusions about population parameters from experimental data by using proper statistical techniques;
4. Use proper statistical techniques (namely hypothesis testing) to draw sound statistical conclusions;

### **Prerequisites**

MATH 2401 or 2411; MATH 24X1 or MATH 2605; MATH 2551/2561 or MATH 2X51.

**Schedule:** It is the student's responsibility to check the schedule posted on the Home page before getting ready for any assignments. Students are expected to keep up with the pace outlined in the posted schedule.

**Grading:** Letter Grade Minimum Target Averages: A: 90%; B: 80%; C: 70%; D: 60%

### **Assignments and Grade Components**

Quizzes: 10%; Homework: 30%; Exam 1: 20%; Exam 2: 20%; Exam 3: 20%.

## **Miscellaneous**

Students are responsible for all announcements made via email, in class, and those posted to the canvas.

Student-Faculty expectations <http://www.catalog.gatech.edu/rules/22/Links to an external site.>

## **HONOR CODE**

All students are expected to be familiar with the Honor Code and are bound by its requirements. You must observe the Honor Code with respect to examinations, assignments, and all other aspects of this course. In particular:

All of the assignments are individual assignments. You may not consult or collaborate with anyone (human) or anything (non-approved materials, including textbooks, cell phones, laptops, additional cheat sheets, etc.) while taking an exam. Submission of your exam is an acknowledgment that you have complied with the Honor Code.

<http://www.policylibrary.gatech.edu/student-affairs/academic-honor-codeLinks to an external site.>

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services at (404)894-2563 or <http://disabilityservices.gatech.edu/Links to an external site.> as soon as possible to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also email me as soon as possible in order to set up a time to discuss your learning needs.