Instructor: Prof. Turgay Ayer
Email: tayer@georgiatech-metz.fr (If you send an email to me, please make sure to include [ISyE 20207] in the subject line, as otherwise, your email not to be read)
Office Location: TBA
Office Hours: By appointment

Course Description
This is an introductory course in probability. As such, you will be introduced to several ideas and principles that can be quite challenging to understand at first. Since materials covered this class will be prerequisite for several other courses, it is important to master the techniques discussed in this course.

Objectives
After successfully completing this course, you should:

- Understand the basic definitions and terminology associated with the theory of probability
- Understand how randomness may affect the system behavior and performance
- Be able to recognize, formulate and analyze probabilistic models in real life decision making
- Be able to communicate the results of the modeling process to management and other non-specialist users of engineering analyses

Prerequisites
Math 1501, 1502 (or equivalent, e.g. 1512, 1712).

Class Times and Location:
Meeting Times/Days: 2:30 -3.25 PM MTWR
Room: TBA

Distribution of information and Attendance

Distribution of Information: There is a mailing list for this course, which will be used for general information, reminders, clarifications, and other purposes. OIT automatically adds each registered student to this list, provided that the student has an email address registered with the University. Make sure to check your email regularly at whatever address you have registered.
A course website is available on Canvas (canvas.gatech.edu). You will need to log in with your GAtech ID and password.

**Attendance:** Attendance is strongly encouraged and is very important to succeeding in this class. *We may cover some materials in class that are not addressed in great detail in the textbook, and you will be responsible for that material.* In addition, there will be frequent pop-up quizzes. You are responsible for assignments or policies that are announced in class or in material handed out in class, **whether or not you are in class.** You are also **responsible for any material distributed electronically by email or via the Web.**

**Required Textbook**

We will not strictly follow any single book. Class notes will be self-contained. For reference though, we will use two online books:

1) *A First Course in Probability, 9th Edition* by Sheldon Ross. Digital version is available on the publisher’s (Pearson) website: 

2) *Probability with Engineering Applications* by Hajek:
   [http://www.ifp.illinois.edu/~hajek/Papers/probabilityJuly11.pdf](http://www.ifp.illinois.edu/~hajek/Papers/probabilityJuly11.pdf)

There are some additional references listed below.

- A Modern Introduction to Probability and Statistics: Understanding Why and How by Dekking, Kraaikamp, Lopuhaa, and Meester (strongly encouraged if you want to keep a published textbook)
- The Essentials of Probability by Durrett
- The Probability Tutoring Book by Carol Ash

**Assignments**

**Quizzes:** Short 1-3 question quizzes will be given at a *random* time in *randomly* selected class periods (in the end this is a probability class, which is all about randomness). *No makeup quizzes will be given.*

**Homework:** Homework assignments will be posted to course website on Canvas. Homework won’t be collected or graded, but is important for your learning. Also, some homework questions may appear in in-class quizzes.

**Exams:** There will be three in class exams. Students are allowed a calculator and pencil for all exams. Exam times will be announced later in the semester.

**Missed exams:** If you miss a midterm exam, you will need to produce appropriate documentation from the Dean of Students Office. *If you have sufficient reasons, then an oral make up examination may be given.* In some cases, the instructor may also choose to add the midterm exam
weight to the final examination. Depending on each case, this decision will be made by the instructor during the course.

If you are late to class on the day of an exam, you may begin the exam at the time you arrive to class, but must turn in the exam the same time as the other students.

**Grade Distribution:**

- **Quizzes:** 25%
- MT 1: 25%
- MT 2: 25%
- MT 3: 25%

**Regrading Policy:** If you have strong reasons to believe that there was a mistake in the grading of your exam, you can request a written request for re-grading by submitting a Grade Readjustment Form within three days of my handing back the graded assignment or test. The form is available at www.isye.gatech.edu/~tayer3/courses/GrAdj.pdf. Re-grades involve re-grading the entire assignment and if no mistake is found, 5 points will be deducted from your overall assignment grade.

**Class Expectations:**

- Students are expected to read and abide by both the Georgia Tech honor code and the Georgia Tech student-faculty expectations agreement. The Georgia Tech honor code may be found at http://www.honor.gatech.edu/, and the student-faculty expectations agreement may be found at http://www.sga.gatech.edu/expectations. Any violations of the honor code or student/faculty expectations agreement will be taken seriously, and could lead to harsh consequences.

- The classroom is a professional space. If a comment, attitude, or behavior is not acceptable in a work setting, it is not acceptable in our classroom.

- If you have any questions about logistics (e.g., hw due date, exam date etc), ask three of your classmates first. If they don’t know, then ask me.

- **Laptop/Tablet Computer Use:** If you need to take notes on your laptop/tablet computer (or other related devices), you may use your laptop/tablet to do so. Computer use is otherwise not allowed, as they usually distract some of your classmates. If you need to use a laptop/tablet etc. to take notes, please sit at the very back row so that you will make sure that you are not distracting any of your fellow students.

- **Cell Phone Use:** Please make sure to set your phone to silent/vibrate as they disturb other students’ learning. They should be in your pocket or off of your desk during class. There is a wall clock in the classroom, so you do not need to use your phone as a clock. If there is an emergency, and you absolutely need to take the call, please leave the class without causing any distraction and deal with
the emergency. If you use your cell phone for any other reasons during class, I may ask you to leave for the day.

Disabilities and Special Circumstances:

- If you have a disability requiring special classroom accommodations or testing accommodations, please make an appointment with the ADAPTS office to discuss the appropriate procedures. Their web site is http://www.adapts.gatech.edu.

- In some cases, religious observances or other events conflict with scheduled class activities. *In such situations students can be given an alternative means of meeting the academic requirement.* Students must notify the instructor of any such conflicts, with the specific dates, within the first two weeks of classes. Students requiring disability accommodations are also requested to make arrangements with the instructor, within the same period if possible.