

# ISyE 2028: Basic Statistical Methods

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**Instructors:** Xiaoming Huo, Groseclose 335. Check the following link for official pronunciation:

<http://www.isye.gatech.edu/faculty-staff/profile.php?entry=xh9>

**Email:** [xiaoming@isye.gatech.edu](mailto:xiaoming@isye.gatech.edu) **Phone:** 404-385-0354 **Office Hours:** after class (or email for appointments)

**Content:**

1. Introduction
2. Descriptive statistics
3. Sampling distribution & point estimation of parameters
4. Single sample problems
5. Hypothesis testing
6. Two sample problems
7. Simple linear regression
8. Multiple linear regression
9. [if time allows] Design single-factor analysis and analysis of variance
10. [if time allows] Design of experiments with several factors
11. [if time permits] Statistical quality control

**Time and Location:** XXX

**Textbook:** Required: Douglas C. Montgomery, George C. Runger, Applied Statistics and Probability for Engineers, 5th Edition,

[http://www.coursesmart.com/givecoursesmartatry?xmlid=9780470053041&\\_instructor=20599](http://www.coursesmart.com/givecoursesmartatry?xmlid=9780470053041&_instructor=20599)

01 (The e-book costs cheaper. The printed version costs a lot more.)

**Prerequisites:** ISYE2027 and CS1312

**Grading:**

- Weekly homework assignments. Late Homework has 20% penalty per day. You are allowed (and encouraged) to work together with other students, as long as you write up and turn in your own solutions. You are also allowed (and encouraged) to ask me questions, although you should try to think about the problems before asking—do not ask me to redeliver a lecture. I strongly encourage you to work on extra exercise problems from the book by your own. Some exam problems can be modified versions of exercise problems from the textbook.
- Weekly quiz (the lowest score will be dropped). Make-up quiz has 25% penalty per day.
- There will be two midterms and a final. Midterms are close book. For the midterms I, II and final, you are allowed to bring four, eight, and twelve pages double-sided notes respectively. On the notes, you can write down anything you like. But they have to be self-made. Do not copy from others. For the schedule of final, please visit <http://www.registrar.gatech.edu/home/calendar.php> for updated information.
- Distribution of points:
  1. Class Attendance 5 % (I do check attendance from time to time)
  2. Homework 10 %
  3. Quizzes 20 % (remember the lowest score is dropped automatically)
  4. Midterm 20 % + 20 %
  5. Final 25 %

**Software:** For questions related to computer support, contact [helpdesk@isye.gatech.edu](mailto:helpdesk@isye.gatech.edu).

**TA:** TBD. **Office:** TBA. **Office Hours:** TBA.

**Misc.:**

- Make sure the scores in T-square are consistent with what you got. I gave the final grades based on them.
- We will not make any change in grading for works older than two weeks.
- *Zero-tolerance:* any violation of honor codes (e.g., cheating in hws, tests, etc.) will result in an automatic F in this class.
- No laptop use during lecture, unless instructor said otherwise.
- No eating.
- Avoid late arrival and early departure-they are distracting.
- I do not give exemption, unless I receive an official letter from legitimate officers at Georgia Tech, including the registrar, dean of students, athletics department, or advisers of student organizations. Letters and reports from parents, church leaders, medical offices, and so on will not be sufficient --- I do not have the resource to verify their validity.

**Academic Honor Code:** It is your responsibility to get familiar with the Georgia Tech Honor Code. *Use of any previous semester course materials is allowed for this course; however, I remind you that while they may serve as examples for you, they are not guidelines for any tests, quizzes, homework, projects, or any other coursework that may be assigned during the semester.* For any questions involving these or any other Academic Honor Code issues, please consult me, my teaching assistants, or [www.honor.gatech.edu](http://www.honor.gatech.edu).