

Probability and Statistics

Spring 2017, MA 380A
MWF 12:00 p.m. - 12:50 p.m. SH 247

Instructor: Prof. Brian Hollenbeck
Office: SH 141F, 341-5644
E-mail: bhollenb@emporia.edu
Office Hours: MTWRF 10:00-10:50 a.m. & by appointment.
Text: *OpenIntro Statistics* by Diez, Barr, and Çetinkaya-Rundel, 3rd Edition.

This course is an introduction to the broad area of probability and statistics. After an introduction to data, we will discuss probability (including various distributions), estimation with confidence intervals, hypothesis testing and if time, linear regression. These methods allow us to make decisions and predictions based on a random sample of a population. Specifically, we will cover topics found in Chapters 1-6 of the text and if time, Chapter 7.

Student Learning Outcomes:

Students successfully completing this course will be expected to...

- Organize, present, and interpret statistical data,
- Use counting techniques and other methods to compute the probabilities of events,
- Solve statistical problems using appropriate probability distributions,
- Understand the role of a sampling distribution in forming statistical inferences,
- Construct and interpret confidence intervals to estimate means and proportions, and
- Construct and interpret hypothesis tests for means and proportions.

Homework/Quizzes:

Homework will be assigned often. Each assignment will consist of several practice problems. Ideally, after we have covered a section in class, you should work the homework problems until you can correctly answer the questions without referring to your notes or the answer. If you finish the homework and still are not comfortable with the problems, feel free to come by my office for help. Remember, test questions will often reflect the assigned problems. Besides collecting homework, we will also have an occasional quiz. Make-up quizzes will not be given after the scheduled time of the quiz. Instead, I will drop your lowest quiz score.

Attendance:

Attendance is important! If you miss a class, it is your responsibility to turn in any assigned work (on time) as well as find out what you missed. If possible, contact me in advance of any absences so we can make any necessary arrangements.

Calculators/Labs:

Generally a calculator will not be needed, except for simple calculations. However, we will have six labs during the semester. Labs will emphasize computation and interpretation. The computations can be done using R via RStudio, a statistical software package that can be downloaded for free. It is also available in SH245. No prior knowledge of this program is expected.

Project:

We will have a project worth 100 points this semester. It may consist of more than one part. More details will be given later.

Exams:

We will have two exams. Their tentative dates are Feb. 15 and Mar. 17. There are no make-up exams. In the case that you must miss an exam, I will use your final exam score for that test. However, you must let me know in advance and provide the appropriate documentation.

The comprehensive final exam is 8:00-9:50 a.m. on Monday, May 8.

Grading:

Here is the breakdown of points for the semester. Plus/minus grades will be used for borderline cases.

Two exams @ 100 points each	200
Homework/Quizzes	100
Project	100
Labs	100
<u>Final</u>	<u>200</u>
Total	700

Academic Dishonesty:

Cheating and plagiarism are very serious offenses and will be reported. Refer to the student handbook for the ESU Academic Dishonesty Policy.

ADA Statement:

Emporia State University will make reasonable accommodations for persons with documented disabilities. Students need to contact the Director of Disability Services and the professor as early in the semester as possible to ensure that classroom and academic accommodations are implemented in a timely fashion. All communication between students, the Office of Disability Services, and the professor will be strictly confidential.

Suggestions:

1. Work hard. To do your best you'll need to read the textbook and work all the homework problems. Don't be surprised if this class takes at least 6 hours a week of your time.
2. Ask for help when you need it. If you don't understand something, make an appointment to come by my office or drop by during my office hours. Just don't wait until it's too late.
3. Be responsible. Come to class and be prepared. Turn assignments in when they're due. If something comes up, let me know in advance (or as soon as possible).

Have a Great Semester!