Important note: 1) Students who already have credit for MATH 462 cannot get credit for MATH 343. 2) Students who take MATH 343 and MATH 462 concurrently cannot get credit for MATH 343. 3) Students who have credit for MATH 343 can later take MATH 462 and get credit, but the two courses cannot both be used to satisfy the "four upper-division course" requirement for the Math Major.

Web page:
There is a Canvas website for this course. Check it periodically for homework assignments, announcements, and to see if your assignment scores are properly entered in the grade book.

Textbook:
M. Buntinas, G. M. Funk, *Statistics for the Sciences*.

Course material:
We will do a selection of topics from chapters 1-14 as time allows. Since the course packet contains only chapters 1-8, chapters 1-14 will be uploaded on canvas. Note for the instructor: I recommend skimming through chapter 1 and skipping most of chapter 2. It is also possible to skip the second half of chapter 9.

Learning Outcomes:
By the end of the quarter, the successful student will have knowledge of the basic tools of statistics and a certain knowledge of probability theory necessary to understand basic models and tests used in statistics.

In particular, the student will be expected to understand the notion of random variable and their mass/density functions and distribution functions, as well as typical types of random variables used in statistics such as Bernoulli, binomial, uniform, and normal random variables. Additionally, the student will be expected to know certain quantities attached to random variables, for instance mean, variance and percentiles, their probabilistic interpretation, and how to estimate these quantities from data.

The statistical content of the course will revolve mostly around modeling and hypothesis testing. The successful student will have an understanding of how to model certain testing situations by various types of
standard random variables, how to form hypotheses from simple data, and how to confirm/reject a hypothesis within a certain confidence interval under various assumptions on the data.

Homework:
The homework assignments will consist of two parts: the written assignments (posted on Canvas) that you would have to upload to Canvas, and the online homework that you do on the WeBWorK website at

http://webwork.uoregon.edu/webwork2/Math343-23591

To log into WeBWorK use your DuckID as a username and your UO ID as a password. The due time of the WeBWorK homework will be posted on the WeBWorK webpage and will not be posted on Canvas. The “intro” WeBWorK homework set is due on Jan.9 (if you used this system before, this set should take no more than 10 minutes).

Doing the homework is essential to succeeding in the course. Begin early and do some every day. The best way to do the WeBWorK homework is to print it out, do the problems, and then enter the numeric and symbolic answers. Each student’s problems will be similar but individualized (different numbers, functions, etc.).

Exams:
There will be a midterm, tentatively, at the end of week 5, and a final exam.

Grading:
webwork 20%
written homework 15%
midterm 30%
final exam 35%

Intermediate grade will be posted after the midterm.