

Instructor: Jonathan “Nate” Wells

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Course Description: This course will cover the fundamental aspects of probability and statistics required for statistical analysis in Business, the Social Sciences, and other applied fields. The course will be divided into three main areas: Data Analysis, Data Production, and Statistical Inference. Emphasis will be both on applying methodology and on interpreting results.

Textbook: Daily reading assignments will be given from *The Basic Practice of Statistics, 7ed.*, by Moore, Notz, Fligner. (The 6th edition may also be sufficient, but you will need to check with me at the start of the term to match up chapter numbers between the two editions)

Course Website: Documents, a daily schedule, assignments, and grades will be posted on our Canvas page at <http://canvas.uoregon.edu>

Technology: A scientific or graphing calculator is necessary, and should be brought to class whenever possible. Strongly recommended: TI-84, TI-83 Plus, TI-83. Calculators may be checked out from the Math Office and the UO Library system. Access to Microsoft Excel is required to complete this course. Students can obtain a free copy of Excel at <http://it.uoregon.edu/about-office-365>

Communication: If you would like to contact me, I can most easily be reached by email weekdays between 10am and 6pm. While I try to answer email as soon as possible, in some cases, I may not be able to respond until the following school day. You are also welcome to stop by my office outside of office hours—I usually have at least a few free minutes to help.

Course Outcomes: By the end of the course, a student should be able to:

1. Organize, present, and analyze data using appropriate statistical models.
2. Use properties of, and computations for, probability in statistical contexts.
3. Determine, given data set(s) in context, an appropriate test statistic and effectively analyze the data using a one-sample or two-sample test for mean or proportion.
4. Correctly interpret the meaning of a p-value.
5. Construct confidence intervals for one-sample and two-sample tests for mean and proportion; interpret the result both quantitatively and qualitatively.
6. Set up, execute, and interpret one-sample and two-sample tests of hypothesis for mean and proportion.
7. Determine linear regression models and speak qualitatively about the regression coefficient, slope, and intercepts.
8. Use Excel to perform computations for one- and two-sample data.

Workload: This course is taught in an intensive learning format. In four weeks, we will cover the same amount of material that is covered in a typical 11-week course. A prepared student will attend class for two hours per day, and spend about three to four hours per day on work outside the classroom (reading, doing homework, discussing, studying, etc.). Together, this represents a 25-30 hour per week commitment. Having other significant obligations during this time may seriously hamper your potential for success.

Class Structure: Daily reading assignments will be posted on Canvas on Fridays for the upcoming week. Each assignment will consist of a list learning objectives, reading/video resources, and a reading comprehension questions. Answer to these questions must be submitted before the start of class. Upon arriving to class on a typical day, we will spend about thirty minutes reviewing the important topics from the section, and then spend the next 20 to 25 minutes working in small groups on a representative problem. After a short break, we'll resume with another brief lecture, and conclude with group work on a second problem. Students will need to submit their own copy of each assignment to receive credit for the day.

Grading Criteria: $A = 90 - 100\%$; $B = 80 - 89\%$; $C = 70 - 79\%$; $D = 60 - 69\%$; $F < 60$ (with upper and lower 2% of each division corresponding to $+/-$, respectively).

Business School Note: The Lundquist School of Business requires applicants to take Math 241, 242, 243 for a letter grade in order to satisfy the entry to the college. They will not accept a P grade in this course for admittance.

Your grade in the class will be based on the following weighted assessments:

1	Daily Reading	7.5%
2	In-class Worksheets	7.5%
3	WebWork	10%
4	Written Homework	7.5%
5	Excel Worsheets	7.5%
6	Midterm Exam	25%
7	Final Exam	35%

Daily Reading: Assignments will be posted on Canvas under the 'Assignments' tab and will include several basic questions to check comprehension. Answers to these questions are due by 10am each day, and can be submitted by following the same link on Canvas where the assignment was found and then either a) uploading a Word / .pdf file, or b) by clicking the Text Entry button and typing directly into the textbox (Be aware that there is also a comments box under the file upload link. Do not use this unless you want to make a comment about the assignment). Grades will be awarded on an all-or-nothing basis, with full points given if a sincere attempt is made to answer the questions (independent of correctness). Up to two daily reading assignments may be missed without penalty.

In-class worksheets: During a typical day of class, two short worksheets will be given to be completed and submitted by the end of class. Up to two worksheets may be missed without penalty.

WebWork: WebWork will be assigned weekly and will be due every Tuesday and Friday at the start of class.

Written Homework: A written assignment will be assigned weekly and will be due every Wednesday at the start of class.

Excel Worksheets: Excel assignments will generally be due on Monday and Thursday of each week, and will be submitted electronically on Canvas. When uploading your assignment, please use the format 'last name_ first name' to title your workbook.

Midterm Exams: One 110-minute midterm exams will be given in class on Friday, August 4th.

Final Exam: A cumulative, final exam will be given in class on Friday, August 20, from 10:00-11:50 am. *If you foresee a conflict with the time of the exam, please contact me during the first week of class so that appropriate arrangements can be made. Barring that, the final exam cannot be taken at any other time.*

Accessibility: The University of Oregon is dedicated to creating inclusive learning environments. Please notify me as soon as possible if there are aspects of the instruction or design of this course that result in disability-related barriers to your participation. You may also wish to contact the Accessible Education Center in 164 Oregon Hall at 541-346-1155 or uoaec@uoregon.edu.

Academic Integrity: Students are allowed and encouraged to collaborate on most in-class and homework assignments. However, any work that you turn in for grading must be your own. Exams will be closed book, closed notes, and closed colleague, unless otherwise specified. All written work that references material outside of the textbook should be accompanied by an appropriate citation (APA or AMS format is preferred). The University of Oregon requires that all instances of academic dishonesty be reported, no matter the scope.

Tentative Schedule:

Week	Chapters Covered
1	1, 2, 3, 12, 13
2	15, 16, 17, 18, Midterm
3	20, 21, 22, 23
4	4, 5, Final

A Typical Week:

Day	Assignment Due
Monday	Daily Reading, Excel
Tuesday	Daily Reading, WebWork
Wednesday	Daily Reading, Written Assignment
Thursday	Daily Reading, Excel
Friday	Daily Reading, WebWork