Math 361 Statistical Methods I FAll 2019

Instructor: Rosanna Overholser, 178 Boivin Hall, 885-1475, rosanna.overholser@oit.edu

Web Page: http://math.oit.edu/~overholserr Please check this site frequently for updates to course materials and calendars and for homework assignments. Grades will be posted in Canvas.

Office Hours: 10-12pm Tuesday, 4-5pm Wednesday, 4-5pm Thursday and by appointment.

Workbook: Investigating Statistical Concepts, Applications, and Methods, 3rd edition, R/Minitab by Allan Rossman and Beth Chance. You may purchase a print copy of this workbook (approximately $30) or order a pdf ($5) online directly from the authors by following the link on my website. We will spend part of each class doing worksheets so you must bring the workbook each day, either the print version or the digital version on your tablet or laptop.

Textbook (optional): The workbook contains formulas and definitions in addition to worksheets, but you may wish to supplement it with **Introductory Statistics with Randomization and Simulation** by David Diez, Christopher Barr and Mine Cetinkaya-Rundel. This text is available online for free, following the link on the course website.

Other materials: In addition to the workbook, you will need to bring a **scientific calculator** to class. Additionally, please bring a laptop or tablet for group activities using applets. Some of the applets can also be run on smartphones. Laptops are available for checkout from the library.

Course Goals and Objectives: After completing this course, students will be able to

1. Describe patterns and departures from patterns in data
2. Use probability rules and distributions, including binomial and normal distributions, to solve problems.
3. Perform statistical inference.

- *Midterm Exams:* There will be two exams given during the term. Each exam will consist of an take-home portion and an in-class portion. **You MUST take the in-class portion of the exams at the scheduled times**. See the schedule at the end of this syllabus for exam dates. Make-up exams can be given for previously arranged absences if you have a good reason to miss an exam.
- *Final Exam:* The final will be given during the time period listed in the schedule below. It will be comprehensive. **The final MUST be taken at the designated time, so make all travel arrangements accordingly.**
- *Homework:* Homework assignments will be collected weekly at the start of class, generally on Wednesdays. They will be posted on the course website. Some problems may require you to use Excel or the statistical software Minitab. Both these softwares are available on all campus computers. You may also access Excel online through TECHweb.
- *Quizzes:* A quiz will be given each week without exams, generally on Wednesdays. Quizzes will be held during the first 10 minutes of class. No formula sheets or calculators are allowed unless permission is explicitly given on the quiz. Each quiz will ask you for the definition of at least one statistical term from the workbook. The remainder of the quiz will consist of problems similar to the practice problems listed on the homework assignment.
- *Project:* Midway through the term, you will have the opportunity for the ultimate hands-on learning experience by collecting and analyzing data using the tools you've learned in the course. The project should be done in groups of two to three students and result in a short written report. More details about the project will be posted on the course website.

Note: on Wednesday, October 9th the first quiz will be given and the first homework assignment collected.

Course grades will be computed from the above as follows:

- 30% of your grade will be determined by the average of the two midterm exam scores (15% each).
- 20% of your grade will be determined by your final exam score.
- 15% of your grade will be determine by your best 7 (out of 9) homework assignment scores.
- 20% of your grade will be determined by your highest 6 (out of 7) quiz scores.
- 15% of your grade will be determined by your group project score.

Letter grades will be assigned using the scale 90-100% ⇒A, 80-89% ⇒B, 70-79% ⇒C, 60-69% ⇒D, and below 60% is an F.

Other Things of Importance:

- *Incomplete Grades:* An incomplete grade can only be assigned to you under the following circumstances:

  1. You have/had a grade of 70% or better (including zeros for any work not done) by the date to withdraw with a W.

  2. You have a SERIOUS problem that begins after the withdraw date and prevents you from being able to complete the term.

  An incomplete grade will definitely not be assigned in the event that you are not performing well in the course and fear that you may not obtain a passing grade!

- *Illness:* In the event that you are ill, please stay home and rest! You can always read the lecture notes online afterwards or ask a classmate to fill you in.

- *Disabilities:* Students with a documented disability who require assistance or academic accommodations should contact the office of Disability Services immediately to discuss eligibility. Disability Services staff are located on both the Klamath Falls and Wilsonville campuses, however arrangements can be made to meet with a student on any campus. Meetings are by appointment only, so please contact the Disability Services office at the campus closest to you: Klamath Falls (541) 885-1790 and Portland-Metro (503) 821-1305. Specific information and Disability Services forms can be found at www.oit.edu, then go to "Academics" and click on "Student Success Center" and then "Disability Services." This link leads to the department's website: http://www.oit.edu/academics/ssc/disability-services

- *Oregon Tech Campus Wide Syllabus:* Policies and resources for all Oregon Tech students may be found under the syllabus link in Canvas.

Calendar: Below are some important dates for the term. Please check the website frequently for any updates.

September 30th - **Classes begin**

October 11th - Last day to withdraw without a "W"

October 28th - **Exam One**

November 8th - **Project Due**

November 11th - Holiday

November 15th - **Project Peer Review Due**

November 15th - Last day to withdraw with a "W" from this course

November 22nd - **Revised Project Due**

November 25th - **Exam Two**

November 27-29th - Holiday

December 9th, **2-4pm - Final Exam (in our regular room)**