

**DEPARTMENT OF MATHEMATICS  
COLLEGE OF THE SCIENCES  
CENTRAL WASHINGTON UNIVERSITY  
WINTER 2019**

1. **MATH 311— Statistical Methods**

CRN	Section	Class Day and Time	Room	Final Exam Day and Time
10266	001	MTWF 1:00 -1:50	Shaw 210	Tuesday, March 12th 12:00 – 2:00
		TH 1:00 – 1:50	Sam 138	

2. **Course Materials:**

- **Textbook.** The Basic Practice of Statistics; seventh edition by Moore, Notz and Fligner. ISBN:978-1-4641-4253-6
- **Graphing calculator.** Students are required to have a graphing calculator for this class. The TI-84 Graphing Calculator is strongly recommended, and will be the calculator used in classroom demonstrations. Calculators may **not** be shared or borrowed during testing.

3. **Instructor’s Office Hours and Contact Information: Dr. Janet Shiver**

<i>Office Location:</i> Samuelson 208	<i>Office Phone:</i> (509) 963- 2109	<i>Email Address:</i> <a href="mailto:janet.shiver@cwu.edu">janet.shiver@cwu.edu</a>	<i>Office hours:</i> 2:00 -3:00 MTWHF
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4. **Course Expectations:** Being successful in a mathematics class generally requires good study habits, hard work/patience while attempting problem sets, and proper time management during testing situations. Each student is expected to attend every class meeting, to read the assigned sections of the text prior to class, to complete homework problems and other assignments in a timely manner, and to seek the assistance of the instructor or a tutor when difficulties are encountered.

5. **Course Objectives:** After successful completion of this course, students will be able to: (1) Calculate and interpret basic descriptive statistics; (2) Calculate probabilities for simple events from a variety of random experiments; (3) Describe and use properties of basic probability distributions; (4) Understand and be able to perform statistical inference in the form of confidence intervals and hypothesis tests; and (5) Review with a more critical eye public information that informs decisions in our world today.

6. **Grading/Make-up Policy:**

10% Weekly Quizzes	10% weekly homework and in class assignments	10% Project on p-value	15% Lab Write ups	5% Attendance (0-1 Absence 100%, 2 absences 90%, 3 absences 80%, etc.)	40% Two Exams	20% Comprehensive Final
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For final weighted averages falling in the following intervals, a student will earn at least the corresponding letter grade:

[93-100] = A    [90-92] = A -    [87 - 89] = B+    [83-86] = B    [80-82] = B-    [77-79]= C+  
 [73-76] = C    [70-72] = C-    [ 67-69] = D +    [63-66] = D    [60-62] = D-    [Below 60] = F

Students are expected to attend each class period and to be on time. Any missed activity/homework grades due to an absence or tardy will be recorded with a grade of zero. **Missed class work may not be made up.**

A missed test may not be made up without just cause. If you have a conflict (e.g. a CWU athletic event, court date, doctor's appointment, etc.) or severe illness that requires you to miss a test contact the instructor to make other testing arrangements. Arrangements should be made as soon as you know there is a conflict or, in the case of illness, by the scheduled test date. **Documentation must be provided in order to make alternate arrangements.**

7. **Labs:** Each student is expected to complete 5 of the 6 assigned labs. If you complete all 6 labs, then the five highest scoring lab write-ups will be factored into your grade.
8. **Primary Source Project:** This project will require time both in class and out of class to complete. You will read several short, informational paragraphs, complete several tasks, and answer questions. During class time, you will work in a small group to discuss your solutions and verify your work. This project will count as 10% of your grade.
8. **Absence/Tardy Policy:**  
 Students are expected to attend class regularly and to be on time. Students who arrive late should enter the class quietly and sit in the first available desk. Students are responsible for signing the attendance roster at each class meeting. Students who miss 3 consecutive classes or more than 5 classes may be withdrawn from the course and assigned a grade of F for excessive absences. NOTE: Extenuating circumstances will be evaluated on a case-by-case basis.
9. **Academic Honesty:** The integrity of students and their oral and written work is a critical component of the academic process. All written work submitted in this course will be individual work unless otherwise directed by the instructor. Students must properly document all outside sources used for outside of class assignments. The submission of another's work as one's own is plagiarism, and will be dealt with using the procedures outlined in the CWU catalog.
10. **Course Outline:** Modification of this schedule will be made at the discretion of the instructor. Announcements made in class or on the class web page will supersede this schedule.

Week of	Class Outline	Notes:
Jan 1st	Distributions, Graphing	Chapter 1
Jan 7th	Measures of Center and Spread, Boxplots, Normal Distributions, Normal proportions	<b>Quiz 1 (Friday)</b> Chapter 2, Chapter 3 Lab 1

Jan 14th	Scatterplots and Correlation, Regression, Residuals, Two-Way Tables,	<b>Quiz 2 (Friday)</b> Chapter 4, Chapter 5, Chapter 6 Lab 2
Jan 21st	Simpson's Paradox Probability, Rules of Probability, Tree Diagrams,	<b>MLK Holiday (Monday)</b> Chapter 12/13/14 <b>Quiz 3 (Friday)</b> Lab 3
Jan 28th	Binomial Distributions, Sampling	<b>Test – Chapters 1-6 and 12/13/14 (Thursday)</b> Chapter 14 and 8 No Lab
Feb. 4th	Sampling Distributions, Law of Large Numbers, Central Limit Theorem, Confidence Intervals	<b>No Class Friday</b> Lab 4 Chapter 15, Chapter 16
Feb. 11th	Tests of Significance (hypothesis testing/p-values), Inference, Errors	<b>Quiz 4 (Friday)</b> Chapters 17 Lab 5
Feb. 18th	Inference about Population, one-sample t-test, Matched Pairs t, Two – sample t	<b>Presidents Day (Monday)</b> Chapters 18, 20 Lab 6 <b>Quiz 5 (Friday)</b>
Feb. 25th	Inference about population Proportions, Z vs. t test,	Chapters 21 and 22 <b>Test – Chapters 15 -22 (Thursday)</b>
March 4th	Two proportions , Chi Square	<b>Quiz 6 (Thursday)</b> Chapters 23 and 25 <b>No lab</b>
March 12 <sup>th</sup> Tuesday	FINAL EXAM	12:00 – 2:00

11. **Safety:** Fire drills may be conducted during the semester. In the event of a fire alarm signal, students will exit the building in a quick and orderly manner through the nearest hallway exit. Learn the floor plan and exits of this building. Do not use elevators. Crawl on the floor if you encounter heavy smoke. Assist disabled persons and others if possible without endangering your own life. Assemble for a head count behind Hertz, on the lawn behind the Science building.
12. **Electronic Devices Policy:** *It is common courtesy to turn all electronic devices to "off" or "silent" mode when entering the library, classrooms and auditoriums.* Please adhere to this policy. All cell phones should be kept out of site during the class. Please be sure they are placed in a pocket, purse, or backpack so they will not present a temptation during class time.
13. **Request for Disability Modifications:** Students with disabilities who wish to set up academic adjustments in this class should give me a copy of their "Confirmation of Eligibility for Academic Adjustments" from the Center for Disability Services as soon as possible so we can discuss how the approved adjustments will be implemented in class. Students without this form should contact the Center for Disability Services, Bouillon

140 or ds@cwu.edu or 963-1202

### Tips for Success

- **Prepare for each class.** A COLLEGE LEVEL MATH COURSE MOVES AT A FAST PACE. New topics are introduced and discussed in each class period. Professors expect students to be proficient in these topics by the next class. Too often students believe that the homework and reading for their math courses can wait until the weekend. This is a losing strategy.
- **If you must miss a class,** it is your responsibility to get notes from a classmate. Exchange phone numbers or emails with someone in class (today). Communicate with your instructor if you must miss an exam or more than one class.
- **Set aside ample time EVERY day** to spend on non-credit math homework. College instructors expect students to spend an average of 2 hours outside of class **for each hour** spent in class. Some topics will be harder to grasp than others. As a result, there will be times when you will need to spend much more than 2 hours. In general, students who do not complete every homework assignment (to the point of understanding) will not perform very well on quizzes and tests.
- **If you do not understand a topic,** get help immediately! Getting assistance early is important. A short trip to the free tutors in the library or your instructor may be all you need.
- **Form a study group** with other students from your class. Study groups can foster a greater understanding of the material and a sense of confidence.
- **READ the textbook and supplementary materials.** The text will have careful explanations of the topics along with examples and illustrations. You are responsible for anything in the assigned reading or homework problems (even if it wasn't discussed in class).