I. BASIC INFORMATION

Instructor: George Weaver  
Office: Kidder 113E  
Office Phone: 541 737-3773  
e-mail: weaverg@stat.oregonstate.edu (Put "ST 201" in the subject line)

Course TA:  
Office:  
e-mail:  

Office Hours: Monday 10-11, Thursday 10-11 or by appointment

Required Material:  

2) Turning Point "clicker"

3) TI-84 Plus calculator

Blackboard: Announcements, assignments, and other information will be placed on Blackboard.  
*Check Blackboard several times a week.*

II. THE COURSE

1. Description  
ST 201 is composed of three hours of lecture each week and one hour of recitation each week. During each lecture, you will use your TurningPoint clicker to answer questions in which you will get participation points. You must bring your TurningPoint clicker to each lecture to get participation. I do not have any extra clickers to hand out if you forgot yours. You will not need your clicker in your recitation.

2. Format  

**LECTURES:**  
I will be posting my PowerPoint lecture slides before class, if you would like to print them out to take notes on.  
Bring your Turning Point clicker to each lecture as I will use them to test your understanding of concepts. Your participation will be earned by participating with your remotes. If you forget your remote you will not get participations points for that day.
Lecture Policy:
Be respectful of your classmates’ right to learn and my right to teach by following these rules:
- No talking, reading newspapers, or playing with your cell phone.
- If you use a laptop, it should be for taking notes and not a distraction. If you need to use your laptop, you will be required to sit within the first 3 rows of the classroom.
- Please be on time and do not leave early. (If you do have to leave early, please sit near the door. Also, please let me know before class you are leaving early.)

Recitation:
A graduate student in the Statistics Department will be instructing your recitation. It is mandatory that you attend. There will be an assignment given in each recitation that must be turned in before you leave the recitation. The TAs will grade it and hand back to you in the following meeting. The goal of the recitation is for you to get extra practice working out book problems, allow you to work on small group in-class projects and to give you an opportunity to ask questions about the material.

3. Course Objective
The purpose of this course is to provide tools for the student to become an informed consumer of statistical arguments as well as become familiar with the calculations involved in arriving at a statistical conclusion. The student will be introduced to critical thinking concepts as they apply to the evaluation of arguments involving numerical evidence and an emphasis is placed on critical evaluation and interpretation of statistical arguments. Mathematical calculations to find such things as sample means, standard deviations, confidence intervals, test statistics and probabilities will be used.

4. Learning Outcomes
Upon completing this course the student should be able to:
- Interpret data presented in a histogram, bar charts, and box plots
- Calculate summary statistics from a data set
- Know the steps to draw a random sample from a population and be aware of how to improperly sample
- Understand the results from sample surveys, observational studies and experiments and what kind of conclusions can be drawn from each study design
- Calculate probabilities using probability rules for independent and disjoint events
- Evaluate arguments based on numerical evidence
- Know what sampling distribution is being used and the conditions needed allow us to apply the Central Limit Theorem when calculating a test statistic
- Perform a hypothesis test for one and two populations and be able to properly interpret p-values, confidence intervals, and test statistics
- Perform a one sample hypothesis test for proportions
- Be familiar scatterplots, correlation and regression terminology. More time on the interpretation of regression analysis is spent in ST 202.

III. Grading

1. Homework
You will have homework assignments that will be found using StatsPortal. This is an online resource that came with the purchase of your test book. You will receive an activation code to access the website when you purchase your text. Due dates for each of these assignments can be found on the course schedule at the end of this syllabus. All assignments must be completed by 11 pm on the day that it is due.
2. Exams
ST 201 has two midterms and a final. Each midterm exam is designed to take approximately 50 minutes to finish and will be closed book. Midterm exams are on the dates listed in the course schedule.
- Midterm 1 is given in the 4th week of the term and covers chapters 1-5.
- Midterm 2 is given in the 8th week of the term and covers chapters 8-14.
- You must present your ID to take the Midterms and Final. Study sessions for the exams will be announced by email and posted to the announcement section of Blackboard. The final is closed book, but you are allowed to bring one 3 x 5 inch notecard.

Exam Policies
- No make-up exams will be given unless there is an extraordinary circumstance. (Routine illnesses such as colds are not considered extraordinary.) Permission to miss an exam must be granted prior to the exam time by the instructor (not the TA). Unless it is a very extraordinary circumstance, no make-up exam will be given if permission to miss the exam is not granted before the scheduled exam time.
- Cell phones must be turned off and stored out of sight during exams. Nothing in or covering the ear will be allowed (hats, earphones, etc.) unless it is a medically approved device.
- Both midterm exams are closed book. You are allowed to use a calculator. Your cell phone MAY NOT be used as a calculator.
- For the final only, you may bring in one 3x5 notecard.
- If there is an error in scoring an exam, all requests for regrading the exam must be initiated by the student within one week of when the exam is returned. No exams will be regraded after that period of time.

Exams will cover material in the lessons, lectures, suggested and extra practice problems, and homework assignments.

3. Recitations
There will be 10 recitations during the term. More details are available in the recitation syllabus.

4. Participation (using TurningPoint remotes ("clickers"))
One of the objectives of using "clickers" in the lectures is for you to participate in the lecture by responding to questions asked during the lecture. Your responses will be recorded. See part VI, #7 below for information on grading of responses.

5. Distribution of your grade
Participation using clickers in lecture: 5% of total grade
Recitation: 10% of total grade
Homework Assignments: 15% of total grade
Midterm 1: 20% of total grade
Midterm 2: 20% of total grade
Final: 30% of total grade

Here's the formula that will be used to determine your final percentage:
\[
\text{Final Grade} = 0.05 \times \left( \frac{\text{clicker points earned}}{\text{total possible clicker points}} \right) + 0.10 \times \left( \frac{\text{recitation points earned}}{\text{total possible recitation points}} \right) + 0.15 \times \left( \frac{\text{homework points earned}}{\text{total possible homework points}} \right) + 0.20 \times \left( \frac{\text{points earned on Midterm 1}}{\text{total possible points for Midterm 1}} \right) + 0.20 \times \left( \frac{\text{points earned on Midterm 2}}{\text{total possible points for Midterm 2}} \right) + 0.30 \times \text{Your % in the class}
\]
6. Assigned grades are based on percentage of points earned:

<table>
<thead>
<tr>
<th>Percentage Range</th>
<th>Grade</th>
<th>Percentage Range</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>92.5% - 100%</td>
<td>A</td>
<td>90% - 92.4%</td>
<td>A-</td>
</tr>
<tr>
<td>87.5% - 89.9%</td>
<td>B+</td>
<td>82.5% - 87.4%</td>
<td>B</td>
</tr>
<tr>
<td>77.5% - 79.9%</td>
<td>C+</td>
<td>72.5% - 77.4%</td>
<td>C</td>
</tr>
<tr>
<td>67.5% - 69.9%</td>
<td>D+</td>
<td>62.5% - 67.4%</td>
<td>D</td>
</tr>
<tr>
<td>under 60%</td>
<td>F</td>
<td></td>
<td></td>
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</tbody>
</table>

IV. INCOMPLETES

A grade of I (incomplete) may be requested if a course requirement has not been completed for reasons acceptable to the instructor, and the rest of the academic work is passing. The decision about whether to approve the request is entirely up to the instructor, but the Statistics Department has established guidelines for submitting and evaluating requests. These guidelines conform with the University's policies and procedures, which are described at http://oregonstate.edu/registrar/incomplete-grade-policy.

If you are considering requesting an incomplete, please download the form you can find at http://www.stat.oregonstate.edu/files/stat/incomplete3.pdf. Read the instructions carefully, and, if you feel you have a legitimate request, fill out the form and submit it to the Statistics office (kiddor 444) before 4 p.m. on Friday of Week 10 (March 16th).

V. STUDENTS WITH DISABILITIES

Accommodations are collaborative efforts between students, faculty and Disability Access Services department. Students with accommodations approved through DAS are responsible for contacting the instructor prior to or during the first week of the term to discuss accommodations. Students who believe they are eligible for accommodations but who have not yet obtained approval through DAS should contact DAS immediately at 541-737-4098.

VI. CLICKER INFORMATION AND POLICIES

1. Registering your remote:
   - Go to the lecture link for this class in Blackboard (ST_201_001)
   - Click "Tools"
   - Click on "TurnnigPoint Registration Tool"
   - Enter your 6 digit response device number. The device number can be found under the bar code on the back of the clicker.

   **Please register your remote by Friday, _____________.** If you fail to register your clicker by this date and I must manually enter in your clicker points I WILL DEDUCT 50% OF THE POSSIBLE POINTS NO MATTER THE REASON!!!!!

2. The Turning Point clickers will be used daily in lecture, never in recitation. Therefore, make sure you bring the clicker to lecture each day. I do not have extra clickers so if you forget your clicker you will get no participation points for that day.

3. To turn the remote on, press the button between all of the arrows.

4. The channel for this class is 46. To change the channel, press the channel button on the left and type in 46.
5. To answer clicker slide questions, make sure you press the silver button in the middle of all the arrows after entering your answer. For example, if a multiple choice slide is showing on the screen, press the button of the correct answer and then press the silver button between all of the arrows.

6. When answering questions, please note the timer at the bottom of the slide. You will need to send an answer before time expires or else your answer will not be recorded.

7. 5% of your grade will be based on participating in lecture with your clicker:
   - You will get credit for answering the question whether you answer the question correctly or not.
   - Each day we have at least one clicker question, that day’s clicker points will be worth 5 points. (Whether we have one clicker question or ten clicker questions, that day’s point total will be 5 clicker points.) The number of points you earn will be based on the percent of clicker questions you answer during a lecture. That percent will be converted to a point total out of 5 clicker points. One question will be dropped each lecture. (In case you don’t respond in time, your remote doesn’t work for a question, you come in late, or some other reason causes you to miss a question, you can still earn full credit for that day.) For example, if 9 clicker questions were asked one day and you responded to 7 of them, you would earn 7/8, or 87.5% of the clicker points for the day. (Remember, one question is dropped, so the denominator is 8 instead of 9.)
   - The lowest two days’ participation points will be dropped. If you need to miss a class or two, you can still earn full credit on the participation points. For example, if there are 25 days with clicker questions, your grade will be based on the highest 23 days’ points. Therefore if you attend all days, you will automatically earn 10 extra credit points. There will be one or two random days that I will assign to be extra credit clicker days. You will find out if a given day is extra credit if you attend class because I will only announce it in class.
   - No make-up questions will be given regardless of the reason.

8. It is a form of academic dishonesty to use someone else’s remote. That is, you cannot have someone else in lecture use your remote if you are not in attendance. To control for such misuse of the clickers, IDs may be checked for a random sample of students on randomly selected (or all) days. I will put a list of names up on the screen at the end of lecture. If your name is on that list, you must show me your ID to receive your clicker points. If you fail to show me your ID and you have clicker points recorded, you will be in violation of this policy and face academic dishonesty charges. (See academic dishonesty section in the course syllabus for penalties for violating this policy.)

9. You may discuss the questions with other people before answering the question.

VII. Academic Dishonesty—Statements from the Office of the Dean of Students

CIVILITY
The goal of Oregon State University is to provide students with the knowledge, skill, and wisdom they need to contribute to society. Our rules are formulated to guarantee each student’s freedom to learn and to protect the fundamental rights of others. People must treat each other with dignity and respect in order for scholarship to thrive. Behaviors that are disruptive to learning will not be tolerated, and will be referred to the Student Conduct Program for disciplinary action. Behaviors that create a hostile, offensive or intimidating environment based on gender, race, ethnicity, color, religion, age, disability, marital status, or sexual orientation will be referred to the Affirmative Action Office. More information regarding student conduct can be found at http://oregonstate.edu/studentconduct/regulations/index.php.
HONESTY
Students are expected to be honest and ethical in their academic work. Academic dishonesty is defined as an intentional act of deception in one of the following areas:
- cheating: use or attempted use of unauthorized materials, information or study aids
- fabrication: falsification or invention of any information
- assisting: helping another commit an act of academic dishonesty
- tampering: altering or interfering with evaluation instruments and documents
- plagiarism: representing the words or ideas of another person as one’s own

**Academic dishonesty will not be tolerated.** At the least, a grade of 0 will be given on an assignment or exam in which academic dishonesty occurs. Below are some examples of academic dishonest acts and their consequences.

<table>
<thead>
<tr>
<th>CONSEQUENCE</th>
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</thead>
<tbody>
<tr>
<td>Act</td>
</tr>
<tr>
<td>I. Assignments</td>
</tr>
<tr>
<td>• Photocopying, hand-copying, or using another person’s assignment in any way to copy all or part of an assignment</td>
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<tr>
<td>II. Exams</td>
</tr>
<tr>
<td>• Copying off another’s exam</td>
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<tr>
<td>• Sharing/passing notes during exam</td>
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<tr>
<td>• Changing answers on exam after exam has been graded.</td>
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</tbody>
</table>

III. Clickers and participation points
- Using someone else’s clicker or having someone else use your clicker will result in a loss of all participation points for the quarter plus an additional loss of 10% of your final percentage.
- For “quiz” points, if you talk or copy someone else’s response, you could lose all of your participation points for the quarter plus an additional loss of 10% of your final percentage.

Other academic dishonest acts will be dealt with on an individual basis. Expect similar to more severe consequences.


<table>
<thead>
<tr>
<th>Week</th>
<th>Monday</th>
<th>Wednesday</th>
<th>Friday</th>
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<tbody>
<tr>
<td>1</td>
<td>Intro</td>
<td>Ch. 1-2</td>
<td>Ch. 2</td>
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<tr>
<td>2</td>
<td>Ch. 3</td>
<td>Ch. 3</td>
<td>Ch. 4</td>
</tr>
<tr>
<td></td>
<td>HW#1 due by 11pm</td>
<td></td>
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<td>3</td>
<td>MLK day No class</td>
<td>Ch. 4-5</td>
<td>Ch. 5</td>
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<tr>
<td></td>
<td>HW#2 due by 11pm</td>
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<tr>
<td>4</td>
<td>Ch. 8</td>
<td>Ch. 8</td>
<td>Midterm 1</td>
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<td></td>
<td>HW#3 due by 11 pm</td>
<td></td>
<td>**covers chapters 1-5</td>
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<td>5</td>
<td>Ch. 9</td>
<td>Ch. 9</td>
<td>Ch. 9</td>
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<td></td>
<td>HW#4 due by 11 pm</td>
<td></td>
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<tr>
<td>6</td>
<td>Ch. 10</td>
<td>Ch. 10 and 12</td>
<td>Ch. 12</td>
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<tr>
<td></td>
<td>HW#4 due by 11 pm</td>
<td></td>
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<tr>
<td>7</td>
<td>Ch. 11</td>
<td>Ch. 14</td>
<td>Ch. 14</td>
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<td>HW#5 due by 11 pm</td>
<td></td>
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<tr>
<td>8</td>
<td>Ch. 15</td>
<td>Ch. 15 and 16 (up to page 400)</td>
<td>Midterm 2</td>
</tr>
<tr>
<td></td>
<td>HW#6 due by 11 pm</td>
<td></td>
<td>**covers lesson 8-14</td>
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<tr>
<td>9</td>
<td>Ch. 18</td>
<td>Ch. 18</td>
<td>Ch. 19</td>
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<td>HW#7 due by 11 pm</td>
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<tr>
<td>10</td>
<td>Ch. 20</td>
<td>Ch. 20</td>
<td>Final Review / Catch up</td>
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<td></td>
<td>HW#8 due by 11 pm</td>
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</tbody>
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Our final is scheduled for ________

Chapter Descriptions:

Chapter 1 - Picturing Distributions with Graphs
Chapter 2 - Describing Distributions with Numbers
Chapter 3 - The Normal Distributions
Chapter 4 - Scatterplots and Correlation
Chapter 5 - Regression
Chapter 8 - Producing Data: Sampling
Chapter 9 - Producing Data: Experiments
Chapter 10 - Introducing Probability
Chapter 11 - Sampling Distributions
Chapter 12 - General Rules of Probability
Chapter 14 - Confidence Intervals: The Basics
Chapter 15 - Tests of Significance: The Basics
Chapter 16 - Inference in Practice
Chapter 18 - Inference about a Population Mean
Chapter 19 - Two-sample Problems
Chapter 20 - Inference about a Population Proportion