Statistical Methods I Syllabus
STA2023, Summer 2019, June 24 - July 26

Course & Instructor Information

Instructor: Kristine Buddemeyer
Email: TBA
Office Hours: By Appointment
Course Time: 1.8 contact hours per day, Monday through Friday
Contact Hours: 45
Credits: 3

Course Description

Statistics and probability constitute the mathematics of uncertainty. This is an introductory course that gives the students knowledge on both descriptive and inferential statistics. Topics include graphic and numerical representations of various types of data; probability and statistics, discrete and continuous probability distributions; sampling and estimations; statistical inferences.

Prerequisites

MAT 1033 (Intermediate Algebra) or equivalent.

Textbook Information


Calculators: You must have a graphing calculator, preferably the TI84 or TI86. All demos will be done using the TI84 Smarview. If you already have a graphing calculator such as the TI83 or TI85 there is no need to buy another model. Bring your calculator to class every day.
Collegewide Student Learning Outcomes

The Collegewide Student Learning Outcomes assessed and reinforced in this course include the following:

- Communication
- Critical Thinking
- Scientific and Quantitative Reasoning
- Information Literacy
- Global Sociocultural Responsibility

Course Requirements

- Required weekly textbook reading
- Required course assignments to be completed before the due date
- Required well preparation for the class

Attendance/Makeup Policy

The College recognizes the correlation between attendance and both student retention and achievement. Per College Policy 3.060, **Students are expected to attend all class meetings of all courses for which they are registered.**

Class attendance is mandatory; attendance will be taken every day at the beginning of class. Poor attendance, habitual tardiness, and disruptive conduct will adversely affect your grade.

You will be allowed to make up work for full credit only under extreme circumstances (such as a documented, serious health-related emergency).

Cheating will not be tolerated. This includes giving or receiving aid on a quiz or exam and plagiarizing the work of others (including your classmates). There will likely be homework or in-class work that will allow for collaboration, but all work you turn in must be in your own words.
Classroom rules

Please respect the education of your fellow students. No disruption of education is allowed while class is in session. The following are not allowed:

- Side conversations or disruption during lecture and class discussion.
- Use of cell phones. Cell phones must be turned off during class.
- Use of notebook computers to access information not relevant to the course.
- Food

Course Outline

Please note that this outline is meant to give an overview of the major concepts of this course. Changes may occur in this calendar as needed to aid in the student’s development.

Week 1: Describing data

Monday: 1.1 – 1.3: Statistical & Critical Thinking, Types of Data, Collecting Sample Data
Tuesday: 2.1 – 2.3: Frequency Distributions, Histograms, Graphs that Enlighten & Deceive
Wednesday: 2.3 - 2.4: Scatterplots, Correlation, and Regression
Thursday: finish 2.4. 3.1 – 3.2: Measures of Center and Variation
Friday: Review and In-Class Assignment

Week 2: Describing data and basic probability

Monday: finish 3.2. 3.3: Measures of Relative Standing and Boxplots
Tuesday: 4.1 – 4.3: Basic Concepts of Probability, Addition Rule, Multiplication Rule, Complements, Conditional Probability
Wednesday: 4.3 – 4.4: Baye’s Theorem, Counting
Thursday: 5.1 – 5.2: Probability Distributions, Binomial Probability Distributions
Friday: EXAM #1 (Chapters 1 – 4)
Week 3: Probability and Normal Distribution
Monday: 5.3: Poisson Probability Distributions
Tuesday: 6.1 – 6.2: The Standard Normal Distribution, Real Applications of the Normal Distribution
Wednesday: 6.3: Sampling Distributions & Estimators
Thursday: 6.4: The Central Limit Theorem
Friday: Review & In-Class Assignment

Week 4: Estimation, test of hypotheses
Tuesday: finish 7.2 & 8.1: Basics of Hypothesis Testing
Wednesday: 8.2 - 8.3: Testing a Claim About a Proportion, Testing a Claim About a Mean
Thursday: 9.1: Two Proportions
Friday: EXAM #2 (Chapters 5 – 8)

Week 5: Regression
Monday: 9.2: Two Means: Independent Samples
Tuesday: 9.3: Two Dependent Samples (Matched Pairs)
Wednesday: 10.1 – 10.2: Correlation
Thursday: Review
Friday: FINAL EXAM

Grading Scale
A = 90-100%
B = 80-89%
C = 70-79%
D = 60-69%
F = Below 60%
"A" grades are given for outstanding work. You are doing extremely well. The student has exceeded expectation.

"B" grades are given for above average work. You are doing very well. Improvements will be toward higher refinements of concept.

"C" grades are given for average work. You are meeting an acceptable level or expectation. Improvements will be towards acceptable levels of project requirements.

"D" grades are given for below average work. You are under-achieving in quality and/or motivation. Improvements will be towards acceptable level of project requirements.

"F" grades are given for failure. You are not reaching the expected level for college work. Improvements are to review goals, seek assistance and increase efforts.

**Grading Policy**

Your grade will be based on in-class activities, quizzes, weekly exams and final exams.

<table>
<thead>
<tr>
<th></th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Quizzes &amp; In-Class Assignments</td>
<td>15%</td>
</tr>
<tr>
<td>Attendance</td>
<td>5%</td>
</tr>
<tr>
<td>Exams</td>
<td>50%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>30%</td>
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</tbody>
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- **Quizzes**: A short quiz will be given daily to record attendance and to ensure that students are keeping up with the assigned homework. These daily quizzes will be based on the homework assigned from the previous class. *Two quiz scores will be dropped at the end of the summer term.*

- **In-Class Assignments**: Graded review assignments will be given on Fridays where an exam is not given. These assignments are meant to prepare students for the next exam and will count as quiz grades.

- **Exams**: There will be three exams, Exam #1 (7/5), Exam #2 (7/19), and a cumulative final exam (7/26)

- **Homework**: Homework from the textbook will be assigned for each lecture. Students are expected to complete each homework assignment and are encouraged to work together on these assignments. The homework itself will not be graded, but problems from the homework assignment will be given on the daily quizzes.

**Academic Integrity**

As members of the Seminole State College of Florida community, students are expected to be honest in all of their academic coursework and activities.

Academic dishonesty, such as cheating of any kind on examinations, course assignments or projects, plagiarism, misrepresentation and the unauthorized possession of examinations or other course-related materials, is prohibited.

Plagiarism is unacceptable to the college community. Academic work that is submitted by
students is assumed to be the result of their own thought, research or self-expression. When students borrow ideas, wording or organization from another source, they are expected to acknowledge that fact in an appropriate manner. Plagiarism is the deliberate use and appropriation of another’s work without identifying the source and trying to pass-off such work as the student’s own. Any student who fails to give full credit for ideas or materials taken from another has plagiarized.

Students who share their work for the purpose of cheating on class assignments or tests are subject to the same penalties as the student who commits the act of cheating.

When cheating or plagiarism has occurred, instructors may take academic action that ranges from denial of credit for the assignment or a grade of "F" on a specific assignment, examination or project, to the assignment of a grade of "F" for the course. Students may also be subject to further sanctions imposed by the judicial officer, such as disciplinary probation, suspension or dismissal from the College.