STA 6166   Statistical Methods in Research I
(Fall 2018)

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Office Hours: M &W 10:30-11:30, 15:30-16:30


Prerequisite: Graduate Standing

Coverage

• Introduction: What is Statistics?
• Looking at Data - Distribution
  Measurement; stemplots, histograms and time plots for numerical variables; frequency distributions for categorical variables. Measures of central tendency and variability; box-plots. Density curves; the normal distribution; and assessing normality.
• Producing Data:
  Design of experiments; sampling design; sampling distributions.
• The Study of Randomness:
  The basic concepts of probability using two-way tables; probability laws.
• From Probability to Inference
  The sampling distribution of the sample mean and the central limit theorem.
• Introduction to Inference:
  Confidence intervals; tests of significance; uses and abuses of tests of significance.
• Inference for Distributions:
  Inference for the mean of a population using t-tests.
• Inference for Count Data:
  Inferences for a single proportion.

SPSS will be used in this class.

Tests and Exam

1. Keep four decimal places for all your answers. Caution: You may lose points for tests and/or exams if you fail to do so.
2. Completely mark out any work which you do not want to show to the instructor. If you provide two or more solutions to the same problem the worst one will be picked for grading.
3. You must show your complete work to receive full/partial credit for all the problems except True/False problems and Multiple Choice problems.
4. To receive credit for True/False problems and multiple-choice problems, correct answers must be circled. If you fail to choose the correct answer or choose more than one answer, you will get no credit for that question. Your work for True/False problems and multiple-choice problems will be ignored.
5. Do not use red pen. The instructor will use this color for grading.

Grading
1. Your grades will be based on three tests (60%) and the comprehensive final exam (40%).
2. The lowest test score will be dropped before the final averaging. The final exam is required and the final exam score will not be dropped.

Grading Scale:

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Grade</th>
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<tbody>
<tr>
<td>90% - 100%</td>
<td>A</td>
</tr>
<tr>
<td>87% - 89%</td>
<td>A−</td>
</tr>
<tr>
<td>83% - 86%</td>
<td>B+</td>
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<tr>
<td>80% - 82%</td>
<td>B</td>
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<tr>
<td>77% - 79%</td>
<td>B−</td>
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<tr>
<td>74% - 76%</td>
<td>C+</td>
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<tr>
<td>70% - 73%</td>
<td>C</td>
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<tr>
<td>60% - 69%</td>
<td>D</td>
</tr>
<tr>
<td>0% - 59%</td>
<td>F</td>
</tr>
</tbody>
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Important Dates

- September 3 (Monday) Labor Day
- September 12 (Wednesday) Test 1
- October 10 (Wednesday) Test 2
- October 29 (Monday) Last day to drop
- November 7 (Wednesday) Test 3
- December 3-8 Final exam week
- December 13 (Thursday) Grades Posted

The test dates are listed here. Before you decide to register, please make sure that you will be available on those dates. No makeup tests will be given.

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