Instructor: Jack Jeffries

Class Time and Place: 2:00 – 3:20 p.m., Tuesdays and Thursdays in AEB 350

Office Hours: Will be announced during the second week of the course.
Office: JWB 128
E-mail address: jeffries@math.utah.edu
Course Website: http://www.math.utah.edu/~jeffries/2013/1070/


Prerequisite: Completion, with a grade of C or better, of Math1010 or Accuplacer CLM score of 50 or better.

Computer Lab: in the T. Benny Rushing Mathematics Student Center, Rm 155C. Monday – Thursday 8 a.m. – 8 p.m. Friday 8 a.m. – 6 p.m.

Grading: The grades will be calculated as follows:

<table>
<thead>
<tr>
<th></th>
<th>Homework 10%</th>
<th>Final Project 5% Due 12/12/13</th>
<th>Quizzes 10% Weekly</th>
<th>Exam 1 15% 10/3/13</th>
<th>Exam 2 15% 11/7/13</th>
<th>Exam 3 15% 12/5/13</th>
<th>Final 30% 12/18/13</th>
</tr>
</thead>
</table>

The final exam will be held Wednesday, Dec. 18, 2013, 1:00 – 3:00 p.m., in the lecture room.

Grading Scale: Although I’m not philosophically opposed to curving grades, I find it’s rarely necessary. The grade scale will be the usual:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>≥93%</td>
</tr>
<tr>
<td>A-</td>
<td>≥90%</td>
</tr>
<tr>
<td>B+</td>
<td>≥87%</td>
</tr>
<tr>
<td>B</td>
<td>≥83%</td>
</tr>
<tr>
<td>B-</td>
<td>≥80%</td>
</tr>
<tr>
<td>C+</td>
<td>≥77%</td>
</tr>
<tr>
<td>C</td>
<td>≥73%</td>
</tr>
<tr>
<td>C-</td>
<td>≥70%</td>
</tr>
<tr>
<td>D+</td>
<td>≥67%</td>
</tr>
<tr>
<td>D</td>
<td>≥63%</td>
</tr>
<tr>
<td>D-</td>
<td>≥60%</td>
</tr>
<tr>
<td>E</td>
<td>&lt;60%</td>
</tr>
</tbody>
</table>

If I do need to curve the grades, I will simply shift everything down by a few points.

Online Grades: I will put your grades online on Canvas. You can get there easily from the main University of Utah website www.utah.edu. To log in, you use the same student id and password that you use for Campus Information System. I do my best to update the grades on a regular basis and keep everything accurate. However, I would advise you to check your grades often to make
sure there were no data entry mistakes. I'm always happy to correct any mistakes I've made. You just need to let me know about them.

**Calculators:** You will need a calculator for this class. I do not have any preference regarding which calculator would be most useful, so you're welcome to choose for yourself. I will allow calculators on exams. No cell phone calculators will be allowed.

**Homework:** Weekly homework will be assigned during lecture every Friday (beginning with the first week) and will be due at the beginning of class every Monday. At the end of the semester I will drop the lowest two homework assignments. There will be no late homework accepted under any circumstance. It is important to note: this is the minimal amount of work required to be successful in the course.

**Quizzes:** Weekly quizzes will be given in class every Friday. There are no makeup quizzes. At the end of the semester I will drop the lowest two quiz scores.

**Final Project:** I will assign a final (individual) project intended to be completed using statistical software. The project will be comprehensive and draw upon the topics covered throughout the course. Final project dates are listed above.

**Important Dates:**

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classes begin</td>
<td>Monday, August 26</td>
</tr>
<tr>
<td>Last day to add without a permission code</td>
<td>Monday, September 2</td>
</tr>
<tr>
<td>Last day to drop (delete) classes</td>
<td>Wednesday, September 4</td>
</tr>
<tr>
<td>Last day to add, elect CR/NC, or audit classes</td>
<td>Monday, September 9</td>
</tr>
<tr>
<td>Last day to withdraw from classes</td>
<td>Friday, October 25</td>
</tr>
<tr>
<td>Last day to reverse CR/NC option</td>
<td>Friday, December 6</td>
</tr>
<tr>
<td>Classes end</td>
<td>Friday, December 13</td>
</tr>
<tr>
<td>Final Exam Period</td>
<td>Monday – Friday, December 16–20</td>
</tr>
<tr>
<td>Grades available</td>
<td>Tuesday, December 31</td>
</tr>
<tr>
<td>Labor Day holiday</td>
<td>Monday, September 2</td>
</tr>
<tr>
<td>Fall break</td>
<td>Sunday–Sunday, October 13–20</td>
</tr>
<tr>
<td>Thanksgiving break</td>
<td>Thursday–Friday, November 28–29</td>
</tr>
</tbody>
</table>

**Expected Learning Outcomes:** After completing this course the student should be able to:

- Apply their knowledge of statistics to reading and interpreting peer reviewed journals and newspaper articles.
- Distill “word problems” into their important mathematical interpretation.
- Understand the practical application of various statistical methods in the context of a set of examples used throughout the course.
- Calculate basic probabilities such as the sum of two fair dice.
- Calculate probabilities and quantiles for sampling distribution related to the normal distributions ($t$, $\chi$-square, $F$); apply central limit theorem to calculate probabilities and quantiles of the sample mean.
• Understand the steps and uses to performing ANOVA.

• Understand how to perform hypothesis tests and find a p-value for the non-parametric tests.

• Develop a good sense of the assumptions of each statistical test and why they are important to be met.

• Develop some basic skills in Microsoft Excel or another spreadsheet program.

• Explore several graphic methods and develop a vocabulary for describing graphs with statistical savvy.

• Improve math literacy.

Course learning outcomes will be assessed through the following: homework, quizzes, tests, the final project, and class discussions.

Policies:

1. There will be no retakes of exams ever. Your score is what you get.

2. You may take an alternate exam if you talk to me about it first and explain the extenuating circumstances that make it necessary. Needing to work, babysitting your siblings, oversleeping, or needing more time to study do not pass as acceptable reasons to inconvenience me. Getting in a car crash or your mother’s death, on the other hand, is sufficient reason to request to take an alternate exam. But, it is 100% your responsibility to communicate with me as soon as is possible, before the exam occurs (or as soon as possible). Talking to me after the problem will be sufficient reason for me to allow you to get a zero on that test. I reserve the right to make alternate exams more difficult than the scheduled exam.

3. I will demand respectful behavior in my classroom. Examples of disrespect include reading a newspaper or magazine in class, social chatting with your friend in class, text-messaging your buddies during class or cuddling with your girl/boyfriend in class. If you choose to be disrespectful during my class, I can guarantee I will take action to terminate your disruptive behavior.

4. You need to have a valid email address registered with Campus Information System. I will regularly send emails to the class and will hold you accountable for receiving that information. If you have troubles receiving my weekly emails, you can (1) check to make sure your email address at Campus Information System is correct, (2) make sure my emails are not going directly to your junk mail folder, or (3) contact the webmaster at Campus Information System.

5. If you have crisis-level extenuating circumstances which require flexibility, it is completely your responsibility to communicate with me as soon as possible. The longer you wait to communicate with me, the less I can and am willing to do to help.

6. If you have questions about any exam grade, or you want to appeal the grading of the exam, you must bring it to me within one week of the exam. After that, you will have to live with whatever grade you got.
7. Please make sure you do your best throughout the semester and come talk to me if you need further study strategies. I will NOT offer any extra credit at the end of the semester or any other way for you to improve your grade at that time.

8. If you cheat on any homework, project, quiz or exam, I will automatically give you a zero for that grade. Depending on the severity of the cheating, I may decide to fail you from the class.

9. There will be no late homework accepted under any circumstance.

Tentative Course Schedule:

**Week 1 (8/26–8/30):** Intro/Ch. 1, 2
- HW 1: Chapter 1: 22, 27, 30, 33, 38, 46
- Quiz 1: 8/29

**Week 2 (9/2–9/6):** Ch. 2
- HW 2: Chapter 2: 19, 22, 25, 28, 30, 31, 44, 52
- Quiz 2: 9/5

**Week 3 (9/9–9/13):** Ch. 3
- HW 3: Chapter 3: 16, 25, 32, 35, 43, 45, 47
- Quiz 3: 9/13

**Week 4 (9/16–9/20):** Ch. 4
- HW 4: Chapter 3: 45, 47
- Chapter 4: 14 - 18 (even), 26, 34
- Quiz 4: 9/19

**Week 5 (9/23–9/27):** Ch. 5
- HW 5: Chapter 5: 19, 20, 21, 32, 33, 37, 39
- Quiz 5: 9/26

**Week 6 (9/30–10/4):** Ch. 8, 9
- HW 6: Chapter 8: 16-24 (even), 27, 38
- Chapter 9: 20-28 (even), 34, 36

**Week 7 (10/7–10/11):** Ch. 10, 11
- HW 7: Chapter 10: 22-30 (even), 31, 38, 41-44
- Chapter 11: 14-20 (even), 26, 28, 36
- Quiz 6: 10/10

**Week 8 (10/14–10/18):** No Class: Fall break

**Week 9 (10/21–10/25):** Ch. 14, 15
- HW 8: Chapter 14: 11, 12, 17 ,18, 24-34 (even), 40, 48, 50
- Quiz 7: 10/24

**Week 10 (10/28–11/1):** Ch. 15
- HW 9: Chapter 15: 20-24 (even), 32, 39
- Quiz 8: 10/31

**Week 11 (11/4–11/8):** Ch. 17
- HW 10: Chapter 18: 29, 30, 33

**Week 12 (11/11–11/15):** Ch. 18, 19
- HW 11: Chapter 19: 25, 26, 32, 35
- Chapter 20: 28, 34
- Quiz 9: 11/14

Exam 1 (10/3)
Exam 2 (11/7)
Due: 10/22/13
Due: 10/29/13
Due: 11/5/13
Due: 11/12/13
**Week 13 (11/18–11/22):** Ch. 19, 22
- HW 12: Chapter 20: 36  
  Due: 11/19/13
- Chapter 23: 30, 32, 38
- Quiz 10: 11/21

**Week 14 (11/25–11/29):** Ch. 22
- Thanksgiving break 11/28-29
- HW 13: Chapter 23: 36(a,b), 38, 42, 44  
  Due: 12/3/13
- Quiz 11: 11/26

**Week 15 (12/2–12/6):** Ch. 24, 25  
Exam 3 (12/5)
- HW 14: Chapter 25: 30, 37, 38, 39, 40, 41  
  Due: 12/10/13
- Non-parametric Tests: 11, 14, 16, 24, 25
- Final Project Assigned 12/3/13

**Week 16 (12/9–12/13):** Ch. 25
- Final Project Due: 12/12/13

*** This is a tentative schedule and will change with very high probability. ***