Elementary Statistics and Inference
Summer 2012

Instructor: Prof. R. P. Russo, 205 SH, 335-0817, rp-russo@uiowa.edu
Classes: 9:30A - 11:15A MTWTh 71 SH.
Office Hours: 11:30 to 12:15 MTWTh, or by appointment. Students seeking office-hour help are expected to have excellent attendance in the lectures.

Approved GE: Quantitative or Formal Reasoning
Prerequisite: three years of high school math or 22M:0048

Classroom Decorum: Please arrive on-time & do not leave early (unless you clear it first with me). Emailing, facebooking, twittering, web-surfing, newspaper reading, conversing, etc. are distracting behaviors, & are violations of classroom decorum.

Text: Statistics, 4th edition by Freedman, Pisani, and Purves. This is an excellent book with many good examples & exercises. Coverage: chapters 3-5, 8-10, 12-21, 23-24, & 26-27 (20 chapters). The pace is roughly one chapter per day.

Objectives: This course takes a conceptual approach to the major ideas of probability & statistics. Topics include descriptive statistics, correlation & regression, elements of probability, chance error, expectation, standard error, sampling, confidence intervals & hypothesis tests. You need to be comfortable with math at the level of elementary algebra (e.g., equation of a straight line, plotting points, taking powers & roots, percentages).

Independent Tutors: go to http://www.stat.uiowa.edu/courses/tutors.html

Attendance: Attendance is mandatory. Illness/injury is a legitimate reason to miss class; feeling a little under the weather is not. There are only 22 classes, two of which are reserved for exams, so it is important that you do not miss them. Excessive absences invariably result in poor test/quiz scores & a low course grade.

Advice: Main rule: do not fall behind! The material is cumulative. Most students need a minimum of three hours of study after each class (not including class time) to successfully learn the course material. Some students may need more. If you don’t put in the time, you won’t learn. Your goal should be to understand the concepts, rather than to merely memorize facts and formulas. Come to office hours to get your problems sorted out promptly. Read the text carefully. Keep up with the lectures. Don’t read the textbook casually as you would a novel. Do the exercises and if you get stuck, look for similar worked exercises & examples. Work problems by yourself or in small groups. Working exercises is the main way to assess your understanding and to solidify concepts. You cannot learn how to solve problems by merely watching your instructor do them; you must solve problems on your own. When you do not understand something, ask questions. Be a participant, not a spectator.
**Homework:** You are encouraged to work with others on homework problems; however, you should first attempt them on your own. You are required to write the solutions NEATLY & on your own, rather than copying the work of others. Do not merely write down answers, but show clearly your methods of solution. Submit homework on 8.5x11 paper. Multiple page submissions should be stapled together. Be sure to include your name & assignment number. HW submitted after class on the day due will receive a 10% penalty. HW submitted one class period late will receive a 25% penalty. HW submitted more than 24 hours late will not be accepted.

**Exams and Quizzes:** Quizzes and exams are closed book. You may have one sheet of 8.5 X 11 paper with notes on both sides for the exams. **Do not** wear caps or hats during the exams or quizzes. **Do not** use electronic devices (tablet, netbook, smartphone, & the like) other than a stand-alone calculator (TI 83 for example) during exams & quizzes.

There will be six quizzes and two exams. Dates are as follows:

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<tr>
<td>June</td>
<td>19</td>
<td>20</td>
<td>21 quiz #1</td>
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<td>25</td>
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<td>27 quiz #2</td>
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<td>2 July</td>
<td>3 quiz #3</td>
<td>4 no class</td>
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<td>9 Midterm</td>
<td>10</td>
<td>11</td>
<td>12 quiz #4</td>
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<td>16</td>
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<td>24 quiz #6</td>
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<td>26 FINAL</td>
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Except in rare cases, there will not be make-ups for quizzes or exams. The lowest quiz grade will be dropped. Thus, if you must be away on a quiz day, that quiz will count as your low one.

**Grades:** Grades will be based on the percent of points earned on quizzes, exams, homework & attendance.

- homework 10%
- attendance 10%
- quizzes 20% lowest dropped, missed quiz = 0
- midterm 25% location TBA
- Final 35% cumulative, location TBA

Example of a grade computation: Suppose that Sally scores 352/400 on HW, misses 0/22 classes, has quiz scores of 8/12, 10/12, 6/12*, 8/12, 12/12, 10/12 & exam scores of 76/100 on the midterm, 90/100 on the final (*note: 6/12 is dropped)

Sally’s Final % =

\[
(352/400)10\% + (22/22)10\% + (48/60)20\% + (76/100)25\% + (88/100)35\% = 84.6\%
\]
As a rough guide:

A = 90% to 100%  B = 80% to 89%  C = 70% to 79%  D = 60% to 69%

**Special Arrangements:** I would like to hear from anyone who has a disability which may require some modification of seating, testing or other class requirements so that appropriate arrangements may be made. Please see me about this as soon as possible.

**Important dates to keep in mind:**
Begin Date 06/19/2012  End Date 07/27/2012
Last day to add or drop the course without $12 charge 06/25/2012
Last day for tuition & fee reduction if you drop the course or reduce hours 06/25/2012
Last day to add without dean's approval 06/25/2012
Last day to drop without a "W" 06/25/2012
Last day to drop without dean's approval, undergraduate 07/17/2012
Last day to drop without dean's approval, graduate 07/13/2012

Course policies are governed by the College of Liberal Arts and Sciences. University policies regarding Student Rights and Responsibilities can be found at http://www.clas.uiowa.edu/students/academic_handbook/

**Department:** Statistics & Actuarial Science, 241 SH, 335-0712.
Department Chair – L. Tierney
Teaching Policies & Resources

Administrative Home
The College of Liberal Arts and Sciences is the administrative home of this course and governs matters such as the add/drop deadlines, the second-grade-only option, and other related issues. Different colleges may have different policies. Questions may be addressed to 120 Schaeffer Hall, or see the CLAS Academic Policies Handbook at http://clas.uiowa.edu/students/handbook.

Electronic Communication
University policy specifies that students are responsible for all official correspondences sent to their University of Iowa e-mail address (@uiowa.edu). Faculty and students should use this account for correspondences (Operations Manual, III.15.2, k.11).

Accommodations for Disabilities
A student seeking academic accommodations should first register with Student Disability Services and then meet privately with the course instructor to make particular arrangements. See www.uiowa.edu/~sds/ for more information.

Academic Honesty
All CLAS students have, in essence, agreed to the College's Code of Academic Honesty: "I pledge to do my own academic work and to excel to the best of my abilities, upholding the IOWA Challenge. I promise not to lie about my academic work, to cheat, or to steal the words or ideas of others; nor will I help fellow students to violate the Code of Academic Honesty." Any student committing academic misconduct is reported to the College and placed on disciplinary probation or may be suspended or expelled (CLAS Academic Policies Handbook).

CLAS Final Examination Policies
The final examination schedule for each class is announced around the fifth week of the semester by the Registrar. Final exams are offered only during the official final examination period. No exams of any kind are allowed during the last week of classes. All students should plan on being at the UI through the final examination period. Once the Registrar has announced the dates and times of each final exam, the complete schedule will be published on the Registrar's web site.

Making a Suggestion or a Complaint
Students with a suggestion or complaint should first visit with the instructor (and the course supervisor), and then with the departmental DEO. Complaints must be made within six months of the incident (CLAS Academic Policies Handbook).

Understanding Sexual Harassment
Sexual harassment subverts the mission of the University and threatens the well-being of students, faculty, and staff. All members of the UI community have a responsibility to uphold this mission and to contribute to a safe environment that enhances learning. Incidents of sexual harassment should be reported immediately. See the UI Comprehensive Guide on Sexual Harassment for assistance, definitions, and the full University policy.

Reacting Safely to Severe Weather
In severe weather, class members should seek appropriate shelter immediately, leaving the classroom if necessary. The class will continue if possible when the event is over. For more information on Hawk Alert and the siren warning system, visit the Department of Public Safety website.