General Information

- Instructor: Matt Bognar, 358 SH, 335-0799, matthew-bognar@uiowa.edu
- Office Hours: 9:30-11:00 Tuesday & Wednesday, and by appointment
- TA's: See website
- ICON/Web: This course will use ICON (http://icon.uiowa.edu) and our course website for announcements, homework assignments, etc.
- Approved GE: Quantitative or Formal Reasoning. This course is primarily for students following the business curriculum. Topics covered include descriptive statistics, probability, estimation, testing hypotheses, and regression and correlation. Students analyze data using the Minitab computer package.

Course Objectives

- In this course we will cover the following topics (in roughly this order):
  * Statistical graphics, summary statistics
  * Sampling techniques (SRS, stratified, cluster), experimental design (treatment and control groups, randomization, blinding)
  * Probability (addition and product rules, conditional probability, Bayes theorem)
  * Probability distributions (expectation, variance, binomial, Poisson)
  * Normal distribution, sampling distributions, Central Limit Theorem (CLT)
  * Inference for $\mu$ ($\sigma$ known, $\sigma$ unknown)
  * Inference for $\mu_1 - \mu_2$ ($\sigma_1 = \sigma_2$, $\sigma_1 \neq \sigma_2$)
  * Inference for $p$ and $p_1 - p_2$
  * Type I & II errors, statistical power
  * Inference for two-way contingency tables, Simpson’s paradox
  * Correlation and simple regression (including inference)
  * Multiple regression (time permitting)
- Students will learn how to assess significance for all inferential procedures.
- We will learn how to do many of the statistical analyses described in class using the statistical software package Minitab. Minitab is available in the campus computer labs. There is a free online version as well; go to http://virtualdesktop.uiowa.edu. Hand computation will be stressed, however.

Grading

- Exams: There will be 2 midterm exams (17.5% each) and a final exam (25%). All exams will be 2 hours in length. Exam dates:
  * Exam 1: Thursday, October 3, 8:45-10:45 PM
  * Exam 2: Thursday, November 7, 8:45-10:45 PM
  * Final Exam: TBA
Students are expected to be present for the exams at the scheduled time. It is your responsibility to make the appropriate arrangements beforehand.

- **Quizzes:** (20% total) A quiz will be given in lecture each Wednesday. *Make-up quizzes will not be allowed under any circumstances.* The lowest two quiz scores will be dropped. Unannounced quizzes may be given (in lecture or discussion) at any time.

- **Homework:** (10% total) Homework will be due each Thursday in discussion. Because the TA’s will not have enough time to grade each problem, a subset of the assigned problems will be graded. *Late homework will not be accepted under any circumstances.* The lowest two homework scores will be dropped. Homework must be stapled, defuzzed, be neatly written in pencil, and look professional (points will be deducted for failing to do so). Excessively sloppy homework will receive a score of 0.

- **Mini-Quizzes:** (5% total) An unannounced mini-quiz will periodically be administered in lecture (and possibly discussion). *Make-up mini-quizzes will not be allowed under any circumstances.* The lowest mini-quiz score will be dropped.

- **Discussion:** (5% total) In discussion, your TA will grade you via attendance, unannounced quizzes, preparedness, participation, etc. *Make sure you fully understand your TA’s policies and expectations regarding the discussion grade.* Grading guidelines will vary from TA to TA.

- Your attendance, participation, preparedness, work ethic, etc. may affect your grade.
- This course uses the +/− grading system (i.e. grades such as A−, B+, and B will be assigned).
- Grade cutoffs will be no higher than the usual 90, 80, 70, 60 breakdown.
- Bonus points may be given at any time and may be applied to any part of your grade.

▶ **Extra Help**

- **Statistics Tutorial Lab:** There is a free statistics tutorial lab for students in this course. During available times, a graduate student will be present to assist you. Hours for the lab can be found at [http://www.stat.uiowa.edu/resources/tutoring](http://www.stat.uiowa.edu/resources/tutoring)

  A list of non-free private tutors can be found on this page as well.

▶ **Notes**

- Do not miss class. You need to attend every day to succeed in this class.
- Success in this class requires a large time commitment. A *minimum* of 10 to 15 hours per week is expected. Review/study numerous times throughout the week.
- The material in this course appears deceptively easy. *Frequently quizzing/testing yourself is the best, most efficient way to learn the material.* Don’t memorize; try to *understand*.
- If you are absent from discussion or lecture (without giving prior notice to your TA), we can not provide handouts/notes.

▶ **Academic Misconduct**

- During quizzes and exams, you may not talk, whisper, pass notes, view other students’ work, allow a fellow student to view your own work (cover your paper), use class notes, etc. All such actions are considered academic misconduct and will be reported to the UI.
- You may, however, work with a fellow student on your homework provided you *both do all of the problems in their entirety* (at which point you can compare methods, approaches, and answers). *Simply copying another student’s homework will be considered academic misconduct.*
- Do not mistake your Professor’s kindness for weakness.
The College of Liberal Arts and Sciences Policy and Procedures

- **Administrative Home of the Course:** 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 Student Academic Handbook:
  
  [http://www.clas.uiowa.edu/students/handbook](http://www.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.

- **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.

  [http://www.uiowa.edu/~sds](http://www.uiowa.edu/~sds)

- **Academic Honesty:** The College of Liberal Arts and Sciences expects all students to do their own work, as stated in the CLAS Code of Academic Honesty. Instructors fail any assignment that shows evidence of plagiarism or other forms of cheating, also reporting the student’s name to the College. A student reported to the College for cheating is placed on disciplinary probation; a student reported twice is suspended or expelled.

  [http://clas.uiowa.edu/students/handbook/academic-fraud-honor-code](http://clas.uiowa.edu/students/handbook/academic-fraud-honor-code)

- **CLAS Final Examination Policies:** Final exams may be offered only during finals week. No exams of any kind are allowed during the last week of classes. Students should not ask their instructor to reschedule a final exam since the College does not permit rescheduling of a final exam once the semester has begun. Questions should be addressed to the Associate Dean for Undergraduate Programs and Curriculum.

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

  [http://www.clas.uiowa.edu/students/handbook](http://www.clas.uiowa.edu/students/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.

  [http://diversity.uiowa.edu/eod](http://diversity.uiowa.edu/eod)

- **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 Public Safety website,

  [http://police.uiowa.edu/stay-informed/emergency-communication](http://police.uiowa.edu/stay-informed/emergency-communication)