

The University of Iowa  
College of Liberal Arts and Sciences  
Department of Statistics and Actuarial Science  
**22S:002 Statistics and Society (STAT:1010)**  
Spring, 2014

**Instructor:**

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**Teaching Assistant:**

Trevor Lightbody  
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**DEO:** Dr. Luke Tierney, 241 Schaeffer Hall, 319-335-0712

**Lecture Time and Location:**

MWF 1:30 – 2:20pm in LR2 Van Allen Hall (VAN)

**Textbook w/ MyStatLab (Required):**

Bennett, Briggs, & Triola (2013). Statistical Reasoning for Everyday Life (4<sup>th</sup> Ed).  
ISBN: 978-0-321-81762-4

Purchase Options:

1. MyStatLab w/ eText (access to eText for life of the book)
2. Paperback Textbook w/ MyStatLab Access
3. MyStatLab w/ a la Carte Textbook (3-hole punch; unbound)

Pearson On-Line Ordering Information:

<http://www.mypearsonstore.com/bookstore/statistical-reasoning-for-everyday-life-plus-new-mystatlab-0321890132>

**Course Goals and Objectives:**

This course is intended to help you develop important analytical skills through the practice of quantitative reasoning. We shall focus on the evaluation of evidence and argument, the understanding of the use and misuse of data, and the organization of information in quantitative or other formal symbolic systems. Specifically, you will be introduced to the fundamental concepts of statistics and develop reasoning skills that can be applied to statistical information encountered on a daily basis. Students should learn to draw conclusions from analyses and how to communicate analysis results.

Hand computations will be stressed. However, should time allow some analyses may be described using statistical software packages such as Minitab or Excel. Any software utilized will be available in the campus computer labs or at <http://virtualdesktop.uiowa.edu>

*Approved GE:* Quantitative or Formal Reasoning

### Course Web Site:

Course notes, homework assignments, solution sets, and other relevant materials will be available on the ICON (Iowa Courses On-Line) course website: <https://icon.uiowa.edu>

### Lecture Notes:

Notes will be available on ICON prior to the lecture in which they are covered. In the case of an absence, the student is responsible for material covered in class and must get any additional notes from fellow students.

### Course Readings:

We will not cover all sections of each chapter of the textbook. Students should read the relevant sections prior to lecture, and focus on material covered in class.

### Weekly Discussion Sessions:

Attendance at discussion is important. Generally problems similar to homework or activities to clarify a particular topic will be covered. Pop quizzes may be given during this time. Quiz make-ups will not be given.

### Tentative Course Topics (in roughly this order):

<u>Topic</u>	<u>Chapter</u>
Sampling Techniques & Study Types	1
Measurement, Data Types, & Dealing with Errors	2
Visual Displays of Data, Statistical Graphics	3
Summary Statistics & Distribution Shapes	4
Probability	6
Normal Distribution	5
Sampling Distributions	8
Inference for Population Mean(s)	8, 9, 10
Inference for Population Proportion(s)	8, 9
Correlation & Regression (as time allows)	7
Inference for Two-way Contingency Tables (as time allows)	10

### Evaluation:

Appropriate work **must** be shown on homework **and** exams. Simply providing a final numerical answer is not sufficient and will be counted as wrong (even if correct).

#### ❖ *Homework (20%)*

Assigned on Friday, and due the following Friday at the beginning of class. Due to time constraints, the grader may grade only some of the assigned questions, but you are responsible for understanding all questions. Late homework will not be accepted. The lowest homework score will be dropped from the calculation of your final grade.

The grader and I reserve the right to **deduct points** if homework does not appear professional, neat, and easily handled (e.g. stapled, problems done in order, etc.)

Collaboration is allowed. However each student must write and turn in their own homework assignment. Additionally on the first page, state the name of anyone you collaborated with. Although you can work together in the completion of homework, it is important to remember that you will take exams based on your own knowledge.

❖ **Midterm Exams\* (20% each)**

Two midterm exams will be given. One cheat sheet (8.5"x11") – both sides – is allowed. Any needed tables will be provided by the instructor.

**Midterm One:** Friday, February 28<sup>th</sup>

**Midterm Two:** Friday, April 11<sup>th</sup>

❖ **Final\* (20%)**

The final will be **comprehensive** in nature. Two cheat sheets (8.5"x11") – both sides – are allowed. Any needed tables will be provided by the instructor.

❖ **MyStatLab Quizzes (10%)**

Quizzes will be taken on-line, available for 3 days, and are open-book. Each quiz will generally cover the material from the most recent homework assignment. No make-up quizzes are allowed. Your lowest quiz score will be dropped from your final grade.

❖ **In Class Clicker Questions / Pop-Quizzes\* (5%)**

Starting the second week of class, course lectures will include question slides answered via a Turning Point clicker (bought on-line or at the bookstore). The number of question slides per lecture will vary. Each question slide is worth 2 points – 1 point for answering; 1 point for the correct answer. No make-ups will be allowed.

To get credit for answering these questions, you **must** register your clicker using the link on ICON. (If you buy a used clicker from a UI student, that student must first unregister the clicker!) The website will require you to sign in with your hawkid and password. Then you must enter the 6-digit alphanumeric code on the back of your clicker (under the UPC). Occasional pass-fail pop-quizzes may also be utilized.

Note: Do not give your clicker to another student to answer questions for you. This is academic dishonesty and will be treated as such, if discovered. Random checks may be conducted throughout the semester.

❖ **Discussion (5%)**

The course TA will evaluate you via attendance, unannounced discussion quizzes, preparedness, and participation in your discussion section. *Make sure you are clear about your TA's policies and expectations regarding this portion of your grade.*

❖ **Attendance / Effort**

You are expected to attend all lectures in their entirety. Your attendance, participation, work ethic, etc. may affect your grade. For a 3 semester hour course, it is expected that students will spend 9 hours a week, on average, completing work and attending class.

*\*Note: No make-up quizzes or exams will be given unless absence is due to unavoidable circumstances as stated by University policy (documentation will be required in such cases.) Missed exams and quizzes will receive a score of 0.*

❖ **Extra Credit via MyStatLab Study Plan (Optional)**

The Study Plan is a tool to practice course material independently via MyStatLab. The study plan covers course objectives and assigns mastery points for successfully passing the objective quiz. For the first recommended objective, click **Practice**. You may practice as often as needed. When ready, click **Quiz Me**. When the section is mastered, a new objective will be recommended. The number of master points earned will also be listed.

You may earn up to 5 percentage points to be applied to your final grade as determined by the number of mastery points earned from the total available. The study plan will be available thru May 9<sup>th</sup> (the last class day prior to finals week).

### **Grades:**

As an approximate guide, grades will be given as:

90-100	A
80-90	B
70-80	C
60-70	D
Below 60	F

Plus and minus grades will be assigned near the borders of the letter grade intervals.

### **Resources for Additional Help:**

1. Statistics Tutorial Lab: There is a free statistics tutorial lab in room 202 Communications Center. During available times, a knowledgeable person will be present to assist students. For more information, visit: <http://www.stat.uiowa.edu/resources/tutoring>
2. Private For-Pay Tutors: The Department of Statistics and Actuarial Science maintains a list of private tutors at: <http://www.stat.uiowa.edu/private-tutors>

### **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/](http://www.uiowa.edu/~sds/) for more information.

### **Academic Honesty**

All CLAS students or students taking classes offered by CLAS 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 by the Registrar generally by the tenth day of classes. 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 date, time, and location of each final exam, the complete schedule will be published on the Registrar's web site and will be shared with instructors and students. It is the student's responsibility to know the date, time, and place of a final exam.

### **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](#).