Math 2200: Elementary Statistics  Fall 2014

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Office Hours: MWF 12:00-1:00PM, T 9:00-11:00am, or BY APPOINTMENT

Textbook: OpenIntro Statistics, 2nd ed., By Diez, Barr, and Cetinkaya-Rundel available for free at openintro.org

Other Materials: iclicker classroom voting tool available in bookstore or online calculator with significant statistics capability

Purpose: Statistical analysis and reasoning lie at the heart of modern discourse in social science, education, and commerce. This course serves the general student by ensuring that the student knows the language and logic that is used in this discipline. Further, this course provides students of disciplines that employ statistics for research and decision making with tools that are needed to progress in their chosen area of study. Finally, this course assists all students with the important task of developing analytical and problem solving skills.

Description: This course is a basic introduction to statistics. Statistics has been called the science of data. We will learn to recognize different data types and to describe data graphically and with numerical measures. We will study the two main methods of statistical inference, estimation and hypothesis testing. We will learn the logic of these inferential methods and particular procedures for certain confidence interval estimates and tests of hypotheses. We will study bivariate data in contingency tables and in linear regression models.

Participation: Each student is expected to attend each class session participate through answering questions using iclicker. If a student misses class, that student is responsible for the material covered and to get the notes from a classmate.

Clicker Activities: Each student is expected to complete in-class clicker questions. Each clicker question is worth 2 points (1 point for answering and 1 point for correct answer). in order to receive full credit for clicker activities.

Homework: You will have to complete a weekly WeBWorK assignment. The homework will consist of problems over the topics covered during previous lectures. Due dates will be posted on WeBWorK and Desire2Learn. You may attempt the assignment as many times as you wish until the due date/time. There is also list of suggested problems attached from the textbook that emphasize the ideas from that section. These problems will not be collected but they will be part of the question pool from which I will make the exams.

Please Note: This course is very intensive and will require a lot of work on your part. The rule of thumb is to spend an average of two hours doing math homework for each hour spent in class. I encourage you to come to office hours or the CST Tutoring Center(Science Center 132-134) whenever you need assistance outside of class.
**Calculator:**
In this class we will use a calculator with significant statistics capability. I will use a TI-84 during class. A TI-83, TI-83 Plus, TI-84, Casio FX-9750G11, Casio FX-9860G11, or Casio Prizm FX-CG10 have the needed statistics functionality.

**Exams:**
There will be a total of five exams, four midterms (15% each) and a final exam (25%). All students are expected to take every exam. Make-up exams will not be given. If a student contacts me prior to the exam and provides written verification for missing the exam for a legitimate reason (e.g., extreme illness, death in the immediate family), then the student will receive the percentage scored on the final exam toward the missed exam grade. (This can only be done once during the semester.)
- Exam 1 .............................................. Sept 8
- Exam 2 .............................................. Oct 3
- Exam 3 .............................................. Oct 29
- Exam 4 .............................................. Nov 21
- Final .............................................. Dec 10

**Grade Policy:**
- Clicker Activities ........................................ 5%
- Homework ................................................. 10%
- Exams(4) .................................................. 15% each
- Final ...................................................... 25%

**Grade Scale:**
- A ...................................................... 90% and above
- B ...................................................... 80% - 89.9%
- C ...................................................... 70% - 79.9%
- D ...................................................... 60% - 69.9%
- F ...................................................... below 60%

**Behavior/Ethics:**
- Turn off all cellphones, PDA’s, ipods, etc. during class. If you must have a cell phone on at all times (due to being an emergency contact) please place the device in vibrate mode during class.
- Cooperation on homework does not mean copying mindlessly the answers from someone else who has already done the work. Such practice leads nowhere and the negative effects that will ensue from such practice will definitely be reflected on ones achievement in subsequent tests and quizzes.

**ADA/ Special Accommodations:**
If you have a disability and need accommodations (as documented with a letter from Armstrong’s Director of Disability Services), if I must know of emergency medical information about you, or if you need special arrangements in case the building must be evacuated, please inform me privately after class or in my office as soon as possible.

**Academic Honesty:**
Academic honesty is fundamental to the activities and principles of a university. All members of the academic community must be confident that each person’s work has been responsibly and honorably acquired, developed and presented. Any effort to gain an advantage not given to all students is dishonest whether or not the effort is successful. The academic community regards academic dishonesty as an extremely serious matter, with serious consequences that range from probation to expulsion. When in doubt about plagiarism, paraphrasing, quoting, or collaboration consult the instructor. Each student is expected to adhere to the rules of the Honor Code and the Code of Conduct listed in the AASU catalog and on the following website: http://www.sa.armstrong.edu/Activities/hcoc.html
Expectations:

1. You are no longer in high school. The great majority of you, not having done so already, will have to discard high school notions of teaching and learning and replace them by university-level notions. This may be difficult, but it must happen sooner or later, so sooner is better. Our goal is more than just getting you to reproduce what was told to you in the classroom.

2. Expect to have material covered at two to three times the pace of high school. Above that, we aim for greater command of the material, especially the ability to apply what you have learned to new situations (when relevant).

3. Lecture time is at a premium, so it must be used efficiently. You cannot be taught everything in the classroom. It is your responsibility to learn the material. Most of this learning must take place outside the classroom. You should be willing to put in two hours outside the classroom for each hour of class.

4. The instructor's job is primarily to provide a framework, with some of the particulars, to guide you in doing your learning of the concepts and methods that comprise the material of the course. It is not to program you with isolated facts and problem types nor to monitor your progress.

5. You are expected to read the textbook for comprehension. It gives the detailed account of the material of the course. It also contains many examples of problems worked out, and these should be used to supplement those you see in the lecture. The textbook is not a novel, so the reading must often be slow-going and careful. However, there is the clear advantage that you can read it at your own pace. Use pencil and paper to work through the material and to fill in omitted steps.

6. As for when you engage the textbook, you have the following dichotomy:
   
   (a) (recommended for most students) Read for the first time the appropriate section(s) of the book before the material is presented in lecture. That is, come prepared for class. Then the faster-paced college-style lecture will make more sense.
   
   (b) If you haven't looked at the book beforehand, try to pick up what you can from the lecture (absorb the general idea and/or take thorough notes) and count on sorting it out later while studying from the book outside of class.

7. Exams will consist largely of fresh problems that fall within the material that is being tested.

8. Reference: Zucker, Steven Teaching at the University Level, Notices of the AMS, vol 43 no.8, 1996

9. Other references with regards to expectations
   
   (a) http://www.taft.cc.ca.us/newTC/StudentServices/ACE/differences.html
   
   (b) http://www.iupui.edu/parents/success1.html