

## Stats 7 winter 2017: Basic Statistics

Dr. Baldi, course instructor

**UCI class website** at [eee.uci.edu/17w/37810](http://eee.uci.edu/17w/37810)

The website has the syllabus, exam dates, reading assignments, lecture notes, contact information, office hour times and locations

All course-related questions must be posted on the **EEE Message Board**, so that everyone can benefit.

## Why study statistics?



<http://thisisstatistics.org/>  
<https://youtu.be/wV0Ks7aSYI>

**Statistics** is the science of collecting, summarizing, analyzing, interpreting, and presenting **data** based on logic, mathematical computations, and probability theory.

**Statistical methods** can be used in any situation where outcomes vary in some unpredictable or unknown way.

## STATS 7 outline

- ▣ **Explore and summarize data, communicate findings**  
Graphically and numerically
- ▣ **Design appropriate studies / experiments to collect data**  
Define variables; Select random samples
- ▣ **Describe data with probability models**  
Define probabilities; Compute new probabilities
- ▣ **Derive meaning from sample data using statistical inference**  
Infer properties of a population from a sample:  
estimate parameters, test hypotheses

Textbook: MOS5e  
*Mind on Statistics*  
Utts and Heckard  
(5<sup>th</sup> edition)



***On reserve at the Science (Ayala) library***

## Homework

Textbook problems assigned weekly on class website.

Submitted on **Canvas** ("Assignments") **before 9 PM each Sunday.**

### **Homework is graded for quality:**

**100 points:** Acceptable work, complete (no missing exercises) with detailed answers, mostly correct, and submitted on time

**80 points:** Acceptable work, complete (no missing exercises) but lacking in effort or largely incorrect, submitted on time

**50 points:** Mostly complete, largely incorrect or unexplained (**at the grader's sole discretion**), but submitted on time

**0 points:** Late, missing, or unacceptable work (for ex., only a fraction of the assignment; **again, the grader has sole discretion in this decision**).

***A maximum of 2 late homework for the whole quarter may be resubmitted in complete and handwritten form to the Readers convert the 0 to a 50.***

## Lectures and discussions

**Lectures** are designed for active learning with real data / studies. Participation with the iclicker earns participation credit (1 point per lecture).

*Always bring your iclicker and calculator to class.*

**Discussions** are designed to offer more personalized help and extra practice. Discussion attendance earns you participation credit (1 point per weekly discussion).

*You may attend any of the 8 discussions assigned to my Stats7 classes as long as there is room.*

*Discussions start on week 1 (Wed, Thu, Fri).*

## iclicker

You need an **iclicker** to answer lecture questions. Responses are graded for **participation**, not for accuracy – lecture time is for learning!

- ❑ You must register your iclicker on [www.iclicker.com](http://www.iclicker.com) so the system can match your iclicker responses with your student ID.
- ❑ You need to actually answer the iclicker questions to get credit, so don't come late or leave early.
- ❑ The system doesn't allow manual entries so don't forget your iclicker.

*We will start using the iclicker this Wednesday.*

## Calculator

For this class you MUST have a **graphing calculator** capable of doing "*inferential statistics*", such as the  $t$  test. **You will need a calculator for practice and iclicker questions in class and you will absolutely need it for exams.**

I'll use a TI-83/84 in class. The TI-89 is close. Some graphing Casios work too. The choice is yours. Our textbook has a free TI-83 manual ([http://academic.cengage.com/resource\\_uploads/downloads/1285463188\\_410620.pdf](http://academic.cengage.com/resource_uploads/downloads/1285463188_410620.pdf)) for all the stats functions covered in the book. YouTube and Google have many calculator resources.

Link to a free TI-83 computer applet (TI-83 Plus SDK):

<http://education.ti.com/en/us/software/details/en/7EDBCE1FA37F4906B774BE9C71FEB076/swti83-84plussdk>

## Participation

**There will be 40 points worth of participation for the whole quarter. However, there are 46 points available:**

- For each lecture using the iclicker: 1 point (25 max)
- For each weekly discussion: 1 point (10 max)
- For each flipped lesson quiz on eee: up to 3 points (6 max)
- For the probability quiz on eee: up to 3 points (3 max)
- Up to 2 points for iclicker excellence (computed at end of quarter)

If you are waitlisted or enroll at the last minute during week 2, class participation will still be out of 40 points.

## Grading

STATS 7 grades are made up of:

- ▣ 20% Midterm 1 (in class)
- ▣ 20% Midterm 2 (in class)
- ▣ 35% Final exam (finals week)
- ▣ 15% Homework (due weekly)
- ▣ 10% Participation (whole quarter)

-ONLY DOCUMENTED GRADING MISTAKES WILL BE CONSIDERED

-ALL GRADE ISSUES (except final) MUST BE BROUGHT UP BEFORE FINALS WEEK

-LETTER GRADE PLEADING IS NOT ETHICAL AND NOT ACADEMICALLY ACCEPTABLE

-THIS CLASS IS NOT CURVED (which typically means more Bs and fewer Cs, because most students actually do well in this class)

## Academic integrity

The UCI policy on academic misconduct can be found at the Office of Academic Integrity & Student Conduct website [aisc.uci.edu](http://aisc.uci.edu)

Anyone found cheating or helping another cheat in any way will be formally reported and could receive any grade penalty deemed appropriate.

Unfortunately it happens every quarter. How would you feel if the pilot of the plane you are on or the doctor at your next appointment got through classes by cheating?

## Message board and office hours

All course-related questions should be posted to the **Stats 7 Message Board on EEE**. Instructors will respond via the Message Board but students are encouraged to provide answers as well. [Use email only to discuss personal issues.]

Instructor, TAs, and Reader all have **office hours** (time and place on website). You don't need to make an appointment. Just come and ask questions. We like seeing students and we are always happy to help!

## This Wednesday

**The first lesson, on descriptive statistics, is a “flipped classroom” lesson:**

- ▣ Watch the basics of the lesson online (class website) and read Chapter 2 in the textbook before coming to class.
- ▣ Complete the EEE quiz on this lesson **before 9 AM Wednesday**. This quiz will count toward your participation score (3 points).
- ▣ In class, we will focus on more challenging issues and examples.