

WELCOME TO

STA220: Practice of Statistics 1

Section L0301: Health & Life
Sciences

What is Statistics?

- The science of collecting, organizing, describing, analyzing, and interpreting data.
- *Goal of statistics:* use imperfect information (in the form of data) to obtain information, make predictions, make decisions. Need to quantify the uncertainty.
- Examples: medicine, sciences, law, politics, business, sports, education.

What is Statistics?

Useful for answering important societal questions:

- What is the effect of smoking on health?
- How much Vitamin D do you need?
- Should we vaccinate boys with the HPV vaccine?
- Does lowering the speed limit result in fewer deaths?
- When can a TV news program declare the winner on election night?
- What will the demand be for the new iPhone?
- Interpreting the factors about incoming students that predict their success at university.

STA220: The Practice of Statistics 1

- Teaches the basics of statistical analysis and reasoning
- Is intended for students with grade 12 math and one university course in physical/social/life sciences
- 3 hours of class meetings per week
- No tutorial -- *if you signed up for a tutorial please drop it*

STA220: The Practice of Statistics 1

At the end of this course, you will:

- Know how to apply some common statistical methods
- Know how to critique these statistical methods
- Have a sense of what statisticians do
- Have an appreciation for how statistical methods is applied to other fields especially Health & Life Sciences

Administrative Stuff

- The “course outline” has all the key administrative details.
- The course will use the University of Toronto Learning Portal as its main website.



Coursework Overview

Weekly online quizzes	15%	Sundays at 23:59 (except the week of the term test)
Term test	35%	Thursday, October 24 11:00-13:00
Final exam	50%	TBA

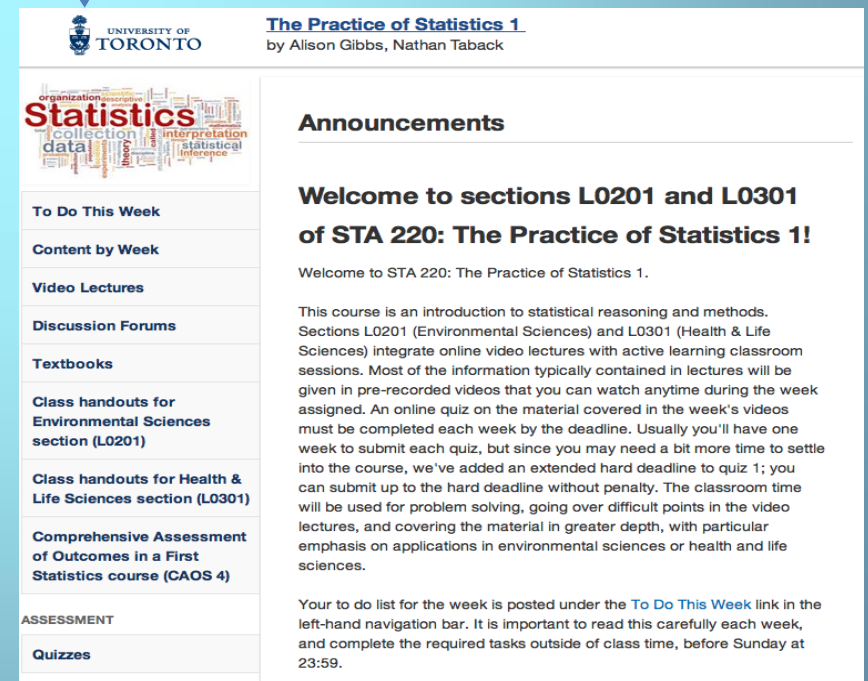
Inverted Classroom



- *Before lectures:* watch lecture videos, complete in-video quizzes, and complete weekly quiz.
- *During lecture:*
 - participate in activities and exercises that apply what was introduced in the videos,
 - solve more complex problems that combine topics.
- Week 2 prep is due by 23:59 Sunday, September 15.

Video Lectures: Coursera

- All lecture videos are available on Coursera.
- You need to log into the UofT Portal to get to the link.



Muddiest Point: Coursera

- Every week I want your opinion about what the difficult points were in the course material.
- These points should be posted in a weekly Coursera Discussion Forum.
- If you see your question or like a classmates then simply upvote the question
- I will review the top question(s) weekly.
- Similar questions might appear on the test and final exam.
- I will also be asking the class for other test questions.

Nathan Taback **INSTRUCTOR** · 2 days ago 

An example of a muddiest point post:


How do you calculate the median with an even number of observations?


↑ 0 ↓ · flag



Quizzes

- By each Sunday at 23:59 you must complete the online quiz to receive credit.
- The quiz will cover material in the videos to be watched that week.
- Multiple choice and true/false questions.
- The number of questions will vary from week to week.
- You can take the quiz as many times as you want, but each time you will get a different randomly generated quiz.

**The Practice of Statistics 1**
by Alison Gibbs, Nathan Taback



[To Do This Week](#)

[Content by Week](#)

[Video Lectures](#)

[Discussion Forums](#)

[Textbooks](#)

[Class handouts for Environmental Sciences section \(L0201\)](#)

[Class handouts for Health & Life Sciences section \(L0301\)](#)

[Comprehensive Assessment of Outcomes in a First Statistics course \(CAOS 4\)](#)

ASSESSMENT

[Quizzes](#)

ABOUT THE COURSE

[Course Outline](#)

Week 1 Quiz

The due date for this quiz is **Sun 15 Sep 2013 8:59 PM PDT (UTC -0700)**.

Now that you've watched the videos for this week, here is a chance to

For this quiz and all of the other weekly quizzes, make sure you submit

for that quiz.

You have up to 100 attempts to take a quiz on this week's material. If you go back and re-watch the relevant video(s) and then try a quiz again. We that you've mastered the material. Each time you attempt the quiz, we'll count will be the **highest** score of all of your attempts submitted before submissions after the deadline will not be recorded.

Good luck!

☐ In accordance with the Coursera Honor Code, I (Nathan Taback) work.

Question 1

Descriptive statistics involves summarizing data using:

☐ numbers

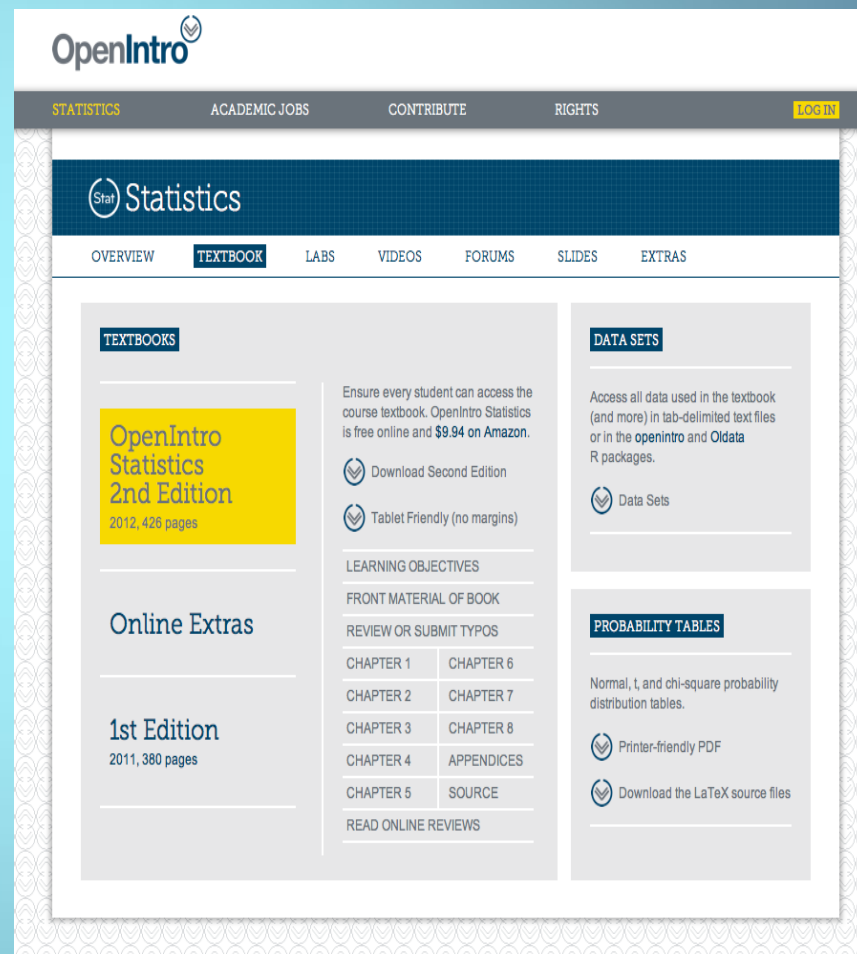
☐ plots

☐ numbers and plots

☐ none of the above

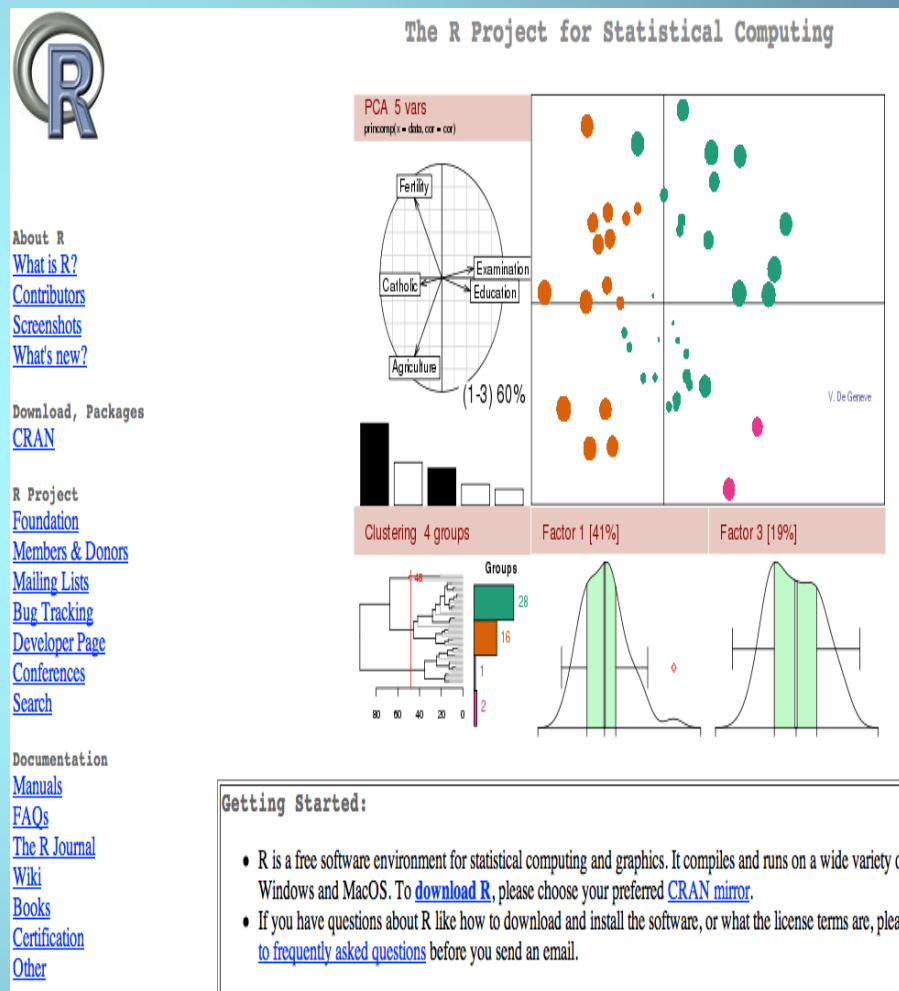
Practice Problems

- We will recommend problems from the required textbook *OpenIntro Statistics* for those who want extra practice.



Statistical Software

- We will use the R statistical software for statistical computing
- You will need to know how to interpret output from R.
- You will not need to know R commands.
- If you want to know how to do the analysis yourself using R, then you can watch the optional R videos on Coursera which show how to replicate the work done in the videos.



Test

- During lecture time
- The location will be posted on course webpages.

Final Exam

- Scheduled by faculty of Arts and Science
- We can't change it!
- All exceptions must be handled through the Office of the Faculty Registrar: we can't set a makeup test, we can't waive it for you.

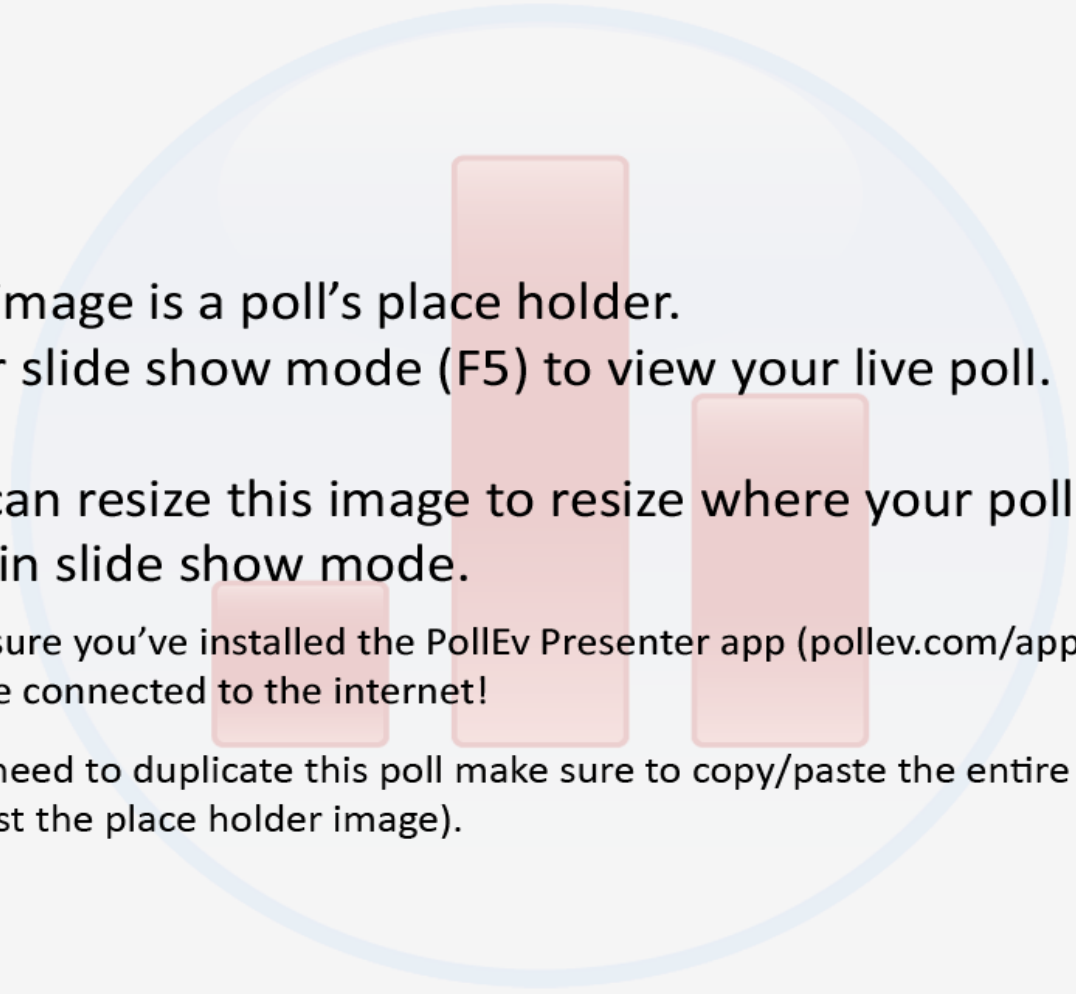
Getting Help

- Don't spin your wheels, ask for help!
- Our TAs:
 - Blair, Edwin, Emery, Victor, Yi
- Lots of office hours (schedule coming soon!)
- Statistics Aid Centre in New College: Wetmore Hall 68A. (See www.utstat.utoronto.ca for schedule.)
- Coursera Discussion Forums

What to do by 23:59 Sunday, Sept. 15:

- Read the “course outline” and “course flow”.
- Log in to the UofT Learning Portal to access the course webpage.
- Complete the week 2 lecture preparation and online quiz. See “To Do This Week” on Coursera.
- Complete the Comprehensive Assessment of Outcomes in a first Statistics course (CAOS 4).

What are your interests?



This image is a poll's place holder.
Enter slide show mode (F5) to view your live poll.

You can resize this image to resize where your poll will load in slide show mode.

Make sure you've installed the PollEv Presenter app (pollev.com/app) and are connected to the internet!

If you need to duplicate this poll make sure to copy/paste the entire slide (not just the place holder image).

Next Class

Thursday 11:10 - 13:00

Room: LM 159