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

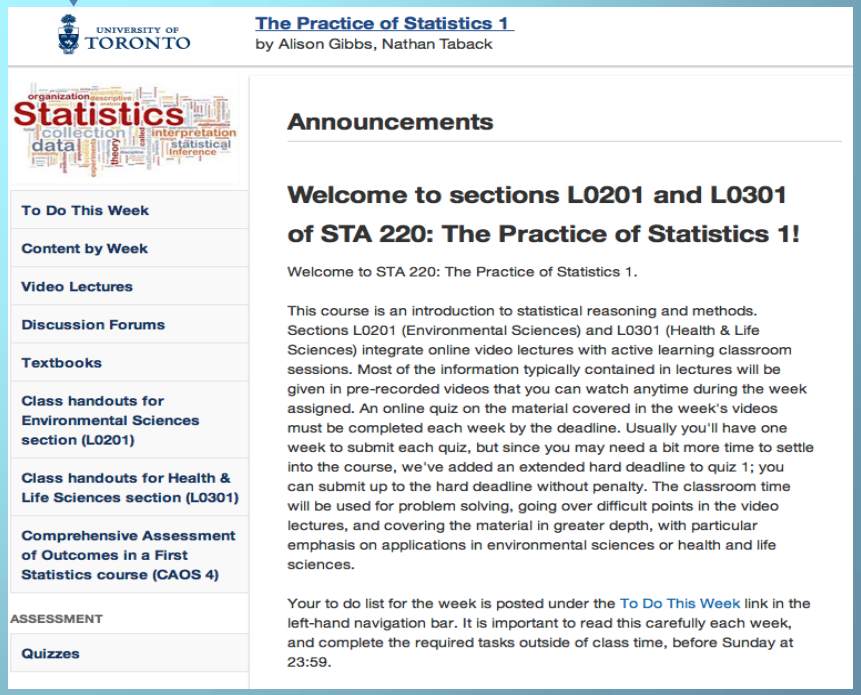
Weekly online quizzes	15%	Sundays at 23:59 (except the week of the term test)
Term test	35%	Thursday, October 24 11:00-13:00
Final exam	50%	TBA

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.

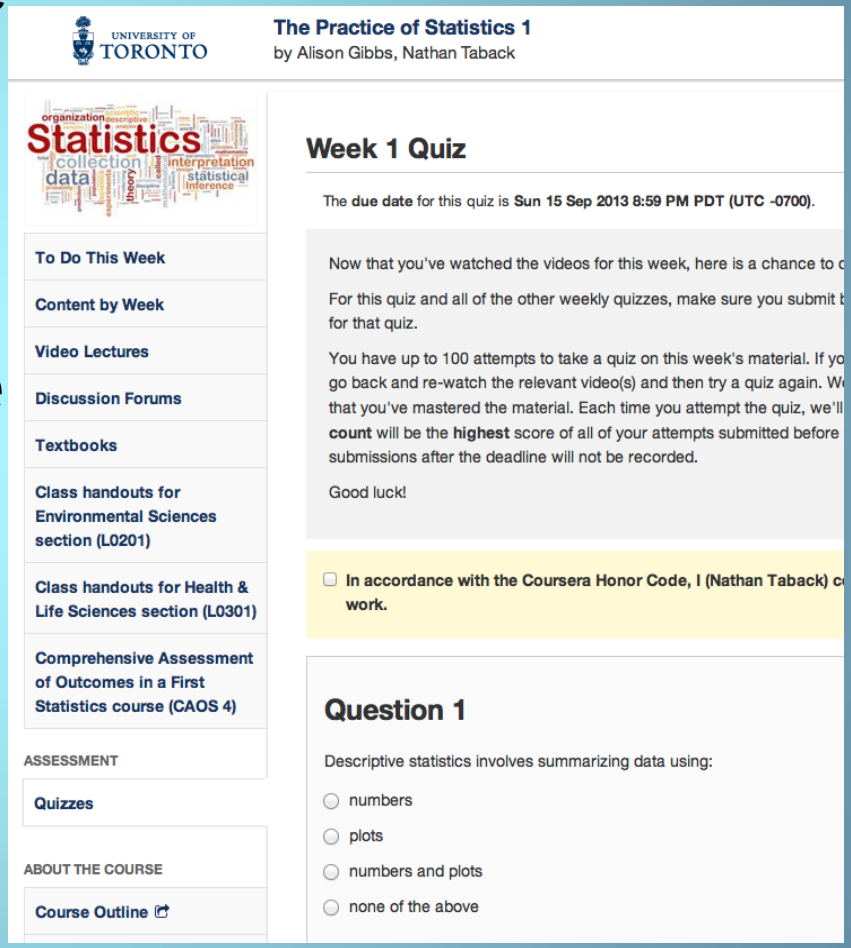


Muddiest Point: Coursera

- 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.

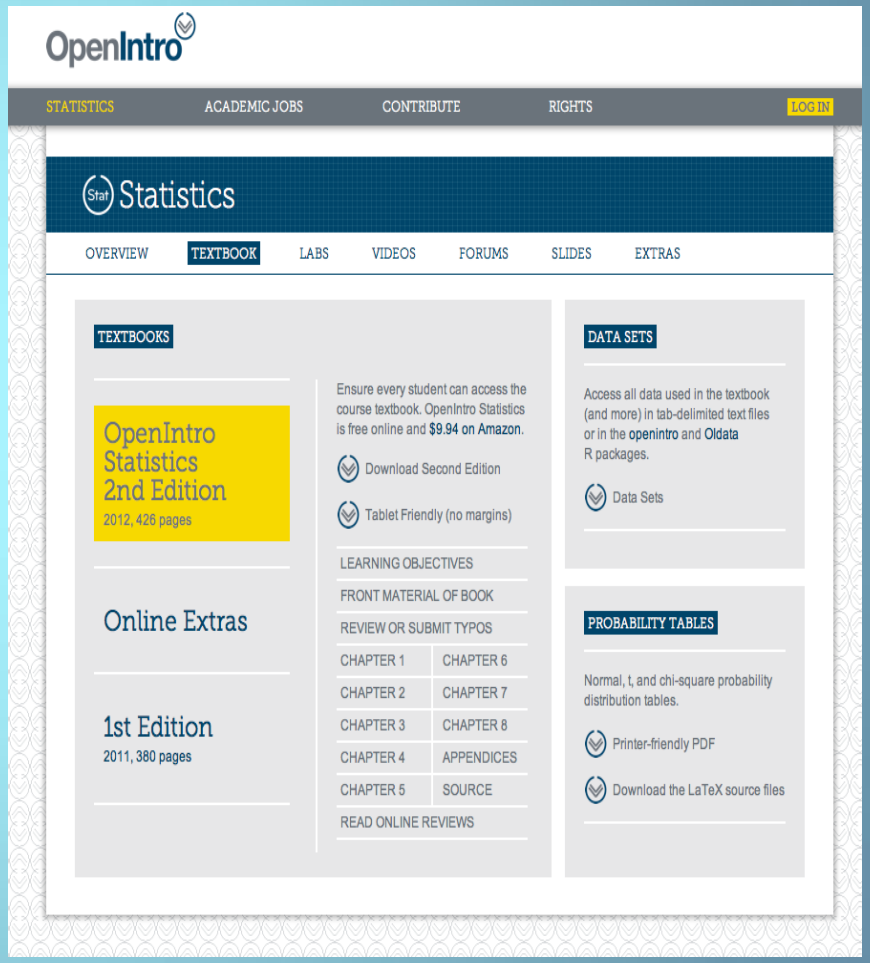
Quizzes

- 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.



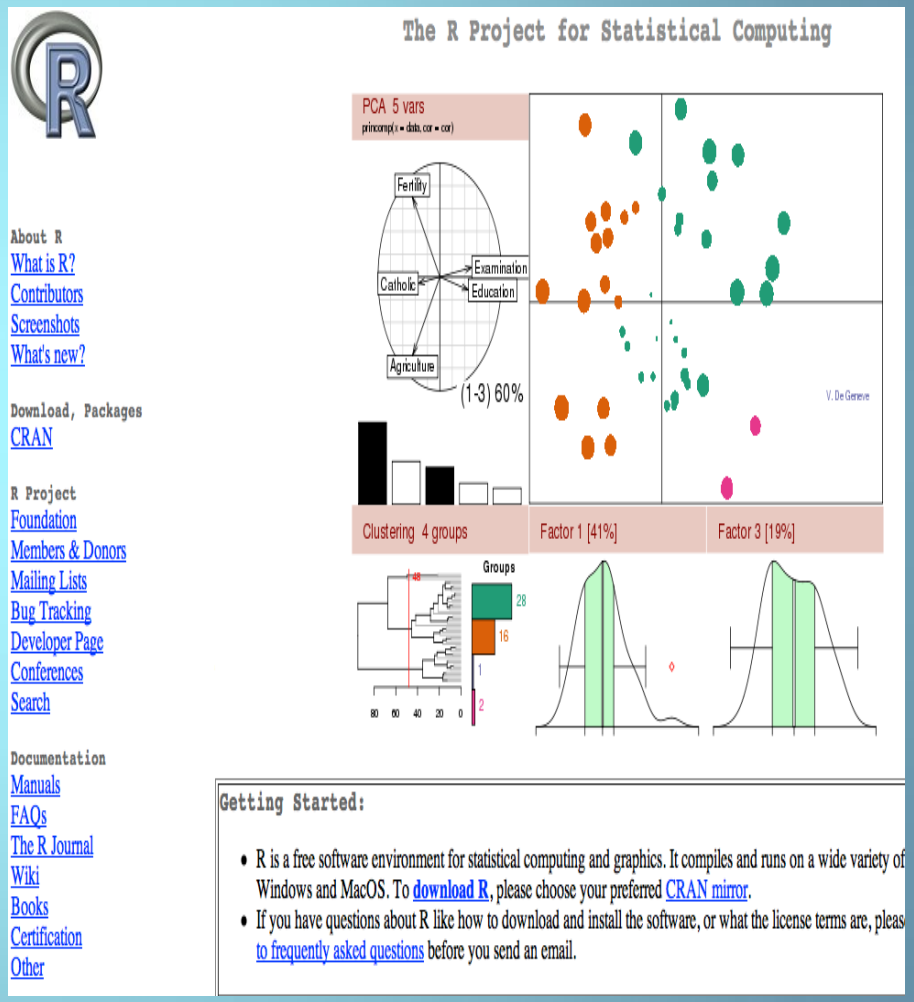
Practice Problems

- 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.

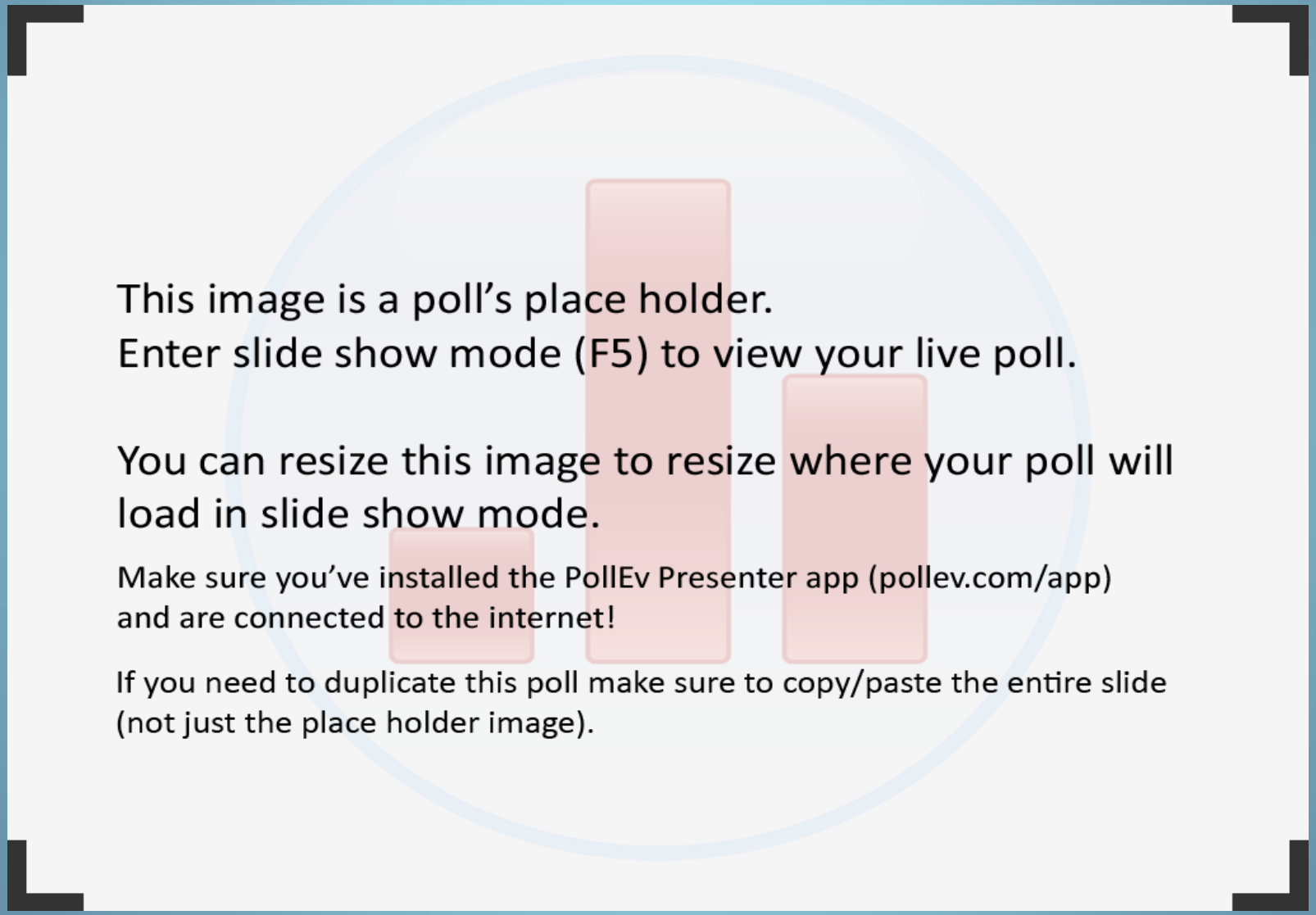
Getting Help

- 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 Outomes in a first Statistics course (CAOS 4).

What are your interests?



Next Class

Thursday 11:10 - 13:00

Room: LM 159