# STA 371G Outline

### Spring 2014

Instructor: Mingyuan Zhou

Office: CBA 6.462 Phone: 512-232-6763

Email: mingyuan.zhou@mccombs.utexas.edu

Office Hours: Tuesday Thursday 3:30-4:30 PM and by appointment

### Tuesday, January 14

# **Topics:**

- Introduction
- Probability
- Random variables
- Probability distributions
- Mean, variance and standard deviation of a random variable
- Add a constant to a random variable
- Multiply a random variable by a constant
- Conditional, joint and marginal probabilities
- Independent random variables
- Sum of independent random variables
- If we have time, we will also discuss
  - Bayes rule
  - Simpson's paradox

#### Reading Assignments:

If you are not familiar with the topics discussed in class, you are recommended to read:

pp. 156-168, 189-195, of Data analysis and decision making, 4th edition or

pp. 196-206, 225-231 of Data analysis and decision making, 3rd edition

To learn more about these topics, you may further read:

Chapters 2.1, 2.2, 2.4, and 2.5 of OpenIntro Statistics, 2nd edition