Syllabus to the class

STA 13B
Elementary Statistics

1. Lecturer: Jacek (Jack) Leśkow, e-mail: jpleskow@ucdavis.edu,  http://www.wsb-nlu.edu.pl/~leskow

   Class time 2:10 to 4 pm MTW, Olson 206
   Office hours: lecturers Wednesday afternoon, 4:15 pm, 4224 New Math & Sci Bldg.
   TA office hours: Thursday and Friday
   Partial exams: July 12, July 26
   Before final extra meeting: JULY 27, 10-12, Olson 206


3. Prerequisite: two years of high school algebra or the equivalent in college. Make also sure you are on the class e-mailing list.

4. Short course contents: Descriptive statistics; basic probability concepts; binomial, normal, Student’s t, and chi-square distributions. Hypothesis testing and confidence intervals for one and two means and proportions. Regression.

5. Mode of delivery.

   Class meets MTW during the Summer Session I for 6 weeks. Homework will be assigned each Tuesday due the following Monday afternoon. No late homework, please. There will be two partial exams and one final summary exam. Partial exam will be held after the 3rd week on July 12 and after 5th week on July 26. The emphasis will be on applications and ability to solve practical problems with statistics.

6. Assessment: 20% homework, 20% each partial exam, 40% final exam. Minimum 55% to pass.
   Grading on the curve. Top 15% will get A.

   Important: TA has up to 10% to give for class activity.
Detailed syllabus of the class

Week 1. Describing data with graphs. Describing data with numerical measures. (Ch 1 and 2)

Week 2. Describing the bivariate data. Probability and probability distributions. (Ch 3 and 4)

Week 3. Several useful discrete distributions. The normal probability distribution (Ch 5 and 6).
The binomial probability distribution. The hypergeometric probability distribution. The mean and variance for the binomial random variable. The Poisson probability distribution. Calculation of areas associated with the normal probability distribution. The normal approximation to the binomial probability distribution. Probability distributions for continuous random variables. Partial exam.

Week 4. Normal probability distribution. Sampling distribution (Ch 6 and 7).

Week 5. Large-sample estimation. Large-sample tests of hypotheses. (Ch 8 and 9)
Choosing the sample size. Estimating the difference between two binomial proportions. Estimating the difference between two population means. Interval estimation. Large-sample confidence intervals for a population mean or proportion. One-sided confidence bounds. Picking the best point estimator. Point estimation for a population mean or proportion. Type of estimators. Large sample test for the difference in means. A statistical test of hypothesis. Testing the hypothesis regarding the difference of populations proportions. Partial exam.

Week 6. Linear regression and correlation. (Ch 12)