

Statistics 112: Introductory Statistics II

Spring 2018

January 10, 2018

Course information:

Lectures: TTh 12:00-1:30 pm SH-DH 211

Lecturer:

Dr. Xian Gu

Email: xiangu@wharton.upenn.edu

Office: 431.4 JMHH

Office hours: 3:00-5:00 pm Wednesdays (tentative) or by appointment

Description:

This is a second course on introductory statistics. You are expected to have a basic understanding of mean, variance, distribution, probability, confidence interval, hypothesis test and linear regression.

Textbook:

(Required) Applied regression analysis, Fourth edition, by Dielman.

(Recommended) Introduction to the Practice of Statistics, Ninth edition, by Moore, McCabe, Craig.

(Recommended) JMP Start Statistics: A Guide to Statistics and Data Analysis Using JMP, Sixth Edition, by Sall, Stephens, Lehman and Creighton.

Canvas: Most of the materials including announcements, lecture notes, homework, solutions, etc. will be available on our Canvas site.

Lecture notes: We will mainly deliver our lectures through slides and blackboard. Lecture slides will be available in our Canvas.

Computer package: The computer software JMP 13 will be used in the course. JMP is also available in all the Wharton computer labs (F75-JMHH, F80-JMHH, 375-JMHH and 380-JMHH) and group study rooms.

Homework and projects: Homework and mini-projects will be assigned and posted in our Canvas. Most homework assignments will be from the textbook. Homework and projects must be submitted online via Canvas. No late homework or projects are acceptable except in the case of serious illness. The lowest homework score will be dropped at the end.

Exams: There will be two in-class mid-terms and a final exam. The exams will be semi-closed book, i.e. a certain number of pages of notes are allowed.

1st Mid-term: February 8th(Thursday);

2nd Mid-term: March 20th (Tuesday);

Final exam: May 4th (Friday), 9-11 AM (comprehensive)

Grade allocation:

Homework: 20%;

Mini-project: 10%

Midterms: 30%;

Final exam: 40%.

TA:

Matteo Sordello: sordello@wharton.upenn.edu

Office hours: TBA, 451 JMHH

Syllabus

Lecture 1: Normal distributions

Lecture 2: Confidence intervals and hypothesis tests

Lecture 3-4: Two population means

Lecture 5: Simple regression

Lecture 6-7: Simple regression inference

Lecture 8: Goodness of fit

Lecture 9: Prediction

Lecture 10: Model diagnostics

Lecture 11-13: Multiple regression

Lecture 14: Model building

Lecture 15-16: Leverage, collinearity

Lecture 17: One way ANOVA

Lecture 18-19: Two way ANOVA

Lecture 20-21: Logistic regression

Lecture 22-23: Design of experiments

Course Schedule is subject to minor adjustment.