Statistics 421, Spring 2015  
Survey Sampling Techniques

Lecture Time: TR 8:30am-9:20am  
Lecture Room: Sweeney 1126
Instructor: Cindy Yu  
Office: 2216 Snedecor Hall
Phone: 294-6885  
Email: cindyyu@iastate.edu

Instructor’s Office Hours  (or by appointment)
Monday: 2:00pm – 3:00pm, Snedecor 2216
Wednesday: 11:00am – 12:00pm, Snedecor 2216

TA  Seho Park (parks@iastate.edu)
Lab: Thursday 12:10pm - 2:00pm, Snedecor 3121
Office Hour: Wednesday 2:00 – 3:00 pm, Snedecor 1215

General
• Credits: 3
• Prerequisite: Stat 301, 326, 401 (introductory statistics course - exposure to probability, discrete distributions, mean, variance, confidence intervals)
• Textbook: Sampling: Design and Analysis, Sharon Lohr, Duxbury Press, Second Edition (see References for good bibliography)
• Labs: Thursday 12:10pm-2:00pm, Snedecor 3121

Learning Objective
The objective is to have students understand concepts of sample surveys and the survey process: methods of designing sample surveys. By the end of the course students should be able to design survey sampling processes that include simple random, stratified, and multistage sampling designs, and estimate population parameters according to the specific survey designs, and use alternative estimation methods of analyzing sample surveys including ratio, regression, domain estimation and nonresponse.

Course Grades
• Exam 1 20%
• Exam 2 25%
• Final exam 30%
• Homework Assignments 25%
  o In-lab computing 10%
  o Take-home 15%

Assignment Policy
• There are two assignments per week
  o IN-LAB SURVEY COMPUTING EXERCISE (turned in during lab)
  o HOMEWORK (due in lecture one week later)
• Assignments will not be accepted late for credit
• Working together
  o HOMEWORK and IN-LAB COMPUTING EXERCISE
    ▪ You must do your own work (including programming) and write up your own answers (program)
    ▪ You may work together by discussing answers after you have done your own work
  o Grading policy for both of two weekly assessments
    ▪ Your grade is affected by the content AND presentation of your written homework.
    ▪ No credit will be given if
      ▪ We can't quickly decipher what you did
      ▪ You hand in your assignment late
    ▪ To receive full credit, you must:
      ▪ Create neat, organized assignments
      ▪ Use complete sentences in your written answers
      ▪ Clearly identify all formulas and include a reasonable collection of intermediate values in hand calculations to aid checking
      ▪ Use comments, titles and hand annotations in your computer program and output so that we can easily find values used to derive homework answers when we are trying to identify a problem

Formula Sheets (if necessary) will be provided for each exam.

Course Web Important updates to these pages will be announced in class.
http://streaming.stat.iastate.edu/~stat421/

Software This course uses Statistics software called SAS. Find the SAS installation information on
https://statserve.stat.iastate.edu/universityAccess/SAS/requestSAS.php
Statistics department IT: 2123 Snedecor

Miscellaneous

Your attendance to each class (listening) and your genuine effort on the assignments and exams (doing) are two of the most important factors affecting your success in this class. Statistics requires both listening and doing. Feel free to ask me about problems after you have honestly worked on them – my office hours are for you.

Iowa State University complies with the Americans with Disabilities Act and Sect 504 of the Rehabilitation Act. If you have a documented disability and anticipate needing accommodations in this course, please contact me within the first two weeks of the semester. Retroactive requests for accommodations will not be honored. Please have Disability Resources Office, located in Room 1076 on the main floor of the Student Services Building complete a SAAR form verifying your disability and specifying the accommodations you will need for this course. Their telephone number is 515-294-6624, TDD 294-6335. You will need to present this form to me.