

STAT 506 : Sampling Theory and Methods Spring 2008

Tuesday, Thursday 11:15am-12:30pm 219 Thomas Building

Instructor: Dr. Mosuk Chow Office: 315 Thomas
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Office Hours: W 2:30 - 4:30pm, Friday 11:00 am – noon
or by appointment

Grader information: (will be announced on the course ANGEL site)

Aim: The course covers sampling design and analysis methods useful for research and management in many fields. A well-designed sampling procedure ensures that we can summarize and analysis the data with a minimum of assumptions or complications. In this course, we will cover the basic methods of sampling and estimation and then explore selected topics and recent developments. Basic methods include simple random sampling with associated estimation and confidence interval methods, selecting sample sizes, estimating proportions, unequal probability sampling, ratio and regression estimation, stratified sampling, cluster and systematic sampling, multistage designs, and double sampling.

Textbook: *Sampling, Second Edition, by Steven K. Thompson, John Wiley and Sons, 2002.*

Course Content: Chapters 1-8, 11-15 and selected topics.

Grading (tentatively): Course grades in each of the nine categories will be tentatively awarded based on the following lower bounds:

F	D	C	C+	B-	B	B+	A-	A
0	60	70	77	80	83	87	90	93

Grades:

Home works:	25 %
Midterm:	30 % (March 20)
Presentation:	5 %
Project:	10 %
Final Exam:	30 % (per University schedule)

Exams: Midterm exam and final will be closed book and comprehensive. More focus will be given to material not covered in the prior exams. For midterm and final exams, you will be allowed to bring in a formula sheet made up by yourself. This sheet may comprise three pages of one sided 8.5x11 inches sheets. No early or late exams will be allowed without a legitimate excuse.

Home works: Homework assignments will be posted on the Angel site and you will get an e-mail when it is posted. You must show all work on the homework problems to get full credit. Doing the homework promptly and carefully is necessary for learning the material. A reasonable amount of collaboration is allowed on homework. However, each student must turn in his or her own written work which reflects his or her own individual understanding of the material. **Late home works will not be accepted. Note that the lowest homework score will be dropped.**

Website: the ANGEL (cms.psu.edu) site of this course

Academic Integrity: All Penn State and Eberly College of Science policies regarding academic integrity apply to this course. See

<http://www.science.psu.edu/academic/Integrity/index.html> for details.