STA 675 Elementary Survey Sampling Fall 2005

Instructor: Dr. Bill Rayens
Office/Hrs: 865 POT/MWF 11:00-11:50

Meeting Times
Class CB 211 on MWF 9:00-9:50
Laboratory CB 307 on R 12:00 – 1:50

Text: Sampling Methods for Applied Research, by Peter Tryfos

Included is a data diskette containing data sets and a sampling calculator. Start getting familiar with this diskette.

Blackboard: This course will be fully organized and administered through Blackboard, U.K.'s course management system. You must have a Blackboard account and should check Blackboard often for announcements. Please go to https://elearning.uky.edu and follow the links to acquire a Blackboard (Bb) logon. Do not rely on the instructor's old STA 675 website. It may not be kept up to date.

Laboratory: Thursday labs will meet in CB 307. Rebecca Rankin will be your TA for the lab. Rebecca will facilitate the discovery exercises that I create and will be available to help you with homework questions. We will also use the laboratory to become proficient with Tryfos' useful, but awkward "sampling diskette".

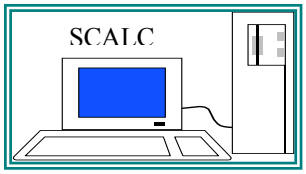
Grading Policies

Take-Home Exams (2)	200 course points (non-collaborative)
Problem Sets	165 course points (collaborative)
Laboratories	35 course points (attendance)

The usual grading scale (90-100 A; 80-89 B; etc) will be used.

Topics

Introduction and Review	Chapters 1,2,10
Simple Random Sampling	Chapter 3
Stratified Random Sampling	Chapter 4
Two-stage Random Sampling	Chapter 5
Systematic Random Sampling	Special Topic
Ratio and Regression Estimation	Chapter 6
Sampling from a Process	Chapter 9



Specify approach or exit program:
1. Randomization (random sampling)
2. Prediction
0. To exit program

Learning Objectives
Upon successfully completing this course the student will be able to:
1) articulate the concept of "random sampling variability" and "standard error"
2) articulate the connection between "standard error" is a product of the sampling design
3) design, implement and analyze the following sampling designs:
   a) simple random
   b) stratified
   c) multistage
4) explain and apply ratio and regression estimates in the context of simple random samples
5) articulate the role of ratio and regression estimation in the new area of "sampling from a process"

Tentative Schedule of Events – Subject to Revision Depending on Semester Circumstances		
October	**M17**	Classes Begin – Introduction
	W19	Introduction and Review Continues
	R20	Laboratory 1 - Blackboard; Lab Computers; Means and Proportions
	F21	Simple Random Sampling (Chapter 3)
	M24	Simple Random Sampling (Chapter 3)
	W26	Simple Random Sampling (Chapter 3)
	R27	Laboratory 2 – Sampling Variability and Confidence Intervals
	F28	Stratified Random Sampling (Chapter 4)
	M31	Stratified Random Sampling (Chapter 4)
November	**W2**	Stratified Random Sampling (Chapter 4)
	R3	Laboratory 3 – Issues with Stratified Sampling
	F4	Stratified Random Sampling (Chapter 4)
	M7	**Review and Catch Up. Hand Out First Take Home Exam**
	W9	Two-Stage Sampling (Chapter 5)
	R10	Laboratory 4 – Thinking about Two-Stage Samples
	F11	Two-Stage Sampling (Chapter 5)
	M14	Two-Stage Sampling (Chapter 5)
	W16	Systematic Random Sampling (Special Topic) **First Take-Home Due in Class**
	R17	Laboratory 5 – Philosophy of Systematic Samples
	F18	Systematic Random Sampling (Special Topic)
	M21	Ratio and Regression Estimation (Chapter 6)
	W23	Ratio and Regression Estimation (Chapter 6)
	R24	Thanksgiving Break
	F25	Thanksgiving Break
	M28	Ratio and Regression Estimation (Chapter 6)
	W30	Ratio and Regression Estimation (Chapter 6)
December	**R1**	Laboratory 6 – Ratio and Regression Discoveries
	F2	**Review and Catch Up. Hand Out Second Take Home Exam**
	M5	Sampling From a Process (Chapter 9)
	W7	Sampling From a Process (Chapter 9)
	R8	Laboratory 7 – Issues with Sampling from a Process
	F9	Review and Catch Up
	T13	**Second Take-Home Exam is Due at 8:00 a.m.**

Please understand that this is a tentative schedule. While it is great to have a plan, we also need to be flexible enough to see where the semester takes us!