

**SU DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE**  
**SYLLABUS (Tentative)**  
**MATH 313 Survey Design and Sampling**

**Objective:** To study basic principles for constructing surveys, so that one can determine how to get useful information from a survey at low cost.

**Intended For:** Students in Social Science, Natural Science, Business or Nursing who are faced with conducting surveys or critically reading the works of others based upon surveys.

**Prerequisite:** MATH 155 or MATH 213.

**Textbook:** "Elementary Survey Sampling," by Scheaffer, Mendenhall and Ott; Duxbury, 7<sup>th</sup> edition, 2012.

**Projects:** Minitab will be used extensively throughout the course. Two major projects will be assigned which will require the use of Minitab and a full written report.

		<b>Weeks</b>
Chapters 1 & 2	<i>Introduction and Review</i>	1
Chapter 3	<i>Elements of the Sampling Problem</i>	1
Chapter 4	<i>Simple Random Sampling</i>	2
Chapter 5	<i>Stratified Random Sampling</i>	2
Chapter 6	<i>Ratio, Regression &amp; Difference Estimation</i>	2
Chapter 7	<i>Systematic Sampling</i>	1
Chapter 8	<i>Cluster Sampling</i>	1
Chapter 9	<i>Two-stage Cluster Sampling</i>	1
Chapter 10	<i>Estimating the Population Size</i>	1
Chapter 11	<i>Supplemental Topics</i>	1
	<i>Tests</i>	<u>1</u>
		14

**EVALUATION**

Tests 40%  
Homework/Quizzes 20%  
Projects 20%  
Final Exam 20%

**NOTE: ONCE A STUDENT HAS RECEIVED CREDIT, INCLUDING TRANSFER CREDIT, FOR A COURSE, CREDIT MAY NOT BE RECEIVED FOR ANY COURSE WITH MATERIAL THAT IS EQUIVALENT TO IT OR IS A PREREQUISITE FOR IT.**