Survey Design and Analysis --- SIOB 296.

Survey Design and Analysis is a course about understanding DOTs. It may seem a bit funny to frame the course this way but as you will see it's not. We will take a systematic look at the world of primary data collection -- from design to observing activity to tabulating results and then to accessing the merits of what we uncovered.

In this class, you will learn how to collect primary information which will provide insights into any area where mankind has set its footprints. My job is to expose you to what is involved in undertaking a project that would benefit from the field of survey research. To get the most out of this course, you will need to ask questions continually about the process and see how each of the elements fits together. You will learn what the important questions are and when they need to be asked and how to answer them. Your notes from this class will give you a summary guide that can be used as you come across survey-based research in whatever environment you find yourselves.

 The course will walk you through each step in the process of collecting the desired information. We will talk about how to recognize "problems/ questions" that can be addressed from a survey-driven framework. We will start with the big picture and then focus on each component to a survey process -- design, collection, processing, analysis, and reporting. In addition, you will be given insights in how to critique survey-based studies. At the end of the course you will understand how to construct and field a survey-based study and how to critically evaluate these types of surveys.

Course Overview
This is an introductory survey course which will show how to design, execute, analyze, and present the results of a project that requires primary data collection. Survey research is all about gathering information. Information is at the foundation of decision-making. And as George J. Stigler, Nobel Laureate, Economics pointed out "Information is a valuable resource: knowledge is power." Surveys are all about collecting information. We begin with an overview of survey research and its environment and identify the subsequent problems/issues that must be addressed. Next , we will examine the critical process of designing the project, learn how to write a questionnaire, determine the best way to collect the information, decide how to best select the sample of individuals we are going to question, calculate the number of individuals we need to interview, examine the steps needed to properly process the survey effort from the data collection to electronic database. Once we have compiled the numerical representation of the survey, we administer statistical means to describe, infer and forecast what are the effects generated from the event we are observing. And, finally, we will assess our reporting and presentation options in sharing the findings of the survey effort. In all there are ten (10) modules that make up the course. They are:

Module	Description
1	Numbers Do Matter -- The Role of Statistics
2	Setting the Framework
3	The Art of the Design
4	The Vehicle -- aka The Questionnaire
5	Field of Dreams -- Collection Methods
6	Finding the Ones -- Sampling
7	One Size Doesn't Fit All -- Sample Size
8	Processing -- A Thankless Job
9	Wrapping Your Head Around It -- The Analysis
10	The End -- Reporting and Presentation

Course Materials/Textbook

Judging by the past, most students end up doing web searches by topic and relying on YouTube instructional videos.

I have listed several texts for the course —

The Oxford Handbook of Polling and Survey Methods; Edited by Lonna Rae Atkeson and R. Michael Alvarez. Oxford University Press 2018

Internet, Phone, Mail, and Mixed-Mode Surveys: The Tailored Design Method Fourth Edition, by Don A Dillman, Jolene D. Smyth, Leah Melani Christan, Wiley 2014

Research Methods Knowledge Base, Research Methods: The Essential Knowledge Base, 2nd Edition. -- www.socialresearchmethods.net/kb/index.php

Others --

The Essential Guide to Effect Sizes: Statistical Power, Meta-Analysis, and the Interpretation of Research Results by Paul D. Ellis, Cambridge University Press, 2010

Survey Research Methods (Applied Social Research Methods), 5th edition, Floyd J. Fowler, Jr. Sage, 2014

Survey Methodology, 2nd Edition, Robert M. Groves, Floyd J. Fowler, Jr., Mick P. Couper, James M. Lepkowski, Eleanor Singer, and Roger Tourangeau; Wiley 2009