TRMD 7440 Household Sampling Applications in Developing Countries

Professor: Thomas Eisele

Credits: 3

Semester(s) offered: Spring

Course Description:

The use of sample surveys to satisfy program-related information needs has become increasingly common in recent years in the international health, population and nutrition sectors. In order to take full advantage of recent developments in survey methodologies, professionals working in these sectors need to have a solid understanding of the intended uses and limitations of various standard protocols, as well as of the underlying principles of survey measurement. Accordingly, the purposes of this course are twofold: to establish a solid understanding of the basic principles of survey measurement, and to review the state-of-the-art in survey measurement in global health, with primary attention to the methodological basis of the protocols considered, and the strengths and weaknesses of the various approaches in actual practice.
Learning Objectives:

By the end of this course students will be able to:

(1) Assess and interpret the concepts of total survey error, components of survey error, bias, precision, accuracy and optimal survey design, and apply these concepts in evaluating a survey design and/or a set of survey results in developing country settings;

(2) Assess the requirements of probability sampling in settings without household sampling frames;

(3) Assess and interpret the logic of and operational procedures for the following sampling approaches in developing country settings without adequate household sampling frames: simple random sampling, systematic random sampling, stratified sampling, and two-stage cluster sampling;

(4) Select a sample and perform data analysis of the resultant survey data using each of these sampling approaches;

(5) Calculate desired sample size to meet survey objectives in obtaining a single point estimate and testing significant differences between two or more point estimates within developing country settings;

(6) Assess and compare the key elements of commonly-used survey protocols in international health, population and nutrition sectors in settings without adequate household sampling frames; and

(7) Perform data analysis of a dataset obtained from a 2-stage cluster PPS design to estimate weighted point estimates, empirically-estimated standard errors and design effect.