



DE LA SALLE UNIVERSITY – MANILA
COLLEGE OF SCIENCE
Mathematics Department

SYLLABUS

COURSE CODE	MSS517M
COURSE TITLE	Survey Sampling Theory and Methods
CLASS DAY & TIME	
ROOM	
NAME OF FACULTY	
COURSE CREDIT	3 units
CONTACT NO. (DEPT)	(02) 536-0270, (02) 524-4611 loc. 420/413
TERM/SCHOOL YEAR	

COURSE DESCRIPTION

A course on simple random sampling, stratified random sampling, systematic random sampling, systematic and cluster sampling, ratio estimates and cost minimization.

COURSE OBJECTIVES

The students will:

1. properly define and differentiate the different sampling designs;
2. demonstrate ability to evaluate sampling strategies;
3. show the capability of designing sample surveys based on the theories covered;
4. Exhibit values like:
 - cooperation through group study;
 - honesty by claiming credit only for the work he has done;
 - zeal and seriousness of intent to learn by participating actively in class discussion, doing his homework regularly and consulting his mentor;
 - patience, perseverance and diligence by solving assigned exercises completely including the difficult ones;
 - faith by doing what is right and giving his best in performing any assigned task;
 - show concern for the community through sharing of know-how and resources during group discussion;
 - self-reliance by being able to solve problems independently.

Topic/Subtopic	Learning Strategies/ Activities	Week/Meeting/ Hours
1. Introduction 1.1 Frameworks for Inference in Survey Sampling 1.2 Methods of Sampling	Lecture Facilitated group discussion Problem solving	
2. Simple Random Sampling 2.1 Description and Properties 2.2 Estimation of the Mean, Total, Proportion and Ratio 2.3 Ratio and Regression Method of Estimation 2.4 Sub-class estimation 2.5 Sample size determination	Lecture Facilitated group discussion Problem solving	
3. Stratified Sampling 3.1 Description and Properties 3.2 Estimation 3.3 Sample allocation 3.4 Formation and determination of the number of strata 3.5 Efficiency of Stratification	Lecture Facilitated group discussion Problem solving	
4. Systematic and Probability Proportional to Size Sampling 4.1 Description and Properties 4.2 Estimation	Lecture Facilitated group discussion Problem solving	
5. Multi-Phase Sampling 5.1 Description and Properties 5.2 Estimation 5.3 Multi-phase sampling for the ratio and regression method of estimation	Lecture Facilitated group discussion Problem solving	
6. Cluster and Multi-stage Sampling 6.1 Description and Properties 6.2 Estimation 6.3 Stratified Multi-Stage Sampling 6.4 Efficiency 6.5 Weighting 6.6 Sample Size Determination	Lecture Facilitated group discussion Problem solving	
Special Topics in Survey Sampling – A Survey and Introduction 7.1 Nonresponse 7.2 Variance Estimation 7.3 Small Area Estimation 7.4 Inference in Complex Surveys 7.5 Adaptive Sampling	Lecture Facilitated group discussion Problem solving	

*OPTIONAL

TEACHING STRATEGIES/METHODOLOGY

1. Lecture
2. Report
 3. SAS Exercises

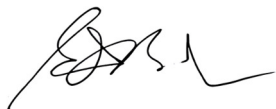
COURSE REQUIREMENTS

Examinations
Case Studies/Problem Sets

SOURCES

- Lohr, S.L (1999). Sampling: Design and Analysis. Duxbury Press.
- Valliant, R., Dorfman, A.H., and R.M. Royall. (2000). Finite Population Sampling and Inference. A Prediction Approach. John Wiley.
- Cochran, W.G. 1977. Sampling Techniques. 3rd ed. John Wiley.
- Wolter, K.G. 1985. Introduction to Variance Estimation. Springer-Verlag.
- Kish, L. 1965. Survey Sampling. John Wiley.

Noted by:



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