Instructor: Jimoh Olawale Ajadi   **Office**: (5-322)
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Office Hours: UTR 2pm-3.30pm

Course Description (3-0-3):
Simple random sample. Sampling proportion. Sample size estimation. Stratified random sampling. Ratio, regression, and difference estimators. Systematic sampling. Single stage cluster sampling. Multi-stage cluster sampling. Unequal probability sampling.

Course Objectives The main objective of the course is to provide a deeper understanding of theory and applications of Sampling Methods. The course will help graduate students in learning advance techniques of analyzing the data after survey and sampling procedures.

Textbook: Lohr S. L. (2010), Sampling: Design and Analysis. Cengage Learning.

Additional Reference: *Sampling Techniques,* by William G. Cochran. Third edition, John Wiley & Sons, Inc. 1977

Software: *R* language and Excel.

Intended Learning Outcomes After the completion of this course, students should be able to:
1. Learn a variety of common sampling designs.
2. Apply sampling theory to sample survey problems.
3. Understand elements of proper survey design.

Assessment

Activities	Weight
Class Activities (Assignments, Quizzes and participation)	15%
Mid Term	30%
Final exam (comprehensive)	40%
Project	15%

Grades: The letter grades will be assigned based on relative performance of the registered students.

Notices:
Any notice about the course will be communicated to the students through blackboard.

Project Description
The project should be based on a real problem (with complete description) and a detailed analysis using the skills developed in the course. There should be some concluding remarks that refer to the real

implications of your chosen problem, preferably in your major area. You may use online sources in your project with proper citation/reference.

Project Requirements:

- Students should submit the following:
    - a formal report (pdf)
    - a power point presentation

Deadline: The end of semester (before the last day of classes)

Submission: email submission to jimoh.ajadi@kfupm.edu.sa + A Hard copy