COURSE CODE: STS 394

COURSE TITLE: Laboratory for Experimental Design I

NUMBER OF UNIT: 1 UNIT

COURSE DURATION: ONE HOUR PER WEEK.

COURSE COORDINATOR: MR G.A. DAUDU

LECTURER OFFICE LOCATION: AMREC

COURSE CONTENT:

Completely Randomised Design, Randomised Complete Block Design, Latin Square Design and Simple Factorial Experiments with two factors each at two levels. Practical applications in Agriculture, Biology, Engineering and Industry. Statistical Packages includes SPSS, S-Plus, R, GENSTAT, SAS, and MINITAB.

COURSE REQUIREMENTS:

This is a compulsory course for all statistics students. Students are expected to have a minimum of 75% attendance to be able to write the final examination.

READING LIST:

1.) **Statistical Design and Analysis of Experiments by P.W.M. John.**
2.) **Experimental Designs by Cochran and Cox.**
3.) **Designs and Analysis of Experiments for Biology and Agric. Students by Oyejola, B.A.**
4.) **Statistical Methods by Snedecor and Cochran.**
5.) **Statistical Procedures for Agricultural Research by Gomez and Gomez.**

LECTURE NOTES

Purpose/Goals:

This course will provide students with a review of basic statistical concepts as well as detail coverage of simple experimental design procedures. Students will have the opportunity to gain practical experience with the analysis of experimental data using SPSS, R and other Statistical Packages. Several different designs and procedures will be covered. Expertise in statistics comes with practice and experience. The goal here is to learn the fundamental principles and basic techniques, which will allow the learning process to begin.

Specific topics to be covered will include Completely Randomised Design, Randomised Complete Block Design, Latin Square Design and Simple Factorial Experiments with two

factors each at two levels. Practical applications will be done using data from Agriculture, Biology, Engineering and Industry.

Statistical Packages

SPSS

S-Plus

R

GENSTAT

SAS

MINITAB