DEPARTMENT: Biostatistics and Bioinformatics

COURSE NUMBER: BIOS 502    SECTION NUMBER: 000    SEMESTER: Fall 2011

CREDIT HOURS: 2

COURSE TITLE: Statistical Methods III

INSTRUCTOR NAME: Jose N G Binongo

INSTRUCTOR CONTACT INFORMATION

EMAIL: jbinong@emory.edu

PHONE: 404 712 8575

SCHOOL ADDRESS OR MAILBOX LOCATION: GCR 206

OFFICE HOURS: Thursday, 11:00 a.m. to 12:00 noon, or by appointment

BRIEF COURSE DESCRIPTION

This course introduces students to data analytic methods not covered in the BIOS 500 & BIOS 501 (Statistical Methods I & II). It is focused on multilevel models, particularly modeling longitudinal data. Issues involved with the analysis of repeated measures data, particularly missing data, are also covered.

LIST SCHOOL LEVEL, DEPARTMENT, AND/ OR PROGRAM COMPETENCIES

• Calculate, interpret and present selected descriptive statistics (specifically for longitudinal data)
• Compute selected inferential statistics (e.g., confidence intervals, hypotheses testing as applied to longitudinal data)
• Use computer statistical software for both data management and data analyses
• Assist in the interpretation of study results
• Communicate the results of the study both orally and in writing
• Understand and adhere to guidelines of responsible research

ACADEMIC HONOR CODE

The RSPH requires that all material submitted by a student in fulfilling his or her academic course of study must be the original work of the student.
LIST LEARNING OBJECTIVES ASSOCIATED WITH THE COMPETENCIES

(1) Students study statistical procedures available for analyzing clustered data, particularly intra- and inter-individual change over time.
(2) Students examine the assumptions and limitations of the statistical procedures.
(3) Students use SAS judiciously to perform data analyses.
(4) Students have hands-on experience analyzing a multilevel data set from start to finish.
(5) Students communicate in writing the statistical methods used and the results of the analysis.

EVALUATION

Quizzes & Homework: 30%
Midterm Exam: 20%
Final Project: 50%