Syllabus

General Information
Instructor: Yili Hong, PhD
Office: 213 Hutcheson Hall; Phone: 540-231-9710; Email: yilihong@vt.edu
Class time and place: TR 11:00am-12:15pm; Seitz 313.
Office hours: TR 9:30am-11:00am, or by appointment.

Resources
Course webpage: https://scholar.vt.edu/portal

Description
Statistical techniques for analyzing longitudinal data (repeated measures) will be taught in this course. The primary focus of this course is on application of the various statistical models. The use of statistical software is also illustrated. The underlying statistical theory of models for longitudinal data analysis, including derivation and estimation of model parameters, will also be covered. After completing this course, students will learn how to analyze longitudinal data and interpret the results from such analysis. Students will also have a good understanding of the underlying statistical theory.

Outline
The following lists some of the models and topics for longitudinal data analysis that will be covered:

- Univariate and multivariate analysis of variance for repeated measures
- Random-effects models
- Covariance pattern models
- Generalized estimating equations (GEE) models
- Random-effects logistic regression models
- Missing data in longitudinal studies
- Nonlinear mixed model (time permits)
Evaluation

Letter grade will be given based on homework (40%) and a final project (60%).

Homework: There will be four homework. Turn them in at the beginning of the class on the date it is due. NO late homework will be accepted.

Project: Students are expected to complete a project in which they acquire and analyze a set of longitudinal data, and write a comprehensive report.

Academic Integrity

Students are expected to abide by Virginia Tech’s Community Standard for all work for this course (http://www.honorsystem.vt.edu/). Violations of the Standard will result in a failing final grade for this course and will be reported to the Dean of Students for adjudication. Ignorance of what constitutes academic dishonesty is not a justifiable excuse for violations.

Special Accommodation

As supported by Virginia Tech’s Principles of Community (http://www.vt.edu/diversity/principles-of-community.html), all students will be treated equally. Those with special needs can be accommodated and should refer to the website http://www.ssd.vt.edu/ for specific questions.