Syllabus

General Information

- Instructor: Yili Hong, PhD
- Office: 213 Hutcheson Hall; Phone: 540-231-9710; Email: yilihong@vt.edu
- Class time and place: TR 8:00am-9:15am; Hutcheson 204
- Office hours: TR: 10:00am-10:50am, or by appointment.

Resources

- Textbook: Linear Models in Statistics, 2nd ed., by Alvin Rencher and Bruce Schaalje.
- Course website: `https://canvas.vt.edu/`

Description

This is primarily a theory course, covering the inner workings of the distributions, estimations, and hypothesis testing procedures used in regression and analysis of variance. The material is fundamental to a proper understanding of how linear models work. A thorough knowledge of solving linear equations is needed, which is the topic of Chapter 2. Chapters 4 and 5 concentrate on distributions of linear combinations and quadratic forms involving normal random variables. Chapter 6 onward will examine myriad aspects of the general linear model, including the estimation, hypothesis testing and confidence interval procedures for multiple regression, one-way analysis of variance. We will also cover linear mixed models if time permits.

Evaluation

- Letter grade will be given based on homework (25%), the first mid-term (20%), the second mid-term (20%), and the final exam (35%).
- Homework: On a regular basis. Turn them in at the beginning of the class on the date it is due. NO late homework will be accepted.
- First Mid-term: close-book, in-class, Thursday, February 21st.
- Second Mid-term: close-book, in-class, Thursday, April 18th.
- Final exam: close-book, comprehensive, scheduled for Friday, May 10th, 7:45am-9:45am.

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.