STA 363 (Arranged Course) Syllabus
Advanced Regression

Spring 2023 Block 5 (1/15 to 2/7)

West Science 311

Class Times
M/W/F
4:00 – 5:00 pm

Professor:
Dr. Tyler George
West Science 311
tgeorge@cornellcollege.edu

Office Hours:
Monday – Thursday
Office & Zoom (HERE)
3:05pm – 4:05pm
And other times by appointment!

I am available at other times than those listed. Email me to set up a socially distanced meeting on campus, or a Zoom call!

Prerequisite:

Statistical Methods II (STA 202) or transfer equivalent.

Tentative Grade Scale

94-100	A
90-94	A-
86-90	B+
82-86	B
78-82	B-
74-78	C+
70-74	C
66-70	C-
62-66	D+
60-62	D

Textbook – Online and FREE

We will be using *Beyond Multiple Linear Regression Applied Generalized Linear Models and Multilevel Models in R* by Paul Roback and Julie Legler. This is an online (and in print technically) textbook that covers many advanced regression topics. Best of all it is recently published (statistics moves fast) and it is free! Link on Moodle and HERE. If you want a printed version, page 1 of the online book has links to buy. Chapters 1-8 minimally.

Learning Objectives

This course supports the Educational Priorities and Outcomes of Cornell College with emphases on knowledge, inquiry, communication, reasoning, and ethical behavior. Specifically, the learning objectives of this course are:

- Ability to communicate statistical ideas clearly and accurately (communication).
- Understand the class of generalized linear models and the models contained (knowledge, reasoning).
- Ability to ascertain which type of analysis is appropriate for a particular data set and question (inquiry, reasoning, ethical behavior).
- Become more adept at following the statistical process of starting with a question, collecting the requisite data, analyzing the data, and reporting on the results (reasoning, communication).

Moodle

Moodle is where you will find course announcements, technology instructions, homework assignments and much more. Check there many times each day to stay caught up in our course.

Statistics Software – R and R Studio

R and R Studio are completely free to install and use. You will use your RStudio Server access.

Github for Submissions

Student will create a Github repo for the course and submit via pushing. Deadlines to be discussed.

If you have any technical problems you should contact IT as soon as possible. Submit a Work Order!

IT Help Desk: HERE

Grade Breakdown

Homework (400pts):
Homework will be given every other day. Evaluated during meetings on M/W/F.

Class Participation (100pts)
I will have you push your R scripts at the end of each day to your Github repo. (make a "Class R scripts subfolder). I will check for these scripts weekly and use this for your participation score during our meetings.

Exams (250pts midterm & 250pts Final)
Both exams may be in person. The format of the exams is yet to be decided. The final exam will be completed by 3pm on 2/7/2024.

Total Points: 1000

DISABILITIES AND ACCOMODATIONS POLICY
Cornell College makes reasonable accommodations for persons with disabilities. Students should notify the Office of Academic Support and Advising and their course instructor of any disability related accommodations within the first three days of the term for which the accommodations are required, due to the fast pace of the block format. For more information on the documentation required to establish the need for accommodations and the process of requesting the accommodations, see https://www.cornellcollege.edu/student-success-center/disabilities/index.shtml

Academic Honesty
Cornell College expects all members of the Cornell community to act with academic integrity. An important aspect of academic integrity is respecting the work of others. A student is expected to explicitly acknowledge ideas, claims, observations, or data of others, unless generally known. When a piece of work is submitted for credit, a student is asserting that the submission is her or his work unless there is a citation of a specific source. If there is no appropriate acknowledgment of sources, whether intended or not, this may constitute a violation of the College's requirement for honesty in academic work and may be treated as a case of academic dishonesty. The procedures regarding how the College deals with cases of academic dishonesty appear in The Catalogue, under the heading "Academic Honesty."

- Always cite your sources when you present ideas and/or language that you have not developed yourself, including material from class lectures and discussions.
- Violation of this policy includes collaborating on assignments where collaboration is not allowed and/or utilizing notes, texts, etc. on any assignment where use of such materials is not allowed.

Use of AI
I expect you to generate your own work in this class. When you submit any kind of work (including projects, exams, quizzes, or discussions), you are asserting that you have generated and written the text unless you indicate otherwise by the use of quotation marks and proper attribution for the source. Submitting content as your own that has been generated by someone other than you, or was created or assisted by a computer application or tool, including artificial intelligence (AI) tools such as ChatGPT is cheating and constitutes a violation of our Academic Honesty policy. You may use simple word processing tools to update spelling and grammar in your assignments, but unless given permission otherwise, you may not use AI tools to draft your work, even if you edit, revise, or paraphrase it. There may be opportunities for you to use AI tools in this class. Where they exist, I will clearly specify when and in what capacity it is permissible for you to use these tools