Instructor: Leanna House
Email: Lhouse@vt.edu
Office: 404 Data and Decision Sciences (DDS)
Office Hours:
In-Person or Zoom: Thursdays, 9-10am, 404 DDS or https://virginiatech.zoom.us/my/drhousecall
By appt: Email Leanna House to set a time to meet
With GTA and ULA: TBD
Class Time/Location: MW 2:30pm – 3:45pm, 100 Burkes Johnson Center (GBJ)

Course Overview

Course Outline

Today's students are tomorrow's doctors, lawyers, politicians, industrial leaders, patients, parents, volunteers, neighbors, etc. who will make important decisions that will impact both themselves and our society. To make these decisions, data serve as an important resource for gathering "objective" information and evaluating risk (or lack thereof) from multiple perspectives. However, the use of data does not automatically imply objectivity. In this class, students are exposed to multiple sources of data, personal reflection on inner or other biases and the contrast between findings from data and those biases based on statistical tools. Additionally, students will be exposed to technologies and computation that can help them process and discover information in data for interpretation.

Course Materials

- **Canvas:** It is extremely important that you check Canvas on a regular basis. I strongly recommend that you change your settings to receive an email when things are updated on Canvas. I will use Canvas to post announcements and assignments. It is your responsibility to check Canvas on a regular basis.
- **Statistical Software:** We will use R/RStudio occasionally throughout the semester to demonstrate concepts. Knowing R is not a prerequisite, but you will use it. If you would like, you may download and install both R and RStudio (free). BE SURE to install R FIRST, then RStudio.
    1. https://cran.r-project.org/
    2. https://posit.co/products/open-source/rstudio/

Topic covered

- Critique reported findings from data collected across disciplines, including sources of data, analytical methods, and forms of communication.
- Recognize ethical issues and vulnerabilities when learning from data extrapolating to larger populations.
- Develop or identify multiple solutions to one problem and make clear arguments why one could be better than another.
- Communicate information in data effectively and responsibly, via written summaries, quantitative summaries, and visualizations.
- Make insights from data that may rely on many variables.

- Form an intuitive understanding of probability and weighted decisions while considering outcomes, probability of those outcomes and personal biases.

Miscellaneous

- Sept 9,11: Recorded, zoom, or guest lecture

Course Breakdown

Homework Assignments

- Homework will be assigned weekly via Canvas and due 11:59pm on Sundays. Not, midnight (12:00am) on Mondays. I will be strict, even when there are simple computer glitches or mistakes.
- Late assignments will receive a 20 point or 20% (whichever is more) penalty; no assignments will be accepted 7 days past due.
- The lowest homework grade for the semester will be dropped before calculating final grades.
- Note, at times, only *random* subsets of the homework assignments will be graded. The class is simply too big for grading entire assignments.
- Homework grades will be penalized on the basis of incomplete, incorrect, or unclear responses.
- Students are encouraged to work together, but the work turned-in MUST be your own. PLEASE work with each other! We all can learn from each other!

Quizzes

- There will be a quiz every 1 to 2 weeks.
- These will take place on canvas, and will have HARD due dates. NO late quizzes and no make-up quizzes, without a university sanctioned excuse.
- The lowest quiz grade for the semester will be dropped before calculating final grades.

Project

- Tentatively due Dec 1, 11:59pm
- In turn, presentations will take place Dec 2,4,9,11.
- Attendance will be graded on these days! DO NOT miss classes after Thanksgiving break.

Attendance:

- Participation is important for this class to go well.
- We will start with everyone getting 100% for the attendance portion.
- But, if attendance noticeably drops, then we will need to start keeping track.

Final Exam: None

Evaluation

You will receive a letter grade of A, B, C, D, F with the plus or minus adjustments based on the following weights:

Homework	45%
Quizzes	20%
Project	30%
Attendance	5%

A	93% - 100%	B-	80% - 82.99%	D+	67% - 69.99%
A-	90% - 92.99%	C+	77% - 79.99%	D	63% - 66.99%
B+	87% - 89.99%	C	73% - 76.99%	D-	60% - 62.99%
B	83% - 86.99%	C-	70% - 72.99%	F	0% - 59.99%

*Cut-offs are firm. Rounding up will not be applied to grades.

Student Expectations

Communication

- When corresponding with the instructor or TA through email, please use the following as your Subject in the email: **`YourFirstandLastName:Stat1014 <topic>`**. For example, if I needed help on homework 1, I might write in the subject of my email: `LeannaHouse:Stat1014 HW1 help`. Following these directions is important! I get a lot of email!
- I will make every attempt to respond to students' emails within 48 hours. If a student has not received a response from the instructor after 48 hours, the student should resend the email, and keep doing so.
- All individuals associated with this course will be civil and respectful of the diverse backgrounds of the class participants, with the goal of promoting a professional environment. All Forum Discussion Board posts, emails, and other correspondence are expected to be polite and constructive. And written correspondence needs to adhere to Standard English constructs with attention to grammar and spelling.

Honor Code

The Undergraduate Honor Code pledge that each member of the university community agrees to abide by states:

"As a Hokie, I will conduct myself with honor and integrity at all times. I will not lie, cheat, or steal, nor will I accept the actions of those who do."

Students enrolled in this course are responsible for abiding by the Honor Code. A student who has doubts about how the Honor Code applies to any assignment is responsible for obtaining specific guidance from the course instructor before submitting the assignment for evaluation.

Ignorance of the rules does not exclude any member of the University community from the requirements and expectations of the Honor Code.

For additional information about the Honor Code, please visit: https://www.honorsystem.vt.edu/
With respect to the honor code and course assignments:

- Homework assignments: Students may work with others, but all students must submit their own answers for grading.
- Quizzes: Students MUST work alone.

Use of AI
In this course, you may use generative Al tools like ChatGPT and Copilot. However, you are expected to use these tools to support your work, not to replace your work. We will discuss what is acceptable and what is not ethical practice when using generative Al. The ultimate metric is this: When you submit an assignment, I should be grading your work and not grading something created by generative AI. Therefore, your voice and work should be prominent even when using Al tools as support.

Accommodations
If for any reason you need special accommodations, please contact me as soon as possible (within the first two weeks of the semester). I will make sure you needs are met. All requests must be approved by the university.

Changes to the Syllabus

All policies in this syllabus are subject to adjustment as the class progresses. In such instances, the instructor will provide the students with sufficient notice.

Good luck & ask for help when you need it!