

STAT 1984
Data in Our Lives
Fall 2017

Instructor:

Name: Dr. Leanna House

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Office Hours: Fridays from 12:15am-1:15pm or by appointment, www.apps.stat.vt.edu/house/teaching.html.

Course Information:

Time: Monday, Wednesday, 2:30pm-3:45pm

Location: 101S LIBR

Final Exam: No final exam

Textbook(s): None, but materials will be provided on Canvas

Software: R

Website: See Canvas

Prerequisites: None. be in R.

Summary:

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.

Objectives:

- 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 weight decisions while considering outcomes, probability of those outcomes and personal biases.

Computing:

Students are welcome to use any software. Although, the software used in this class is R via Rstudio (Rstudio is a user friendly version of R). Rstudio is free and ready to download at <https://www.rstudio.com>. If you need help downloading, please see me know.

Grading:

Grading will be based on: weekly assignments (50%), quizzes (20%), and a project (30%). Most homework will be assigned Friday and due Monday BEFORE class, however there may be some smaller assignments in between. E.g., reading assignments. Assignments will be issued and submitted by you on canvas.

Attendance: This class relies crucially on participation. If attendance and/or participation starts to wane, we will consider shifting the grading distribution to include a participation.

Absence/Late Policy: There ISN'T one. That is, unless you have a severe problem/event or university sponsored excuse (e.g., in the hospital, attending a funeral, making court appearances, or participating in VT music or athletic events), late or missed assignments are NOT acceptable. Thus NO LATE HOMEWORK and NO MAKE-UP QUIZZES. That said, I understand that you are human beings and have lives outside of school. Thus, I will DROP the lowest quiz grade (if we have more than one) and the lowest homework/lab grade. This means that, if you miss one homework and/or one quiz, you are ok. The zero will not count toward your grade.

Students:

As supported by Virginia Tech's Principles of Community, all students will be treated equally (<http://www.vt.edu/diversity/principles-of-community.html>). Those with special needs can be accommodated easily. For specific questions. refer to <http://www.ssd.vt.edu/>.

Academic Honesty:

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, visit: <https://www.honorsystem.vt.edu/>.

Changes to the Syllabus:

The instructor reserves the right to make changes to the syllabus during the course. Any necessary changes will be announced in class and posted on the course website.