

# VISUALIZATION TECHNOLOGIES 1

## **ARTG 5330**

Spring 2022 Semester  
Mondays 6:00–9:30  
Ryder Hall 236

## **INSTRUCTOR**

Dave Landry  
d.landry@northeastern.edu

## **COURSE DESCRIPTION**

Introduces students to beginner to intermediate level topics in web-based interactive visualization. Focuses on building familiarity with HTML, CSS, JavaScript, and the d3js library, as well as teaching best practices and common patterns in data visualization problem solving.

Through lectures, workshops, and an over-arching final project, the class offers students an opportunity to learn to effectively deploy their data visualization skills on the web and to explore and extract understanding from data in a critical and efficient manner.

## **SCHEDULE**

Each class in the first part of the semester will focus on a selection of widely used concepts for creating engaging interactive web visualizations. After that foundational work, each student will begin creating an individual data narrative. From that point forward, class lectures will be structured around critiquing eachothers projects to help iterate each individual design, followed by in-class guided coding. As needed, lectures on any additional “on demand” concepts that each unique project might require may occur.

01.24 – Github, Servers, and HTML  
01.31 – SVG and CSS  
02.07 – JavaScript  
02.14 – D3  
02.28 – Data, Manipulation, and APIs  
03.07 – Design and Narrative Principles  
03.21 – Bar Chart  
03.28 – Maps, Code Structure, and Events  
04.04 – Color Scales and Legends  
04.11 – SVG Text  
04.25 – Prototype Review

## **TECHNOLOGY**

Students are expected to bring their own personal laptop to each class, which we will be setting up as their programming environment.

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## **FINAL PROJECT**

Using a dataset of their choosing, students will be creating a visualization narrative that must:

- guide users to gain an insight from the selected dataset
- animate at least 1 visualization via user interaction
- include at least 3 sentences of data-driven text description

Projects will be graded on implementation, design, and the overall narrative of the page.

## **GRADING**

Final grades are calculated as a weighted average between the final project (70% weight) and the average of all homework assignments (30% weight).

Final project grading and homework assignment grading are both based on rubrics that will be discussed in class when first assigned. At any point during the semester, students may e-mail the instructor to receive their current grade based on time elapsed.

## **ATTENDANCE POLICY**

Presence in class is mandatory, and only one unexcused absence is allowed. Any other unjustified absences will result in the dropping of half a letter grade from the student's final grade.

If currently unknown circumstances prevent in-class attendance, students are allowed to attend via Zoom periodically on a case-by-case basis.

## **OFFICE HOURS**

As requested, office hours occur in-person 5:00-6:00 before class on Mondays, or via Zoom at a time that works for both parties.

If additional help and/or practice is needed, Kate Kryder is available for data analysis, coding, and visualization consult through the Library:

- <https://subjectguides.lib.neu.edu/dataviz/consults>

## **RESOURCES**

All of the class slides, code references, and resources are hosted at the following URL:

- <http://www.dave-landry.com/classes/artg5330-fall2021>