

Advanced Data Visualization – Tentative Schedule*

*Subject to change.

Mon Jan 30: Introduction to the Course, Icebreakers. Why Learn about Data Visualization?

Pre-class Reading: None

Wed Feb 1: Tools Intro: GIMP, *R* & RStudio, & ParaView

Pre-class reading: Complete Data Carpentry *R* tutorial Section “Before We Start”
(<https://datacarpentry.org/R-ecology-lesson/00-before-we-start.html>)

Mon Feb 6: Basics of Data Visualization

Pre-class Reading: Ware Ch. 1

Wed Feb 8: The Eye

Pre-class Reading: Ware Ch. 2

Mon Feb 13: Luminance, Brightness, & Contrast

Pre-class Reading: Ware Ch. 3

Wed Feb 15: Color

Pre-class Reading:

1. Ware Ch. 4 (pp. 95–117)
2. The Getty’s Bauhaus Exhibit on Form and Color:
https://www.getty.edu/research/exhibitions_events/exhibitions/bauhaus/new_artist/form_color/

Mon Feb 20: Uses of Color in Graphing & Plotting with ggplot2

Pre-class Reading:

1. Ware Ch. 4 (pp. 117–138)
2. Wickham 2010

Wed Feb 22: Finding Information

Pre-class Reading: Ware Ch. 5

Mon Feb 27: The Good, The Bad, and The Ugly

Pre-class Reading: Wilke Ch. 1–5, 17–25

Wed Mar 1: Student Presentations: 2D Graphs (Online, no class meeting)

Pre-class Reading: Wilke Assigned Chapter

Mon Mar 6: Visualization Challenge # 1

Pre-class Reading: None

Wed Mar 8: Using Motion

Pre-class Reading: Ware Ch.6

Mon Mar 13: Critique and Revisions of Challenge #1

Pre-class Reading: none

Wed Mar 15: Space Perception

Pre-class Reading: Ware Ch. 7

Mon Mar 20: Spring Break (Mar. 22, no class)

Wed Mar 22: Spring Break (no class)

Mon Mar 27: Final Project discussion / 3D Plotting in R

Pre-class Reading: have a 2-3 minute “elevator pitch” on your research or idea for final project.
Does not need to be complete, we can also discuss and help brainstorm.

Wed Mar 29: Using Paraview for 3D Objects

Pre-class Reading: None

Mon Apr 3: Visual and Data Objects

Pre-class Reading: Ware Ch. 8

Wed Apr 5: Cognition in Visualization

Pre-class Reading: Ware Ch. 11

Mon Apr 10: Building a Visual Narrative

Pre-class Reading: Ware Ch. 9

Wed Apr 12: Visualization Challenge # 2

Pre-class Reading: None

Mon Apr 17: Individual meetings regarding final project progress (no class meeting)

Pre-class Reading: None

Wed Apr 19: Critique and Revisions of Challenge #2

Pre-class Reading: None

Mon Apr 24: Free work period

Pre-class Reading: None

Wed Apr 26: Build an Assessment Tool for Visualizations

Pre-class Reading: Ware Appendix C

Mon May 1: ggplot hacks

Pre-class Reading: None

Wed May 3: Interacting with Visualizations

Pre-class Reading: Ware Ch. 10

Mon May 8: In-class critiques

Pre-class Reading: None

Wed May 10: In-class critiques

Pre-class Reading: None

Final Exam: Slide-show Presentations (Friday May 21 8:00 – 10:30 am)