

Advanced Data Visualization – Tentative Schedule*

*Subject to change.

Mon Feb 1: Introduction to the Course, Icebreakers. Why Learn about Data Visualization?

Pre-class Reading: None

Wed Feb 3: 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 8: Basics of Data Visualization

Pre-class Reading: Ware Ch. 1

Wed Feb 10: The Eye

Pre-class Reading: Ware Ch. 2

Mon Feb 15: Luminance, Brightness, & Contrast

Pre-class Reading: Ware Ch. 3

Wed Feb 17: 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 22: Uses of Color in Graphing & Plotting with ggplot2

Pre-class Reading:

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

Wed Feb 24: Student Group Presentations: 2D Graphs

Pre-class Reading: Wilke Assigned Chapter

Mon Mar 1: Building a Visual Narrative

Pre-class Reading: Ware Ch. 9

Wed Mar 3: The Good, The Bad, and The Ugly

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

Mon Mar 8: Visualization Challenge # 1

Pre-class Reading: None

Wed Mar 10: Finding Information

Pre-class Reading: Ware Ch. 5

Mon Mar 15: Critique and Revisions of Challenge #1

Pre-class Reading: none

Wed Mar 17: Pattern Finding

Pre-class Reading: Ware Ch.6

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

Wed Mar 24: Spring Break (no class)

Mon Mar 29: Using Motion / Project discussion

Pre-class Reading: Ware Ch.6, 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 31: Space Perception

Pre-class Reading: Ware Ch. 7

Mon Apr 5: Space Perception

Pre-class Reading: Ware Ch. 7

Wed Apr 7: Multi-dimensional Plotting with ParaView & VisIT

Pre-class Reading: Paraview User Guide (<https://www.paraview.org/paraview-guide/>)

Mon Apr 12: Visual and Data Objects

Pre-class Reading: Ware Ch. 8

Wed Apr 14: 3D Plotting in R

Pre-class Reading: None

Mon Apr 19: Cognition in Visualization

Pre-class Reading: Ware Ch. 11

Wed Apr 21: Visualization Challenge # 2

Pre-class Reading: None, Individual meetings regarding final project progress

Mon Apr 26: Build an Assessment Tool for Visualizations

Pre-class Reading: Ware Appendix C

Wed Apr 28: Critique and Revisions of Challenge #2

Pre-class Reading: none

Mon May 3: In-class critiques

Pre-class Reading: None

Wed May 5: In-class critiques

Pre-class Reading: None

Mon May 10: In-class critiques

Pre-class Reading: None

Wed May 12: In-class critiques

Pre-class Reading: Ware Appendix C

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