Lecture 1 – Intro to the Course

Today:

1. Overview of the course.

2. Overview of the syllabus.

3. Icebreaker

4. Tools of the course

Course Atmosphere

You may get bored, that's OK.

Don't be a jerk.

This course is NOT a competition between students!

I am here to help.

Course Learning Objectives:

1. Become proficient in the use of the *R* language.

2. Become familiar with the use of Bash, shell programming, and console editors.

3. Learn the basic principles of software design.

4. Produce code that is reproducible and produces results that are replicable.

5. Learn to interact with High-Performance Computing resources.

6. Learn how to document your work and prepare scientific publications.

Course Polices

Please read the syllabus and complete the syllabus assignment on Canvas.

All deadlines posted on assignments are suggestions. Real final deadline for all work is last day of courses (December 10, 2021).

I expect everyone to work together unless an assignment is an individual evaluation.

Academic Honesty: cite your sources (even in code); group work is fine as long as you disclose who you worked with on each assignment. Do so at the top of a script.

Course Structure
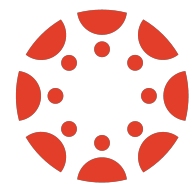
canvas
- **Syllabus**
- **Assignments**
- **Gradebook**
- **Zoom links and recordings**

GitHub
- **Syllabus**
- **Other Course Materials**
- **Lecture Notes**
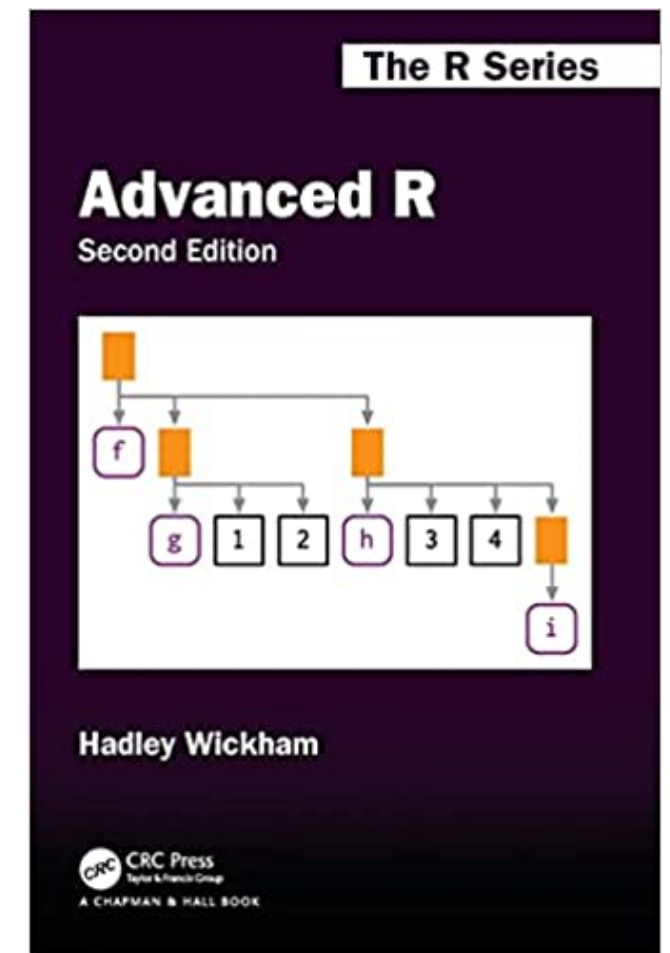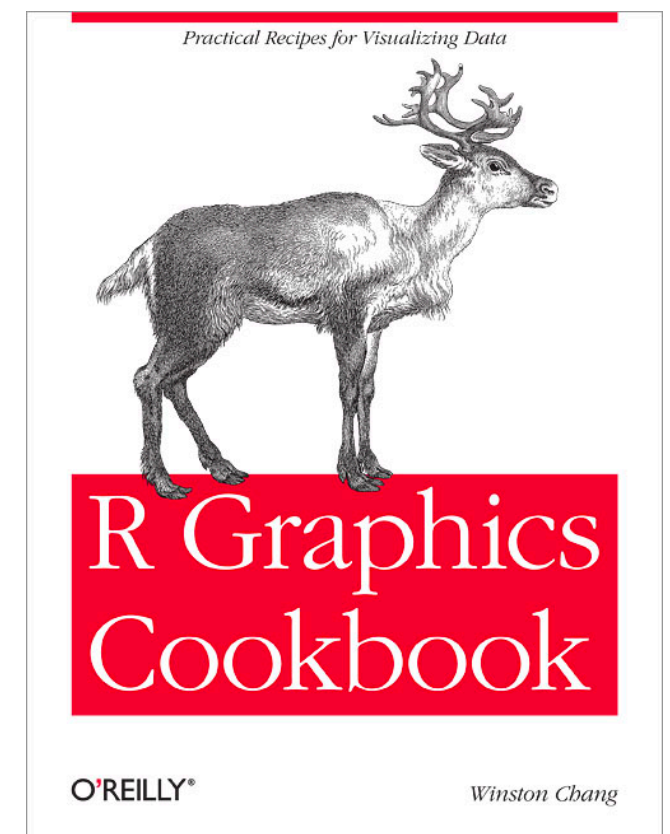- **Assignment Templates/Code**
- **Your Work**

slack
- **Announcements**
- **Discussion**
- **Group work**

Course Textbook

Required text: Advanced R by Hadley Wickham. Second edition, CRC Press. Online at https://adv-r.hadley.nz/

Recommended: R Graphics Cookbook by Winston Chang. First Edition, O'Reilly Media. Online at https://r-graphics.org/

Course Structure

Assessment:

10% – Participation

Any engagement in the course on an intellectual level.

15% – Assignments

Short assignments associated with each lecture, reinforce concepts and provide space to practice. Complete/not complete. Feedback provided.

25% – Midterm Coding Project

Project meant to develop and assess skills learned in the first part of the course (coding in R).

25% – Midterm Project Revision

Project meant to develop and assess skills learned in the second part of the course (code revision).

25% – Final Project

Project meant to develop and assess skills learned in the third part of the course (communicating results).

Icebreaker!

I will assign you to breakout rooms.

In your groups, come up with answers to the following questions:

1) Pick an animal mascot for your group.

2) What's (collectively) the weirdest/most unique thing
that someone in your group has done?

Other Course Tools

Please have these installed and functional before next time:
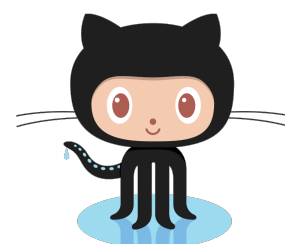
Bash: See instructions on Github README

R: **https://www.r-project.org/**

RStudio: https://rstudio.com/products/rstudio/download/

git: https://git-scm.com/downloads

Please send me your Github user name on slack:

Github: https://github.com