R Bootcamp Fall 2017 – Proposed syllabus

Day 1

Intro to R – what it is; installing R; the console; installing packages; R Studio – talking what CRAN is

Why use it? Find an example publication. Download and open

Arithmetic in R -- exercises

Variable Assignment -- exercises

Relational operators -- exercises

Logical operators -- exercises

Data types in R -- exercises

Vectors -- exercises

Matrices -- exercises

Factors -- exercises

Dataframes -- exercises

Lists -- exercises

Writing your first script — repeatability; sharing your code

With Syntax and google style guide and commenting
Data dryad and other repositories…

If else statements – exercises

Looking at the page here

Functions and Loops -- exercises

Apply functions -- exercises

What is more efficient? Case by case

TAKE HOME MESSAGES—different ways of approaching a problem

Day 2

Short review of previous day- Open Script, Run Script

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Review exercise: Write a function with scaffolding and they have
fill in (solutions at the back)

Reading in and saving data -- exercises

Special types of data:
        Times and dates – exercises

        Geo data and maps

Summary statistics -- exercises

Plotting: basic plotting and ggplot, ggvis -- exercises

Simulating data in R -- simple exercise