

# Stat 5014 Fall 2020 Schedule

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2020-08-20

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|-----------------|---|
| 9:05-9:55 a.m.  | Wednesday, Zoom   |
| CRN:            | 90035   |
| Office:         | Zoom only – see Canvas for link   |
| Email:          | rsettlag@vt.edu   |
| Office hours:   | W 9-10, Zoom session open for “drop-ins”  |
| Course Website: | <a href="https://github.com/rsettlage/STAT_5014_Fall_2020">https://github.com/rsettlage/STAT_5014_Fall_2020</a> |

Suggested schedule, you can speed ahead. \*Denotes homework due by date (you can turn in early)

| Lecture | Date    | Topic  |
|---------|---------|--|
|         |         | <b>MODULE 1 – R Bootcamp for Reproducible Research</b>                     |
| 1       | 26-Aug  | Introductions, R, Rstudio, Rmarkdown, LaTeX, Git and Reproducible Research |
| 2       | 2-Sep*  | Data structures, plotting basics, Reproducible Research and (some) Git     |
| 3       | 9-Sep   | Loading, munging, summarizing data using tidyverse                         |
| 4       | 16-Sep* | R functions, logic, good programming practices                             |
| 5       | 23-Sep  | R Vector/matrix manipulations and math, speed considerations               |
| 6       | 30-Sep* | R's Apply family of functions  |
| 7       | 7-Oct   | Parallel computing in R, foreach and dpar                                  |
|         |         | <b>MODULE 2 – Graphics in R</b>  |
| 8       | 14-Oct* | Base graphics, multi panel plots   |
| 9       | 21-Oct  | ggplot2  |
| 10      | 28-Oct  | Interactive Visualizations and Dashboards                                  |
| 11      | 4-Nov*  | GUIs for working with collaborators  |
|         |         | <b>MODULE 3 – Deep Learning and some Python</b>                            |
| 12      | 11-Nov  | Deep Learning using Keras in R   |
| 13      | 25-Nov  | No class – Thanksgiving  |
| -       | 2-Dec   | Python and Jupyter Notebooks   |
| 14      | 9-Dec*  | More Python (Final projects due)   |
| 15      | 16-Dec  | Final – none   |