# Programming with R for Social Science Workshop

Fall 2022

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| **Instructor:** | Mike Burnham | **Time:** | August 15-19; 1-2:30 |
| **Email:** | mlb6496@psu.edu | **Place:** | 371 Willard |

**Course Page:**

> https://github.com/MLBurnham/R-workshop

**Office Hours:** After class or by appointment.

**Course Overview:** This course is designed to give you a basic foundation for working with R, as well as teach you how to think about and approach programming generally. The scope of learning R is too vast to cover in a week and many of you will also go on to learn additional programming languages such as Python and LaTeX. You will find that programming is a continuous cycle of learning and problem solving. Thus, our primary objective is not to make you competent R programmers, but to teach you skills and concepts that will be most helpful for solving the many problems you will encounter.

**Recommended Reading:**

- Wickham, Hadley. "Tidy Data" *Journal of Statistical Software* 59, no. i10 (2014).

- Wickham, Hadley. "A layered grammar of graphics." Journal of Computational and Graphical Statistics 19, no. 1 (2010): 3-28.

- R for Data Science (Occasionally useful as a reference when starting out. I do not recommend purchasing a hard copy.)

**Before Class**: Follow this tutorial to download and install R and RStudio on your laptop. Please feel free to email me if you have any issues.

**Tentative Course Outline:**
Day 1: Concepts in computing

Day 2: Importing and manipulating data

Day 3: Visualization and working with objects

Day 4: Simulations and problem solving

Day 5: Wrap up, big picture, and resources