

INTRODUCTORY R WORKSHOP

August 19–23, 2024

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| Instructor: | Kayla Kahn | Time: | Mo: 10:45-12:00 Tu: 10:15-11:45 Wed, Thu, Fri: 10:00-11:30 |
| Email: | kpk5494@psu.edu | Place: | 369 Willard Building |

Workshop Materials:

1. https://github.com/kkahn1/r_workshop_2024

Helpful Resources:

- [R Reference Card](#)
- [The R language – a short companion](#)
- [R Tidyverse Style Guide](#)
- Rodrigues, Bruno. *Modern R with the tidyverse*. 2022.
- [The R Graph Gallery](#)
- [R Cheat Sheets](#)

Objectives: This course is primarily designed for first-year graduate students with little to no experience using R. This course is designed to give you a foundation in R that will be useful as you begin your graduate studies.

Installing R and RStudio: [Tutorial](#)

Course Outline:

Day 1: R Basics

- Operators
- Assignment
- Data Types

Day 2: Dataframes

- Reading in data
- Summary statistics
- Accessing dataframe and columns
- Subsetting and merging

Day 3: Plots

- Base R plots

- ggplot

Day 4: Control Structures

- Loops
- Conditional statements
- Simulation

Day 5: Tidyverse

- Tidyverse alternatives to day 2 code