



QuACK



Fall 2021 Schedule

	Topic	Agenda
Week 1 8/31	Intro to R & Programming	<ul style="list-style-type: none">- Data types<ul style="list-style-type: none">- Numbers- Characters- Booleans (logical)- Factors- Variables- Vectors and data frames- Operators
Week 2 9/7	Working directories and reading in data	<ul style="list-style-type: none">- Working directory and directory structure- Setting up a project folder- Reading in and viewing data- Dataframes- Accessing and summarizing data- Adding columns- Indexing vectors and data frames
Week 3 9/14	Intro to the tidyverse and data wrangling - Part 1	<ul style="list-style-type: none">- Why do we need to "wrangle" our data?- What is tidy data?- Pipes ()- Selecting variables- Filtering observations + logical operators- Dealing with missing values- Adding new columns
Week 4 9/21	Data wrangling - Part 2	<ul style="list-style-type: none">- Case_when- Group_by- Summarizing data- Joining new data frames
Week 5 9/28	Intro to data visualization (ggplot) - Part 1	<ul style="list-style-type: none">- Why do we visualize data?- Line graphs- Bar plots- Box plots- Facet_wrap- Violin plots
Week 6 10/5	Data visualization - Part 2	<ul style="list-style-type: none">- More plotting practice- Reshaping data - pivot_wider or longer

Week 7 10/12	Intro to loops	<ul style="list-style-type: none"> - Iterating over vectors - For loops - Nested loops
Week 8 10/19	Loops cont. & Random sampling	<ul style="list-style-type: none"> - Populations and sampling distributions - Random variables - for loops cont. - If/else - Logical indexing
Week 9 10/26	Functions	<ul style="list-style-type: none"> - What are functions and why do we use them? - Practice using and creating functions
Week 10 11/2	Flex week	For whatever/whenever in the schedule
Week 11 11/9	Discussion topic: <i>Open science & data sharing</i>	<ul style="list-style-type: none"> - What are responsible data practices? - What is open science? - What is p-hacking? - GitHub - Open Science Framework - Pre-registration (asPredicted.org)
Week 12 11/16	Discussion topic: <i>Biases in statistics and psych science</i>	Open group discussion about biases in data collection and analysis techniques
Week 13 11/23	Thanksgiving Week *No class*	
Week 14 11/30	Review and celebrate	Celebrate the end of the fall semester! 😊

Note: This schedule is subject to change based on the needs of the cohort.