

Wiser Eagles Research Assistant

10-12 Weeks Curriculum

Program Goals

- Develop foundational skills in economic research (reading, summarizing, synthesizing literature).
- Build data and coding capacity in R (tidy data, wrangling, visualization, reproducibility).
- Produce a portfolio of work that doubles as future RA templates (literature bank, reproducible reports, code snippets).

Topic (Weekly) Schedule Overview

Phase 1: Research Foundations

- What is Research?
 - *Reading:* [The Effect Book](#) (Ch. 1–2). ; Literature Review Slides
 - *Task:* Write a short reflection (1 paragraph) on a research question you are curious about.
 - *Deliverable:* 1-page “Research Curiosity Statement” (research question + why it interests you + where you might find data).
 - *Reflection Questions:* What new skill do you think will help you later as an RA?; What was the hardest part of this week’s work?
- How to Read Papers (AIC)
 - *Reading:* [Raúl Pacheco-Vega](#): AIC method blog. ; Optional: JEP examples for accessible reviews
 - *Task:* Write AIC notes for 3–5 papers
 - *Deliverable:* Submit 3 AIC note using template below.
 - *Reflection Questions:* Which paper was hardest and why? How would you explain it to a non-economist?
- Lit Reviews & Annotated Bibliographies
 - *Reading:* [Guide to Writing in Economics](#) (Ch. 5–7, 12, 22).
 - *Task:* Create an annotated bibliography (3–4 papers; ~150 words each) using [Overleaf](#)
 - *Deliverable:* Annotated bibliography file (shared).
 - *Reflection Questions:* Did you notice patterns across papers?
- Synthesizing & Storytelling
 - *Reading:* McCloskey, [Storytelling in Economics](#). & [Guide to Writing in Economics](#) (Part I).
 - *Task:* Write Mini lit review (3–5 pages).
 - *Deliverable:* Write Mini lit review (3–5 pages).

- *Reflection Questions*: Easier to summarize or synthesize? Why?; How does synthesis help RA work?

Phase 2: R & Data Practices

- Getting Started with R
 - *Resource*: Intro to R Guide (internal). [RStudio/Posit Cloud Primers](#).
 - *Task*: Replicate basics in RMarkdown (objects, vectors, data frames).
 - *Deliverable*: RMarkdown file with outputs.
 - *Reflection Questions*: Most confusing R concept? Did commenting help?
- Tidy Data Concepts
 - *Resource*: Wickham, “Tidy Data” (JSS). R4DS ([online](#)) Ch. 5–7.
 - *Task*: Transform one messy dataset into tidy format. Pick dataset: TidyTuesday, Kaggle, or other-relevant.
 - *Deliverable*: Choose dataset + tidy it.
 - *Reflection Questions*: Biggest challenge tidying data? How does tidiness help RA work?
- Data Manipulation with `dplyr`
 - *Resource*: RStudio Data Wrangling Cheatsheet.; <https://moderndive.com/3-dplyr.html> ; <https://datacarpentry.github.io/r-socialsci/03-dplyr.html> ; R4DS ([online](#)) Ch. 5–7.
 - *Task*: Practice `select()`, `filter()`, `mutate()`, `group_by()`, `summarize()`.
 - *Deliverable*: Short script demonstrating each function.
 - *Reflection Questions*: Which verbs were easiest/hardest? ; Where would these apply in our research data?
- Visualization with `ggplot2`
 - *Resource*: R4DS Ch. 3–4; RStudio Viz Cheatsheet.
 - *Task*: Create 3 plots (scatter, bar, histogram) with captions
 - *Deliverable*: Use the dataset you chose to build one nice chart
 - *Reflection Questions*: Which viz was most effective? How could it help communicate to policymakers?
- Final Mini Project & Showcase
 - *Resource*: ; Intro Guide section + [RMarkdown Cookbook](#).
 - *Task*: Clean, analyze, visualize; present a short briefing.
 - *Deliverable*: 3–4 page reproducible report using the dataset you chose
 - *Reflection Questions*: Most rewarding step? Which skill will you strengthen next as an RA?
- `dplyr` vs `data.table`
 - *Resource*: Atrebas, “A data.table and dplyr tour”.

- *Task*: Rewrite 2–3 ops in both syntaxes on a dataset you chose
- *Deliverable*: Side-by-side comparison script.
- *Reflection Questions*: Which approach do you prefer? Why? When might efficiency matter?

AIC Note Template

- **Citation (APA/Chicago preferred)**: Author(s), Year. Title. Journal, Volume(Issue), Pages.
- **Abstract (A):**
 - * What is the research question?
 - * What is the paper about (in one or two sentences)?
- **Introduction (I):**
 - * Why is the author doing this research? (motivation, context, or gap).
 - * What theory or problem does it connect to?
 - * How is the author approaching the problem (methods, data)?
- **Conclusion (C):**
 - * What are the main findings/results?
 - * Why do they matter? (policy implications, contribution to literature).
- Your Notes/Thoughts (optional but encouraged):
 - * Did you find it hard to follow?
 - * How could this connect to RA work (e.g., datasets, methods, policy relevance)?