# Schedule

## Course Schedule

*subject to change*

| Week | **Topic** | **Tools** |
|---|---|---|
| | Preliminaries | |
| 1 | Course Introduction | Scripts; R and RStudio |
| 2 | Reproducible Data Analyses | Markup Languages; Quarto |
| 3 | File Management & Version Control | Filesystems; git; GitHub |
| 4 | A Field Guide to Data | Data Formats; readr; tidyr |
| 5 | Structural Data Manipulation | dplyr; srvyr |
| 6 | Data Visualization I | Grammar of Graphics; ggplot2 |
| 7 | Data Visualization II | ggplot2 |
| 8 | **Core Exam (Thursday, October 16)** | |
| 9 | Social Networks & Network Data | iGraph; statnet |
| 10 | Census Data | tidycensus |
| 11 | Maps & GIS I | sf; tigris |
| 12 | Maps & GIS II | mapgl; mapbox; osm |
| 13 | Accessing & Using External Data | SQL, other APIs |
| 14 | Project Work | |
| 15 | Project Presentations | |
| F | **Finals Week (Project Due)** | |

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*Advanced Topics (if we have time)*

| Week | **Topic** | **Tools** |
|---|---|---|
| 16 | Text Data & Data Scraping | |
| 17 | Web Apps & Visualization | quarto, shiny |
| 18 | AI Pair Programming & "Vibe Coding" | github copilot |
| 19 | Local LLMs | |