Schedule

## Course Schedule

*subject to change*

| Week | **Topic** | **Tools** |  |
| --- | --- | --- | --- |
| 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 |  |
| 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)** |  |  |

*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 |  |  |