

Computing for Scientists – Tentative Schedule

Mon Aug 31: Introduction to the Course and Tools.

Wed Sept 2: Linux, Bash, and console editors.

Mon Sept 7: (No class, Labor Day)

Wed Sept 9: Version Control with git.

Mon Sept 14: More git and basic shell programming.

Wed Sept 16: Advanced shell programming.

Mon Sept 21: Shell programming cont.

Wed Sept 23: *R* Refresher.

Mon Sept 28: Statistical and data analysis tools in *R*.

Wed Sept 30: Statistical and data analysis tools in *R* continued.

Mon Oct 5: Discussion: Best Practices in Scientific Computing. Midterm coding projects.

Wed Oct 7: Testing Code in *R*.

Mon Oct 12: Refactoring code

Wed Oct 14: Profiling and optimizing code in *R*

Mon Oct 19: Using memory efficiently

Wed Oct 21: Documenting your work for reproducibility

Mon Oct 26: Automating workflows

Wed Oct 28: Interacting with clusters (Midterm Projects due)

Mon Nov 2: Managing large data sets

Wed Nov 4: MPI and parallel processing

Mon Nov 9: Getting started in L^AT_EX

Wed Nov 11: Preparing scientific publications

Mon Nov 16: Basic Principles of Data Visualization

Wed Nov 18: Discussion: Lies, Damn Lies, and Statistics: the Ethics of Data Visualization

Mon Nov 23: (No class, Thanksgiving)

Wed Nov 25: (No class, Thanksgiving)

Mon Nov 30: ggplot2 in *R*

Wed Dec 2: Preparing figures for publication & presentation

Mon Dec 7: Archiving your data

Wed Dec 9: Discussion: Data reproducibility in scientific publications