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: *R* Refresher.
Wed Sept 23: Statistical and data analysis tools in *R*.

Mon Sept 28: Statistical and data analysis tools in *R* continued.
Wed Sept 30: Test-driven development in *R*.

Mon Oct 5: Midterm coding projects assigned and discussed.
Wed Oct 7: Refactoring code

Mon Oct 12: Profiling and optimizing code in *R*
Wed Oct 14: Using memory efficiently

Mon Oct 19: Documenting your work for reproducibility
Wed Oct 21: Automating workflows

Mon Oct 26: Discussion: Best Practices in Scientific Computing
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 LaTeX
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