Intro to R for Oceanographers

Course Objectives: Give new programmers at SIO basic tools for data analysis and presentation in R. Course format will be tutorial-based and adapted to the level of the enrolled students. Students will complete a final project of their choice and present their results to the class. Meeting time TBD, two hours per week.

Week 1: Basics of R programming, including data types, syntax, functions and figures
Task: Read style guide, identify a project or a personal programming goal

Week 2: Importing and working with larger data sets, indexing, and if/else statements

Week 3: Writing for loops in combination with if statements and alternatives to for loops

Week 4: Writing and calling functions

Week 5: Working with date/time data, data manipulation

Week 6: Making figures and maps using ggplot

Week 7: Leslie matrices and population models

Week 8: Designing surveys and sampling strategies, generating synthetic data sets

Week 9: Packages and functions relevant to oceanography

Week 10: Student project presentations