Syllabus: SIO 221C, Data Analysis Laboratory

Sarah Gille

Class Meetings: Tuesday/Thursday 12:30-1:50, OAR 150 Conference Room
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Grading: S/U

Course Objectives: Students refine data analysis skills by carrying out projects that employ specific techniques and by discussing data analysis problems with the group.

Course requirements: Complete 3 projects from list below (up to one project may be arranged with instructor to be tailored to research). Each project is scheduled to take 3 weeks. Report on progress at each class meeting and discuss problems and possible solutions with the group. Written reports are submitted at the end of each project.

Schedule:

— Organization: September 22
— Project 1: September 27, September 29, October 4, October 6, October 11, October 13 (written reports due October 13)
— Project 2: October 18, October 20, October 27, November 1, November 3, November 8 (written reports due November 8)
— Project 3: November 10, November 17, November 22, November 29, December 1 (written reports due December 1). (Extra meeting may be scheduled.)

No class meetings October 25, November 15, or Thanksgiving Day (November 24).

Projects

— Complex Demodulation
— Empirical Orthogonal Functions
— EOFs with Missing Data
— Objective Mapping
— Objective Mapping (with Anisotropic Decorrelation Functions)
— Geostrophic Velocity
— Salinity Spiking
— Wind-Driven Currents
— Wind-Driven Geostrophic Currents
— Box Inverse
— Wavelets
— Probability Density Functions
Texts on reserve for SIO 221C: Data Analysis Laboratory


