

**Syllabus: SIO 200c – OCEAN ACOUSTICS AND SIGNAL PROCESSING III**  
**W. A. Kuperman**

Course Description: This is the second of a three-quarter sequence on ocean acoustics and signal processing. The material will cover basic ocean acoustics, computation modeling, signal processing and analysis of experimental data. The homework assignments will be a sequence of 10 mini- projects. The class meets three times a week plus there will be problem session/workshops. Prerequisites are General Physics with Calculus, Math through differential equations and linear algebra. Some knowledge of MATLAB is helpful.

This third quarter includes:

1. White Noise Constraint Adaptive Processing
2. Vector Fields, Sensors and Processing
3. Split Beam Processing
4. Matched Mode Processing and Subspace Combination
5. Noise Correlation Processing
6. Sensitivity Kernels