

OE5546 Underwater Acoustics and instruments

Course Content:

Derivation of the Helmholtz Equation from Fundamentals Concepts such as standing waves, wave interference, and scattering Acoustic Wave interaction at boundaries Propagation Models using ray theory and modes SONARs and Transmission loss models Instrumentation fundamentals Oceanographic instruments Measurement principles and data analysis

Text Books:

1. George V. Frisk "Ocean and Seabed Acoustics A theory of Wave Propagation" published by Prentice Hall
2. Kinsler et.al. "Fundamentals of Acoustics" published by Wiley
3. Beckwith et.al. "Mechanical Measurements" published by Prentice Hall
4. Plenty of reference materials provided by the instructor

Reference Books:

Prerequisite:

Background in vibration or wave propagation preferred but not required