AE 6761: Acoustics II

Offered Every Fall

Credit Hours: 3-0-3

Prerequisites: ME 6760 or AE 6760 or equivalent or with the consent of the instructor.

Catalog Description: Radiation and scattering of sound waves in fluids, duct acoustics, dissipation phenomena. Crosslisted with AE 6761.


Goals: The goal of this course is to expose students to an in-depth understanding of the fundamental principles governing the radiation and scattering of sound waves in fluids, the propagation of sound in ducts, and dissipation phenomena in acoustics.

Topics:
- Rayleigh integral, Greens function, Kirchhoff-Helmholtz integral
- Baffled piston
- Radiation problems
- Scattering problems
- Duct acoustics, modes
- Acoustics in a moving medium, Doppler shift.
- Attenuation, Dispersion, relaxation