**AE 6761: Acoustics II**

Offered Every Fall

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| 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. |
| Textbooks: | David T. Blackstock, *Fundamentals of Physical Acoustics*, 1st Edition, John Wiley, 2000. Allan D. Pierce, *Introduction to Physical Principles and Applications*, 1st Edition, Springer-Verlag, 1989 (an Acoustical Society publication). |
| 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 |