THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Aeroacoustics

AEROENG 7774

Credit Hours:
3.00 - 3.00

Course Levels:
Graduate (5000-8000 level)

Course Components:
Lecture

Course Description:
Fundamental concepts of classical acoustics; physical mechanisms associated with aerodynamic noise generation; computational aeroacoustic methods.

Prerequisites and Co-requisites:
Prereq: 5615 (615) or equiv.

Course Goals / Objectives:
- Learn fundamental acoustic concepts and physical mechanisms of aerodynamic sound generation
- Understand basic numerical methods in computational aeroacoustics and be able to implement the schemes to solve simple wave equations

Course Topics:
- Quantitative measures of Sound
- The Wave theory of Sound
- Monopoles, Dipoles, Multipoles
- Aerodynamic Sound in unbounded flows
- Sound generation in fluid with rigid boundaries
- Computational Aeroacoustics

Designation:
Elective