

# MECH6378 - Introduction to Compressible Fluid Mechanics

[MECH 6378](#) Introduction to Compressible Fluid Mechanics (3 semester credit hours) Introduction to the theory of compressible fluid flow. Coverage of fundamental concepts such as wave propagation in compressible media, speed of sound, Mach number, and thermodynamic relationships. This course focuses on steady, one-dimensional compressible flows and the effects of variable area, friction, and heat transfer. Normal shockwaves and the use of nozzles and diffusers are reviewed. The engineering applications of compressible flows. A brief introduction to more advanced topics such as oblique shocks will also be provided. Prerequisites: [MECH 3320](#) and [MECH 3351](#) and [MECH 4310](#). (3-0) R