

**ASEN 5519**  
**Boundary Layers and Convection**  
**Spring 2020**

**Lectures: Monday/Wednesday 11:30-12:45 AERO N240**

**Final Exam: Sunday May 3 at 7:30 pm.**

**Purpose:** The Navier-Stokes equations and the boundary layer approximation. Exact solutions and integral methods of incompressible and compressible boundary layers. Convective heat transfer in laminar and turbulent flow.  $f = -2(i) -ve k10 (t) -21 (\%)9TmTm /TT3 237 339 2(nt) -2 (e) 4 (gr) -7 (a) 4 (l) -2 ( )$

- 3) Conservation laws for a continuum: mass, momentum and energy; Navier-Stokes equations.
- 4) Simple viscous solutions of Navier-



